



JAMMU AND KASHMIR PUBLIC SERVICE COMMISSION

RESHAM GHAR COLONY, BAKSHI NAGAR, JAMMU - 180001

Website: <http://jkpsc.nic.in>

Jammu: 0191-2566533

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Subject: Written Examinations for filling up of Gazetted Vacancies in various Govt. Medical Colleges in Health and Medical Education Department, 2023- Provisional Answer Key(s).

Notification No. PSC/Exam/S/2023/72

Dated: 29.10.2023

In pursuance of Rule 10 (c) of the Jammu & Kashmir Public Service Commission (Conduct of Examination) Rules, 2022, as amended upto date, the Provisional Answer Key(s) of Question Paper pertaining to the Written Examinations for post(s) of **Assistant Professor (Anatomy), Assistant Professor (ENT), Assistant Professor (Orthopedics), Assistant Professor (Dermatology, Venereology & Leprosy), Assistant Professor (Epidemiologist/Community Medicine), Medical Record Officer (Allied Ancillary Section)(Central Record Section), Assistant Professor (Tuberculosis & Respiratory Diseases), Assistant Professor (Anesthesiology), Casualty Medical Officer, Librarian with a Degree in Library Science (Central Library) and Assistant Professor (Dentistry) in Health and Medical Education Department, held on 29.10.2023**, are hereby notified for seeking objections from candidates.

Provisional Answer Key Assistant Professor (Anatomy)

Test Booklet Question No. (Series A)		Test Booklet Question No. (Series A)		Test Booklet Question No. (Series A)	
Q1	A	Q12	B	Q23	A
Q2	A	Q13	A	Q24	B
Q3	B	Q14	C	Q25	D
Q4	B	Q15	C	Q26	A
Q5	A	Q16	A	Q27	B
Q6	C	Q17	C	Q28	B
Q7	C	Q18	B	Q29	C
Q8	B	Q19	A	Q30	B
Q9	A	Q20	C	Q31	B
Q10	C	Q21	C	Q32	B
Q11	A	Q22	C	Q33	C

Test Booklet Question No. (Series A)	
Q34	A
Q35	C
Q36	D
Q37	D
Q38	C
Q39	D
Q40	C
Q41	D
Q42	C
Q43	C
Q44	A
Q45	C
Q46	B
Q47	C
Q48	C
Q49	C
Q50	B
Q51	C
Q52	A
Q53	C
Q54	A
Q55	B
Q56	C

Test Booklet Question No. (Series A)	
Q57	C
Q58	A
Q59	D
Q60	B
Q61	A
Q62	C
Q63	B
Q64	A
Q65	D
Q66	B
Q67	D
Q68	A
Q69	A
Q70	D
Q71	A
Q72	D
Q73	C
Q74	C
Q75	C
Q76	B
Q77	C
Q78	A
Q79	A

Test Booklet Question No. (Series A)	
Q80	A
Q81	D
Q82	D
Q83	A
Q84	D
Q85	D
Q86	B
Q87	B
Q88	C
Q89	D
Q90	C
Q91	B
Q92	D
Q93	B
Q94	C
Q95	D
Q96	B
Q97	C
Q98	B
Q99	B
Q100	D

Provisional Answer Key Assistant Professor (ENT)

Test Booklet Question No. (Series A)		Test Booklet Question No. (Series A)		Test Booklet Question No. (Series A)	
Q1	C	Q35	D	Q69	B
Q2	A	Q36	B	Q70	D
Q3	B	Q37	C	Q71	D
Q4	C	Q38	A	Q72	B
Q5	D	Q39	B	Q73	A
Q6	C	Q40	C	Q74	C
Q7	C	Q41	A	Q75	C
Q8	A	Q42	A	Q76	B
Q9	C	Q43	B	Q77	C
Q10	C	Q44	A	Q78	C
Q11	D	Q45	D	Q79	B
Q12	C	Q46	A	Q80	B
Q13	A	Q47	D	Q81	B
Q14	B	Q48	D	Q82	D
Q15	B	Q49	C	Q83	D
Q16	A	Q50	D	Q84	B
Q17	A	Q51	A	Q85	B
Q18	A	Q52	C	Q86	C
Q19	C	Q53	B	Q87	A
Q20	B	Q54	B	Q88	D
Q21	C	Q55	B	Q89	B
Q22	B	Q56	B	Q90	C
Q23	A	Q57	D	Q91	A
Q24	A	Q58	A	Q92	A
Q25	D	Q59	B	Q93	A
Q26	D	Q60	B	Q94	B
Q27	D	Q61	D	Q95	B
Q28	D	Q62	C	Q96	D
Q29	B	Q63	C	Q97	D
Q30	C	Q64	A	Q98	A
Q31	C	Q65	C	Q99	B
Q32	A	Q66	A	Q100	B
Q33	D	Q67	D		
Q34	C	Q68	C		

Provisional Answer Key Assistant Professor (Orthopedics)

Test Booklet Question No. (Series A)	
Q1	A
Q2	C
Q3	D
Q4	B
Q5	C
Q6	D
Q7	B
Q8	A
Q9	B
Q10	C
Q11	A
Q12	B
Q13	C
Q14	C
Q15	A
Q16	C
Q17	B
Q18	B
Q19	C
Q20	A
Q21	A
Q22	D
Q23	C
Q24	A
Q25	C
Q26	B
Q27	C
Q28	A
Q29	D
Q30	B
Q31	C
Q32	D
Q33	B
Q34	A

Test Booklet Question No. (Series A)	
Q35	D
Q36	D
Q37	C
Q38	B
Q39	D
Q40	B
Q41	B
Q42	B
Q43	B
Q44	B
Q45	C
Q46	B
Q47	B
Q48	B
Q49	C
Q50	B
Q51	D
Q52	A
Q53	A
Q54	C
Q55	C
Q56	C
Q57	B
Q58	D
Q59	D
Q60	D
Q61	B
Q62	A
Q63	C
Q64	C
Q65	C
Q66	D
Q67	B
Q68	C

Test Booklet Question No. (Series A)	
Q69	C
Q70	B
Q71	B
Q72	C
Q73	D
Q74	B
Q75	A
Q76	C
Q77	B
Q78	A
Q79	D
Q80	B
Q81	C
Q82	A
Q83	A
Q84	D
Q85	C
Q86	C
Q87	B
Q88	C
Q89	B
Q90	A
Q91	D
Q92	C
Q93	D
Q94	B
Q95	D
Q96	D
Q97	D
Q98	A
Q99	B
Q100	C

Provisional Answer Key Assistant Professor (Dermatology Venereology & Leprosy)

Test Booklet Question No. (Series A)	
Q1	D
Q2	C
Q3	C
Q4	A
Q5	D
Q6	A
Q7	B
Q8	C
Q9	A
Q10	B
Q11	B
Q12	C
Q13	B
Q14	B
Q15	D
Q16	A
Q17	A
Q18	A
Q19	C
Q20	D
Q21	B
Q22	A
Q23	D
Q24	A
Q25	A
Q26	C
Q27	D
Q28	A
Q29	B
Q30	C
Q31	A
Q32	B
Q33	C
Q34	A

Test Booklet Question No. (Series A)	
Q35	D
Q36	C
Q37	A
Q38	B
Q39	D
Q40	A
Q41	B
Q42	A
Q43	C
Q44	B
Q45	B
Q46	A
Q47	A
Q48	B
Q49	D
Q50	B
Q51	B
Q52	D
Q53	C
Q54	A
Q55	D
Q56	D
Q57	C
Q58	D
Q59	A
Q60	B
Q61	C
Q62	D
Q63	B
Q64	C
Q65	A
Q66	C
Q67	A
Q68	B

Test Booklet Question No. (Series A)	
Q69	D
Q70	C
Q71	A
Q72	C
Q73	C
Q74	C
Q75	C
Q76	C
Q77	B
Q78	C
Q79	C
Q80	B
Q81	D
Q82	A
Q83	B
Q84	A
Q85	C
Q86	D
Q87	D
Q88	A
Q89	C
Q90	C
Q91	C
Q92	C
Q93	B
Q94	C
Q95	D
Q96	D
Q97	A
Q98	D
Q99	A
Q100	A

Provisional Answer Key Assistant Professor (Epidemiologist/Community Medicine)

Test Booklet Question No. (Series A)		Test Booklet Question No. (Series A)		Test Booklet Question No. (Series A)	
Q1	A	Q35	B	Q69	B
Q2	C	Q36	C	Q70	B
Q3	B	Q37	B	Q71	D
Q4	C	Q38	C	Q72	A
Q5	A	Q39	D	Q73	B
Q6	A	Q40	C	Q74	D
Q7	A	Q41	C	Q75	B
Q8	C	Q42	B	Q76	C
Q9	D	Q43	B	Q77	B
Q10	B	Q44	B	Q78	A
Q11	B	Q45	B	Q79	D
Q12	C	Q46	D	Q80	D
Q13	A	Q47	D	Q81	B
Q14	B	Q48	B	Q82	A
Q15	D	Q49	B	Q83	B
Q16	A	Q50	D	Q84	D
Q17	C	Q51	A	Q85	C
Q18	D	Q52	B	Q86	A
Q19	A	Q53	B	Q87	A
Q20	A	Q54	D	Q88	B
Q21	A	Q55	D	Q89	D
Q22	D	Q56	C	Q90	A
Q23	B	Q57	A	Q91	D
Q24	D	Q58	A	Q92	B
Q25	C	Q59	B	Q93	C
Q26	C	Q60	C	Q94	A
Q27	D	Q61	C	Q95	A
Q28	C	Q62	B	Q96	C
Q29	D	Q63	D	Q97	D
Q30	A	Q64	D	Q98	A
Q31	A	Q65	C	Q99	C
Q32	A	Q66	C	Q100	C
Q33	B	Q67	B		
Q34	D	Q68	D		

Provisional Answer Key Medical Record Officer
(Allied Ancillary Section) (Central Record Section)

Test Booklet Question No. (Series A)	
Q1	B
Q2	C
Q3	B
Q4	D
Q5	D
Q6	C
Q7	B
Q8	A
Q9	D
Q10	D
Q11	D
Q12	D
Q13	C
Q14	C
Q15	D
Q16	A
Q17	C
Q18	B
Q19	B
Q20	D
Q21	A
Q22	A
Q23	A
Q24	D
Q25	B
Q26	C
Q27	B
Q28	B
Q29	B
Q30	B
Q31	D
Q32	D
Q33	D
Q34	A

Test Booklet Question No. (Series A)	
Q35	A
Q36	A
Q37	B
Q38	C
Q39	A
Q40	C
Q41	C
Q42	A
Q43	C
Q44	B
Q45	A
Q46	C
Q47	C
Q48	D
Q49	C
Q50	A
Q51	B
Q52	C
Q53	A
Q54	A
Q55	B
Q56	D
Q57	B
Q58	C
Q59	A
Q60	A
Q61	B
Q62	C
Q63	A
Q64	D
Q65	A
Q66	D
Q67	C
Q68	C

Test Booklet Question No. (Series A)	
Q69	B
Q70	B
Q71	B
Q72	B
Q73	B
Q74	C
Q75	A
Q76	A
Q77	A
Q78	C
Q79	C
Q80	B
Q81	D
Q82	C
Q83	B
Q84	B
Q85	B
Q86	B
Q87	B
Q88	C
Q89	B
Q90	B
Q91	C
Q92	B
Q93	B
Q94	D
Q95	A
Q96	D
Q97	A
Q98	C
Q99	C
Q100	B

Provisional Answer Key Assistant Professor (Tuberculosis & Respiratory Diseases)

Test Booklet Question No. (Series A)		Test Booklet Question No. (Series A)		Test Booklet Question No. (Series A)	
Q1	D	Q35	A	Q69	A
Q2	B	Q36	A	Q70	C
Q3	D	Q37	C	Q71	B
Q4	B	Q38	B	Q72	B
Q5	B	Q39	D	Q73	D
Q6	D	Q40	B	Q74	B
Q7	A	Q41	C	Q75	C
Q8	B	Q42	D	Q76	C
Q9	D	Q43	B	Q77	B
Q10	A	Q44	C	Q78	C
Q11	D	Q45	B	Q79	C
Q12	D	Q46	A	Q80	C
Q13	B	Q47	D	Q81	D
Q14	D	Q48	C	Q82	D
Q15	B	Q49	C	Q83	D
Q16	C	Q50	B	Q84	C
Q17	A	Q51	C	Q85	B
Q18	D	Q52	B	Q86	C
Q19	A	Q53	D	Q87	D
Q20	A	Q54	C	Q88	C
Q21	A	Q55	D	Q89	D
Q22	D	Q56	D	Q90	C
Q23	B	Q57	C	Q91	C
Q24	D	Q58	A	Q92	D
Q25	C	Q59	C	Q93	C
Q26	C	Q60	A	Q94	B
Q27	D	Q61	C	Q95	D
Q28	D	Q62	C	Q96	D
Q29	B	Q63	B	Q97	C
Q30	C	Q64	C	Q98	B
Q31	A	Q65	C	Q99	C
Q32	D	Q66	D	Q100	A
Q33	A	Q67	B		
Q34	C	Q68	B		

Provisional Answer Key Assistant Professor (Anesthesiology)

Test Booklet Question No. (Series A)		Test Booklet Question No. (Series A)		Test Booklet Question No. (Series A)	
Q1	A	Q35	B	Q69	C
Q2	B	Q36	A	Q70	D
Q3	C	Q37	B	Q71	A
Q4	D	Q38	B	Q72	B
Q5	B	Q39	C	Q73	C
Q6	C	Q40	A	Q74	C
Q7	A	Q41	C	Q75	D
Q8	B	Q42	A	Q76	A
Q9	A	Q43	D	Q77	C
Q10	D	Q44	A	Q78	B
Q11	B	Q45	C	Q79	C
Q12	A	Q46	A	Q80	D
Q13	B	Q47	B	Q81	C
Q14	C	Q48	C	Q82	A
Q15	A	Q49	B	Q83	B
Q16	B	Q50	A	Q84	C
Q17	C	Q51	C	Q85	D
Q18	A	Q52	B	Q86	B
Q19	C	Q53	D	Q87	C
Q20	D	Q54	B	Q88	A
Q21	B	Q55	A	Q89	A
Q22	A	Q56	C	Q90	C
Q23	B	Q57	D	Q91	C
Q24	D	Q58	C	Q92	A
Q25	A	Q59	B	Q93	B
Q26	C	Q60	D	Q94	C
Q27	D	Q61	A	Q95	D
Q28	C	Q62	B	Q96	C
Q29	C	Q63	C	Q97	D
Q30	A	Q64	D	Q98	A
Q31	B	Q65	C	Q99	C
Q32	A	Q66	A	Q100	B
Q33	C	Q67	C		
Q34	D	Q68	B		

Provisional Answer Key Casualty Medical Officer

Test Booklet Question No. (Series A)		Test Booklet Question No. (Series A)		Test Booklet Question No. (Series A)	
Q1	B	Q35	A	Q69	C
Q2	C	Q36	C	Q70	B
Q3	D	Q37	B	Q71	D
Q4	B	Q38	B	Q72	B
Q5	A	Q39	A	Q73	C
Q6	C	Q40	D	Q74	B
Q7	A	Q41	A	Q75	A
Q8	A	Q42	A	Q76	C
Q9	C	Q43	D	Q77	D
Q10	D	Q44	C	Q78	D
Q11	B	Q45	B	Q79	B
Q12	A	Q46	A	Q80	D
Q13	B	Q47	B	Q81	A
Q14	D	Q48	A	Q82	D
Q15	D	Q49	C	Q83	A
Q16	A	Q50	A	Q84	D
Q17	A	Q51	B	Q85	B
Q18	D	Q52	C	Q86	A
Q19	A	Q53	B	Q87	A
Q20	C	Q54	B	Q88	B
Q21	D	Q55	A	Q89	D
Q22	D	Q56	C	Q90	B
Q23	A	Q57	D	Q91	A
Q24	B	Q58	C	Q92	B
Q25	D	Q59	B	Q93	C
Q26	C	Q60	C	Q94	B
Q27	D	Q61	D	Q95	B
Q28	C	Q62	A	Q96	A
Q29	B	Q63	A	Q97	A
Q30	D	Q64	A	Q98	A
Q31	A	Q65	A	Q99	A
Q32	D	Q66	A	Q100	C
Q33	D	Q67	D		
Q34	B	Q68	B		



Provisional Answer Key Librarian

Test Booklet Question No. (Series A)	
Q1	C
Q2	D
Q3	A
Q4	B
Q5	C
Q6	A
Q7	C
Q8	C
Q9	C
Q10	C
Q11	C
Q12	D
Q13	A
Q14	B
Q15	B
Q16	B
Q17	A
Q18	D
Q19	C
Q20	B
Q21	B
Q22	C
Q23	C
Q24	B
Q25	B
Q26	B
Q27	C
Q28	C
Q29	A
Q30	C
Q31	D
Q32	A
Q33	D
Q34	A

Test Booklet Question No. (Series A)	
Q35	A
Q36	D
Q37	B
Q38	B
Q39	C
Q40	D
Q41	A
Q42	B
Q43	B
Q44	C
Q45	C
Q46	B
Q47	A
Q48	D
Q49	C
Q50	C
Q51	D
Q52	C
Q53	B
Q54	B
Q55	A
Q56	C
Q57	C
Q58	D
Q59	B
Q60	A
Q61	A
Q62	C
Q63	A
Q64	B
Q65	A
Q66	B
Q67	D
Q68	D

Test Booklet Question No. (Series A)	
Q69	C
Q70	C
Q71	D
Q72	B
Q73	C
Q74	A
Q75	A
Q76	B
Q77	D
Q78	D
Q79	A
Q80	C
Q81	D
Q82	B
Q83	B
Q84	A
Q85	C
Q86	A
Q87	A
Q88	D
Q89	A
Q90	B
Q91	C
Q92	C
Q93	B
Q94	D
Q95	B
Q96	A
Q97	A
Q98	C
Q99	D
Q100	D

Provisional Answer Key Assistant Professor (Dentistry)


Test Booklet Question No. (Series A)		Test Booklet Question No. (Series A)		Test Booklet Question No. (Series A)	
Q1	B	Q35	A	Q69	D
Q2	C	Q36	C	Q70	B
Q3	A	Q37	A	Q71	D
Q4	D	Q38	D	Q72	C
Q5	C	Q39	C	Q73	D
Q6	C	Q40	B	Q74	B
Q7	C	Q41	C	Q75	A
Q8	B	Q42	B	Q76	B
Q9	A	Q43	C	Q77	C
Q10	C	Q44	C	Q78	A
Q11	C	Q45	B	Q79	A
Q12	D	Q46	A	Q80	C
Q13	B	Q47	C	Q81	B
Q14	A	Q48	A	Q82	B
Q15	B	Q49	B	Q83	B
Q16	B	Q50	D	Q84	D
Q17	A	Q51	C	Q85	A
Q18	A	Q52	A	Q86	B
Q19	A	Q53	A	Q87	A
Q20	A	Q54	A	Q88	C
Q21	C	Q55	C	Q89	C
Q22	C	Q56	A	Q90	D
Q23	B	Q57	D	Q91	B
Q24	D	Q58	D	Q92	C
Q25	B	Q59	D	Q93	B
Q26	C	Q60	D	Q94	A
Q27	B	Q61	A	Q95	A
Q28	B	Q62	A	Q96	D
Q29	D	Q63	B	Q97	A
Q30	B	Q64	D	Q98	B
Q31	C	Q65	C	Q99	A
Q32	B	Q66	A	Q100	A
Q33	B	Q67	A		
Q34	C	Q68	D		

The candidates are advised to refer to **Question Booklet (Series A)** to match the corresponding question(s) in their respective Question Booklet Series and if any candidate feels that the key to any of the question(s) is/are wrong, he/she may represent on prescribed format/proforma annexed as **Annexure-A** along with the documentary proof/evidence (**hard copies only**) and fee of Rs.500/- per question in the form of Demand Draft drawn in favour of **COE, J&K PSC** (refundable in case of genuine/correct representation) to the Controller of Examinations, Jammu & Kashmir Public Service Commission, from Monday i.e. 30.10.2023 to 31.10.2023. **The candidates are further advised to clearly mention the question(s) objected to with reference to its serial number as it appears in the Question Booklet of Series A of the provisional answer key(s).**

Further, any objection/application not accompanied by the requisite Demand Draft of Rs.500/- as prescribed, shall not be considered/entertained under any circumstances. Candidates are, in their own interest, advised to adhere to these instructions and not submit any objection unaccompanied by the Demand Draft as required under extant rules.

The Commission shall not entertain any such representation(s) after the expiry of the stipulated period i.e. after 31.10.2023 (Tuesday), 05.00 pm.

The provisional answer key(s) are available on the website of the Commission <http://www.jkpsc.nic.in>.


(Dr. Vamika Raj), JKAS
Under Secretary

 J&K Public Service Commission

Dated: 29.10.2023

No. PSC/Ex-Secy/2023/61

Copy to the: -

1. Director, Information and Public Relation, J&K for publication of the notice in all leading newspapers published from Jammu/Srinagar.
2. P.S. to Hon'ble Chairman, J&K Public Service Commission for information of the Hon'ble Chairman.
3. P.S. to Hon'ble Member, Shri _____ for information of the Hon'ble Member.
4. P. A. to Secretary, J&K Public Service Commission for information of the Secretary.
5. P.A. to Controller of Examinations, J&K Public Service Commission.
6. Main file/Stock file/Notice Board.

Annexure-A

Representation regarding objection(s) to any Question/Answer pertaining to the Written Test conducted for the post(s) of Assistant Professor (Anatomy), Assistant Professor (ENT), Assistant Professor (Orthopedics), Assistant Professor (Dermatology, Venereology & Leprosy), Assistant Professor (Epidemiologist/Community Medicine), Medical Record Officer (Allied Ancillary Section)(Central Record Section), Assistant Professor (Tuberculosis & Respiratory Diseases), Assistant Professor (Anesthesiology), Casualty Medical Officer, Librarian with a Degree in Library Science (Central Library) and Assistant Professor (Dentistry), 2023 held on 29.10.2023

(NOTE: USE SEPARATE FORMS FOR SEPARATE QUESTIONS)

Discipline : _____
Name of the Applicant : _____
Roll No. : _____
Correspondence Address : _____
Contact/Mobile No. : _____
Date of Application: _____, **10.2023**
Demand Draft No. date : _____
Candidates Account No.(16 digit) & IFSC Code : _____

Question No. in Series A	Details of the Objection	Resource Material (copy to be enclosed)	Details of the Website (if any)
Correct Answer/Option as per candidate :			

Signature of the Candidate

Note : Application for each question/answer shall be made on separate page in the given format, otherwise the first question entered in the format shall only be considered.

DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE TOLD TO DO SO

Booklet Serial No. 210945

Test Booklet Series

TEST BOOKLET
ANATOMY
Written Test - 2023
(54)

A

Time Allowed: Two Hours

Maximum Marks: 100

INSTRUCTIONS

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9. Sheets for rough work are appended in the Test Booklet at the end.
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THERE WILL BE PENALTY FOR WRONG ANSWERS MARKED BY THE CANDIDATE IN THE WRITTEN TEST (OBJECTIVE TYPE QUESTIONS PAPERS).
 - (i) There are four alternatives for the answer to every question. For each question for which a wrong answer has been given by the candidate, **(0.25)** of the marks assigned to that question will be deducted as penalty.
 - (ii) If a candidate gives more than one answer, it will be treated as a **wrong answer** even if one of the given answers happens to be correct and there will be same penalty as above for that question.
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(54) (A)/2023

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1. In the developing embryo, the midgut rotates 270 degrees around which of the following Structures?
 - A) Superior mesenteric artery
 - B) Celiac trunk
 - C) Splenic artery
 - D) Left renal artery

2. Sub capsular sinuses are present in:
 - A) Lymph node
 - B) Palatine tonsil
 - C) Spleen
 - D) Thymus

3. Which one is known as musicians' nerve
 - A) Median
 - B) Ulnar
 - C) Radial
 - D) Musculocutaneous

4. Which one of the following circumventricular organs is solely innervated by postganglionic fibres from the superior cervical ganglion of the ANS?
 - A) Area postrema
 - B) Pineal body
 - C) Organum vasculosum of the lamina terminalis
 - D) Subfornical organ

5. The Karyotype of Turner's syndrome is
 - A) 45XO
 - B) 46XX
 - C) 47XXX
 - D) 47XXY

6. Which is unlocking muscle of knee
 - A) Soleus
 - B) Biceps femoris
 - C) Popliteus
 - D) Gracilis

7. Nerve carrying postganglionic parasympathetic fibres of parotid gland is
 - A) Facial nerve
 - B) Inferior alveolar nerve
 - C) Auriculotemporal nerve
 - D) Buccal nerve

8. Yellow marked plane passes at the level of vertebra



- A) L4
B) L1
C) L3
D) L2

9. Among the following statements, true regarding yellow marked structure is



- A) Action is flexion of the knee joint
B) Supplied by L4, L5 spinal segment
C) Inserted to greater trochanter
D) Vascular supply by inferior epigastric artery.
10. A 68-year-old man is scheduled to have coronary bypass surgery done to his left anterior descending artery. As this procedure is performed, which of the following vessels is most at risk of injury?
A) Anterior cardiac vein
B) Middle cardiac vein
C) Great cardiac vein
D) Coronary sinus

(54) (A)

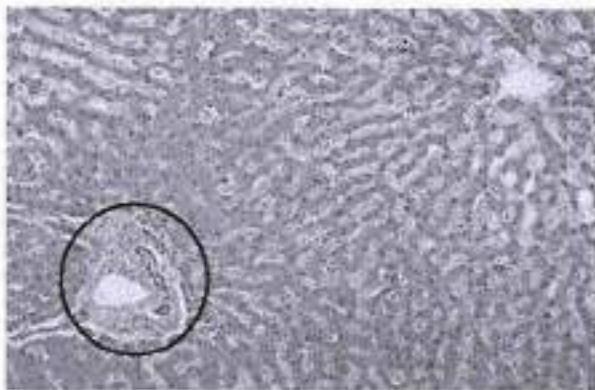
(4)

11. Ureteric bud arises from
 A) Mesonephric duct
 B) Paramesonephric duct
 C) Vesicourethral canal
 D) Urogenital sinus
12. Aortic knuckle, a projection in the upper part of left margin of the cardiac shadow in PA view of chest X-ray is cast by
 A) Aortic sinus
 B) Ascending Aorta
 C) Descending aorta
 D) Arch of Aorta
13. Root value of sacral plexus is
 A) L4,L5,S1, S2,S3
 B) L3,L4,L5,S1,S2
 C) L5,S1,S2,S3,S4
 D) L2,L3,L5,S1,S2
14. Match the following cells with their structure
 1. Kupffer cells
 2. Parietal cells
 3. Dust cells
 4. Clara cells
 i. Stomach
 ii. Bronchiole
 iii. Liver
 iv. Lung
 A) 1-ii,2-iv,3-i,4-iii
 B) 1-iv,2-iii,3-ii,4-i
 C) 1-iii,2-i,3-iv,4-ii
 D) 1-iv,2-i,3-ii,4-iii
15. The corpus striatum is referred to as:
 A) Caudate nucleus and putamen
 B) Caudate nucleus and globus pallidus
 C) Caudate nucleus and lentiform nucleus
 D) Amygdaloid body and lentiform nucleus
16. A line drawn from the anterior superior iliac spine to the ischial tuberosity (Nelaton's line), passing over the lateral aspect of the hip, normally passes over which of the following structures?
 A) Sciatic nerve
 B) Ischial spine
 C) Pudendal nerve
 D) Greater trochanter
17. The Y shaped sheet of white matter that divides thalamus into its three main parts (anterior, medial, and lateral) is called:
 A) Lamina terminalis
 B) Stria medullaris thalami
 C) Internal medullary lamina
 D) Lamina cribrosa
18. Superior oblique muscle is supplied by _____ nerve
 A) Oculomotor
 B) Trochlear
 C) Abducent
 D) Facial

19. General visceral efferent (GVE) component to the lacrimal gland is associated with which of the following nerves
- A) Facial
B) Nasociliary
C) Mandibular
D) Anterior ethmoidal
20. An example for autosomal dominant inheritance is
- A) Tay sach's disease
B) Cystic fibrosis
C) Achondroplasia
D) Hemophilia
21. The middle meningeal artery enters the skull via:
- A) Foramen ovale
B) Foramen lacerum
C) Foramen spinosum
D) Foramen rotundum
22. Migration of motor nucleus towards sensory nucleus is known as
- A) Synapse
B) Chromotolysis
C) Neurobiotaxis
D) Myelination
23. Piriform recess is located in the:
- A) Laryngopharynx
B) Oropharynx
C) Nasopharynx
D) Middle meatus
24. The lesser tubercle of the humerus provide insertion for
- A) Supraspinatus
B) Subscapularis
C) Teres minor
D) Infraspinatus
25. The most common site for implantation in ectopic pregnancy is the
- A) Internal os of the uterus
B) Mesentery
C) Ovary
D) Oviduct
26. The philtrum is derived from the:
- A) Inter maxillary segment
B) Frontonasal process
C) Maxillary process
D) Mandibular process
27. What is the origin of the lens?
- A) Neural ectoderm
B) Surface ectoderm
C) Mesoderm
D) Endoderm
28. The bulb of the penis is located in the
- A) Deep perineal pouch
B) Superficial perineal pouch
C) Ischiorectal fossa
D) Pudendal canal
29. The ovaries are anchored to the lateral pelvic wall by the:
- A) Ovarian ligament
B) Broad ligament
C) Suspensory ligament
D) Round ligament

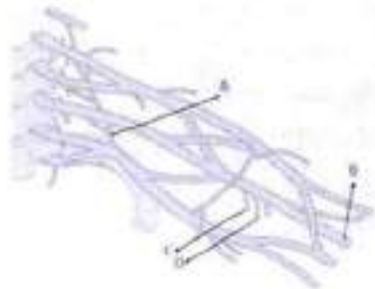
38. The paranasal air sinuses that open into the hiatus semilunaris are the
- A) Frontal and posterior ethmoidal
 - B) Sphenoidal and middle ethmoidal
 - C) Anterior ethmoidal and maxillary
 - D) Middle and posterior ethmoidal

39. In the below picture the contents of region marked by black circle are-



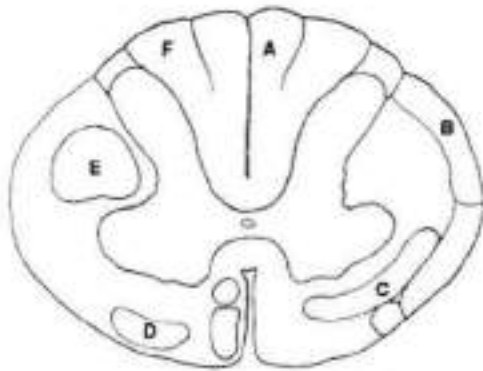
- A) Central vein, hepatic artery and bile duct
 - B) Cystic artery, portal vein and bile duct
 - C) Central vein, cystic artery and bile duct
 - D) Hepatic artery, portal vein and bile duct
40. Perichondrium is absent in _____
- A) Epiphysial cartilage
 - B) Epiglottis
 - C) Intervertebral disc
 - D) Auditory tube
41. The medial wall of axilla is formed by _____
- A) Bicipital groove
 - B) Pectoralis major
 - C) Latissimus dorsi
 - D) Serratus anterior
42. A 68-year-old man is scheduled to have coronary bypass surgery done to his left anterior descending artery. As this procedure is performed, which of the following vessels is most at risk of injury?
- A) Anterior cardiac vein
 - B) Middle cardiac vein
 - C) Great cardiac vein
 - D) Coronary sinus

49. Following are the features of typical lumbar vertebrae except
- Body is large and kidney shaped
 - Vertebral foramen is triangular in shape
 - Presence of costal facet
 - Presence of mammillary process
50. Seminal vesicle develops from
- Mullerian duct
 - Wolffian duct
 - Prostatic urethra
 - Membranous urethra
51. A 60-year-old woman developed a dental abscess that he ignored for 2 weeks. At that time, he began to have severe chest pain due to infection of the mediastinum. Through which pathway did the infection most likely spread to the mediastinum?
- Masticator space
 - Pretracheal space
 - Retropharyngeal space
 - Suprasternal space
52. A patient exhibits winging of the scapula when he pushes against a wall. Injury of which of the following nerves would result in this condition?



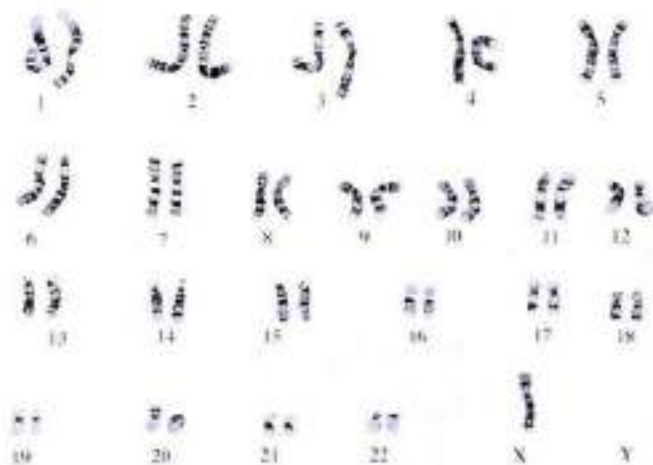
- Point A
 - Point B
 - Point C
 - Point D
53. The Cell with cart wheel appearance nucleus is -----
- Macrophage
 - Lymphocyte
 - Plasma cell
 - Mast cell
54. Blood brain barrier is formed by
- Protoplasmic astrocytes
 - Fibrous astrocytes
 - Microglia
 - Oligodendrocytes

55. Heschl's gyrus receives input from which of the following neural structures?
- Angular gyrus
 - Medial geniculate nucleus
 - Primary auditory cortex
 - Sensory strip
56. Match the description of a spinal cord tract in items 1 to 4 with the appropriate lettered structure shown in the figure.



- | | | | |
|---|---|-----|---|
| 1 | Projects to the cerebellum via the inferior cerebellar peduncle | i | A |
| 2 | Cells of origin are found in the precentral Gyrus | ii | D |
| 3 | Plays a role in regulating extensor tone | iii | B |
| 4 | Transmits vibration sensation from the ankle | iv | E |
- 1-ii, 2-iv, 3-i, 4-iii
 - 1-iv, 2-i, 3-ii, 4-iii
 - 1-iii, 2-iv, 3-ii, 4-i
 - 1-i, 2-iii, 3-iv, 4-ii
57. When the levator ani fails to arise from obturator fascia, it leads to
- Hiatus Urogenitalis
 - Hiatus Rectalis
 - Hiatus of Schwalbe
 - none of the above

58. Below Karyotype suggests _____ syndrome.



- A) Turner
- B) Patau
- C) Klinefelter
- D) Edward

59. A newborn has multiple congenital defects due to dysgenesis of the neural crest. Which of the following cells is most likely to be spared?

- A) Dorsal root ganglion cells
- B) Genuiculate ganglion cells
- C) Melanocytes
- D) Motor neurons

60. Yellow pointed structure is an example for _____ type of epiphysis



- A) Pressure epiphysis
- B) Atavistic epiphysis
- C) Traction epiphysis
- D) Abberent epiphysis

61. This characteristic appearance over the skin of mammary gland is due to



- A) Blockage of cutaneous lymphatics by cancer cells
- B) Infiltration of ducts by cancer cells
- C) Due to metastasis
- D) Obstruction of venous drainage

62. Match the following and tick the correct option

- | | |
|------------------------|--------------------------------|
| 1. Brachial artery | i. Lateral thoracic artery |
| 2. Axillary artery | ii. Common interosseous artery |
| 3. Thyrocervical trunk | iii. Profunda brachii |
| 4. Ulnar artery | iv. Suprascapular artery |
- A) 1-ii, 2-iv, 3-i, 4-iii
 - B) 1-iv, 2-ii, 3-i, 4-iii
 - C) 1-iii, 2-i, 3-iv, 4-ii
 - D) 1-i, 2-ii, 3-iv, 4-ii

63. Neurologic examination reveals miosis, ptosis, hemi anhidrosis, left side; laryngeal and palatal paralysis, left side; facial anaesthesia, left side; and loss of pain and temperature sensation from the trunk and extremities, right side. The lesion is in the

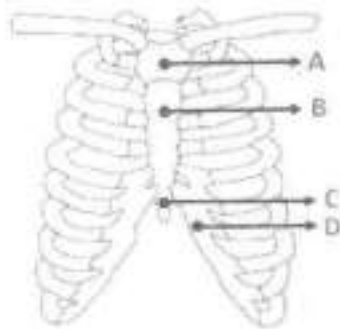
- A) Caudal medulla, ventral median zone, right side
- B) Rostral medulla, lateral zone, left side
- C) Rostral pontine base, left side
- D) Caudal pontine tegmentum, lateral zone, right side

64. The following statements are true about second cervical vertebrae

- i. Presence of anterior arch & Posterior arch
 - ii. Presence of odontoid process
 - iii. Absence of body
 - iv. Presence of massive bifid spine
- A) (i) and (ii) are correct
 - B) (i) and (iii) are correct
 - C) (ii) and (iii) are correct
 - D) (ii) and (iv) are correct

65. P. Howships lacuna contains osteoclasts
 Q. Osteoclasts are the macrophages of bone
 A) P & Q are wrong
 B) Only P is correct
 C) P & Q are correct
 D) Only Q is correct
66. P. Carotid sheath is a part of deep cervical fascia
 Q. It is pierced by IX, X & XI cranial nerves
 A) P & Q are wrong
 B) Only P is correct
 C) P & Q are correct
 D) Only Q is correct
67. Which structure passes through the gap between the superior and middle constrictor muscles?
 A) Recurrent laryngeal artery
 B) Internal laryngeal nerve
 C) Superior laryngeal artery
 D) Glossopharyngeal nerve
68. A 15-year-old boy is eating a fish dinner and inadvertently has a bone "caught in his throat." He complains of significant pain above the vocal cords. Which of the following nerves is responsible for carrying the sensation for this pain?
 A) Internal laryngeal nerve
 B) Recurrent laryngeal nerve
 C) Spinal accessory nerve
 D) External laryngeal nerve
69. The sinoatrial node
 A) Contains cells which spontaneously and rhythmically generate action potentials.
 B) Is connected to the AV node by way of Purkinje fibers.
 C) Transmits impulses directly to the ventricular myocardium.
 D) Is the only normal pathway for impulse conduction from the pacemaker to the ventricles.
70. Capacitation involves the following factors except
 A) Removal of acrosomal cap
 B) Alteration of glycoprotein coat of sperm head
 C) Removal of seminal proteins from the head
 D) Dissolves the tail of the sperm

71. In the below picture, name the type of joint formed between A & B?



- A) Symphysis
 B) Syndesmosis
 C) Saddle
 D) Schindylesis

72. Choose the correct division pattern of renal arteries.

- i. Arcuate
 ii. Segmental
 iii. Interlobar
 iv. Interlobular
 A) i, ii, iii, iv
 B) ii, iii, i, iv
 C) ii, iii, iv, i
 D) i, iv, iii, ii

73. Table below shows list of arteries in column 1 and their branches in column 2

Column 1	Column 2
a) Coeliac trunk	i. Middle colic artery
b) Superior mesenteric artery	ii. Left colic artery
c) Inferior mesenteric artery	iii. Middle rectal artery
d) Internal iliac artery	iv. Left gastric artery

Correct matching of the arteries and their branch is

- A) a-iv, b-i, c- iii, d- ii
 B) a-ii, b- iii, c- i, d- iv
 C) a-iv, b-i, c- ii, d-iii
 D) a-ii, b- iii, c - iv, d-i

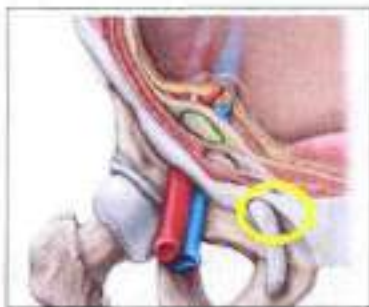
74. Match the following

- | | |
|--------------------------------|------------------------------|
| 1. Coeliac plexus | i. Iliohypogastric nerve |
| 2. Lumbar plexus | ii. Presacral nerve |
| 3. Superior hypogastric plexus | iii. Pelvic splanchnic nerve |
| 4. Inferior hypogastric plexus | iv. Greater splanchnic nerve |

- A) 1-ii, 2- iv, 3-i, 4-iii
 B) 1-iv, 2-iii, 3-ii, 4-i
 C) 1-iii, 2-i, 3-iv, 4-ii
 D) 1-iv, 2-i, 3-ii, 4-iii

75. Match the following derivatives with their developmental components
- | | |
|----------------------------|---------------------------|
| 1. Epididymis | i. Genital tubercle |
| 2. Uterus | ii. Vesicourethral canal |
| 3. Urinary bladder | iii. Paramesonephric duct |
| 4. Body and glans clitoris | iv. Mesonephric duct |
- A) 1 - i, 2 - ii, 3 - iii, 4 - iv
 B) 1 - ii, 2 - iv, 3 - i, 4 - iii
 C) 1 - iv, 2 - iii, 3 - ii, 4 - i
 D) 1 - i, 2 - iii, 3 - iv, 4 - ii
76. All the following are true about Adductor canal EXCEPT:
- A) Roof contains subsartorial plexus
 B) One of the contents is femoral nerve
 C) Also known as Hunter's canal;
 D) Posterior wall is formed by adductor longus.
77. A 65-year-old man has difficulty in raising from sitting position and straightening his trunk, but he has no difficulty in flexing his leg. Which of the following muscle is most likely to be affected?
- A) Hamstring muscle
 B) Tensor fascia lata
 C) Gluteus maximus
 D) Iliopsoas
78. A 27-year-old unconscious woman is admitted to the emergency department. A nasogastric tube is inserted and passed into her esophagus. What will be the last resistance point felt by the physician as the tube passes from the nose into the stomach?
- A) Esophageal hiatus of the diaphragm
 B) Level of superior thoracic aperture
 C) Posterior to the aortic arch
 D) Posterior to the left atrium
79. Senior resident draining pleural effusion inserts 14-gauge needle at 5th intercostal space along midaxillary line. When he inserts the needle, the structures pierced in order from superficial to deep are
- A) Internal intercostal muscle, innermost intercostal muscle, endothoracic fascia, parietal pleura
 B) Internal intercostal muscle, endothoracic fascia, parietal pleura, visceral pleura
 C) Innermost intercostal muscle, parietal pleura, endothoracic fascia, visceral pleura
 D) Internal intercostal muscle, endothoracic fascia, innermost intercostal muscle, parietal pleura
80. Match the following germ layers with their derivatives
- | | |
|-----------------------|--------------------------------|
| 1. Ectoderm | i. Lining of respiratory tract |
| 2. Mesoderm | ii. Melanocytes |
| 3. Endoderm | iii. Mammary gland |
| 4. Neural crest cells | iv. Dermis of skin |
- A) 1-iii, 2-iv, 3-i, 4-ii
 B) 1-iii, 2-i, 3-iv, 4-ii
 C) 1-iv, 2-iii, 3-ii, 4-i
 D) 1-ii, 2-iii, 3-i, 4-iv

81. Following statements are true regarding the yellow circled region-



- A) It transmits ilio lumbar nerve
B) It transmits spermatic cord in both the sexes
C) Lies above and lateral to the pubic crest.
D) Lies above and medial to the pubic crest.
82. The small saphenous vein empties into which of the following veins?
A) Femoral
B) Tibial
C) Peroneal
D) Popliteal
83. A 45-year-old woman is having significant uterine bleeding from uterine fibroids. The radiologist performs an embolization procedure of the uterine arteries. Through which of the following structures do the uterine arteries traverse?
A) Transverse cervical (cardinal) ligaments
B) Uterosacral ligaments
C) Vesicouterine fold
D) Anterior vaginal fornix
84. A Surgeon exploring the thorax will be able to identify the right pulmonary artery in which of the following locations?
A) Anterior to the ascending aorta and the SVC
B) Anterior to the ascending aorta and posterior to the SVC
C) Posterior to the descending aorta and the SVC
D) Posterior to the ascending aorta and the SVC
85. 34-year-old woman had a direct blow to the patella during a car collision. The woman is admitted to the emergency department and radiographic examination reveals multiple fracture of patella. Which of the following muscles is attached to it?
A) Hamstrings
B) Calf muscle
C) Adductor muscles
D) Quadriceps femoris
86. Meiosis in spermatogenesis occurs in which of the following step
A) Primary spermatocyte to intermediate spermatocyte
B) Primary spermatocyte to secondary spermatocyte
C) Secondary spermatocyte to spermatid
D) Capacitation

87. First-order neurons of the ventral spinocerebellar tract
- Are found in dorsal root ganglia at all levels
 - Provide the afferent limb for muscle stretch reflexes
 - Project axons into the medial root entry zone
 - Give rise to the fasciculus cuneatus
88. Which of the following statement is FALSE?
- Right renal artery passes behind the IVC
 - Left renal vein passes in between abdominal aorta and Superior Mesenteric Artery.
 - The length of right renal vein is more than that of the left renal vein
 - Inferior suprarenal artery is a branch of Renal artery
89. A 72-year-old male who has smoked for fifty years developed carcinoma of his lower lip. Which nodes would first receive lymph drainage from this area?
- Jugulodigastric
 - Juguloomohyoid
 - Submandibular
 - Submental
90. Which of the following BEST describes the stratum corneum?
- Multilayered, large oval cells, Merkel's discs in hairless areas.
 - Single layer, undergoes mitosis, contains melanocytes.
 - Multilayered, cells completely keratinized and dead.
 - Multilayered, granular cells, shriveled nuclei, keratohyalin present.
91. 39-year-old woman is admitted to the emergency department with a complaint of inability to do dorsiflexion of foot at ankle joint. Which of the following nerve is injured?
- Femoral nerve
 - Deep peroneal nerve
 - Superficial peroneal nerve
 - Obturator nerve
92. Motor speech area of Broca is situated in
- Superior temporal gyrus of temporal lobe
 - Superior frontal gyrus of frontal lobe
 - Inferior temporal gyrus of temporal lobe
 - Inferior frontal gyrus of frontal lobe
93. The layers present in tertiary villi of placenta from within outwards are
- Maternal blood vessels, cytotrophoblast, syncytiotrophoblast, extraembryonic mesoderm
 - Foetal blood vessels, extraembryonic mesoderm, cytotrophoblast, syncytiotrophoblast
 - Cytotrophoblast, syncytiotrophoblast, extraembryonic mesoderm, Maternal blood vessels
 - Syncytiotrophoblast, extraembryonic mesoderm, Cytotrophoblast, Maternal blood vessels

94. Deviation of tongue to affected side due to unilateral Hypoglossal nerve injury is because of
- A) Affected genioglossus muscle on the other side
 - B) Unaffected palatoglossus muscle on the other side
 - C) Unaffected genioglossus muscle on the other side
 - D) Affected palatoglossus muscle on the same side
95. Paramedian infarction of the base of the pons involves which of the following structures?
- A) Trapezoid body
 - B) Descending trigeminal tract
 - C) Rubrospinal tract
 - D) Pyramidal tract
96. An 18-year-old man is noted to have probable testicular cancer. He undergoes surgery. After incising the scrotum, the surgeon contemplates the approach to the parenchyma of the testes. Through which layer must the surgeon incise to reach the testicular parenchyma?
- A) Buck fascia
 - B) Tunica albuginea
 - C) Dartos fascia
 - D) Scarpa fascia
97. Nerve of Pterygoid canal is formed by
- A) Lesser petrosal & external petrosal
 - B) Lesser petrosal & greater petrosal
 - C) Greater petrosal & deep petrosal
 - D) Greater petrosal & external petrosal
98. Ovarian fossa is bounded anteriorly by
- A) Obturator artery
 - B) Obliterated umbilical artery
 - C) Ovarian artery
 - D) Uterine artery
99. A 60-year-old man who had a history of a chronic duodenal ulcer was admitted to the Emergency ward exhibiting signs of a severe internal hemorrhage. He was quickly diagnosed with perforation of the posterior wall of the first part of the duodenum and erosion of an artery behind it by the gastric expellent. The artery most likely is:
- A) Common hepatic
 - B) Gastroduodenal
 - C) Left gastric
 - D) Proper hepatic
100. Which of the following techniques could you use to precisely locate the appendix?
- A) Locate a region devoid of haustra
 - B) Trace the right collect artery
 - C) Trace the ileocolic artery
 - D) Trace the taeniae coli on the cecum

ROUGH WORK

DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE TOLD TO DO SO

Booklet Serial No. 213377

Test Booklet Series

TEST BOOKLET
ENT
Written Test - 2023
(62)

A

Time Allowed: Two Hours

Maximum Marks: 100

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(62) (A)/2023

[P.T.O.]

17000

1. The inferior tympanic artery to the middle ear is a branch of

A) Postauricular artery	B) Caroticotympanic artery
C) Ascending pharyngeal artery	D) Facial artery

2. The average size of the footplate of stapes is:

A) 1.41 X 2.99 mm	B) X 4.11 mm
C) 1.22 X 2.13 mm	D) 1.30 X 1.75 mm

3. The following test is similar to Carhart test but it incorporates rest periods during the testing. This test is
 - A) Olson- Noffsinger test
 - B) Owen test
 - C) Rosenberg One-minute test
 - D) Greemn Modified tone decay test

4. Ear muffs, ear plugs provide the following amount of attenuation:

A) 5-10 dB	B) 10-20 dB
C) 20-40 dB	D) 40-50 dB

5. The cochlear microphonics originate from

A) Auditory nerve	B) Cochlear nucleus
C) Stria vascularis	D) Hair cells

6. A 47 years old male presents with vertigo. During ENG testing, he has a right-beating nystagmus with left ear down and a left beating nystagmus with right ear down. This is suspicious of:

A) Multiple sclerosis	B) Viral Labyrinthitis
C) Positional alcohol nystagmus	D) BPPV

7. On ENG test a 23 years old female presented with symptoms of unsteadiness, it was noted that there was evidence of anterior inter-nuclear ophthalmoplegia on testing eye movements. This is indicative of
- A) Acoustic neuroma
B) Meniere's disease
C) Multiple sclerosis
D) Subarachnoid hemorrhage
8. When a child repeats what is said to him, it is termed as
- A) Echolalia
B) Repetitive verbal child
C) Acholia
D) Aprasia
9. The region of the intermediate and deep layers of the lamina propria is called the
- A) Vocal fold
B) Membranous portion of vocal fold
C) Vocal ligament
D) Fibroblastic layer
10. Leopard syndrome is a form of congenital deafness associated with sensori-neural hearing loss, pulmonary stenosis, hypogonadism and
- A) Blue iris
B) Elevated sweat chlorides
C) Ocular hyper teleorism
D) Mitral insufficiency
11. A 4 year old child had a cochlear implant inserted in his right ear at 3 years of age. She presents with Otitis media with effusion for the last 3 months. The next step is
- A) Suggest myringotomy with ventilation tube
B) Suggest myringotomy
C) Start on high dose of antibiotics
D) Suggest no treatment and observe for infection
12. In performing a middle fossa approach to remove the acoustic neuroma, the anterior limit of dissection is
- A) Greater superficial petrosal nerve
B) Arcuate eminence
C) Middle meningeal artery
D) Facial nerve

19. Triad of apical lung tumour, vocal cord paralysis and Horner syndrome is called
- A) Bourneville syndrome B) Bornier syndrome
C) Pancoast tumour D) Forney syndrome
20. The average distance from incisor teeth to hiatus is
- A) 28 cm B) 38cm
C) 42 cm D) 49 cm
21. Floor of the orbit is formed by orbital plate of maxilla, orbital surface of zygoma and
- A) Lacrimal bone
B) Sphenoid bone
C) Orbital process of palatine bone
D) Orbital process of frontal bone
22. Procedure of decompression for malignant exophthalmos in which ethmoidectomy is done and floor of frontal sinus is removed is described by:
- A) Kronlein B) Sewell
C) Naffziger D) Hirsch
23. A 40 year old female presents with headache, vomiting and gait disturbances. She has papilledema, paroxysmal positional nystagmus. Most likely diagnosis is
- A) Cerebellar glioma B) Meningioma
C) Chiari malformation D) CVA
24. A 40 year old female has undergone surgery 18 hours previously for a pituitary adenoma. Urinary output is greater than 250 ml/hour with a specific gravity of 1. Initial treatment will include
- A) DDAVP B) Propranolol
C) Hydrocortisone D) Demeclocycline

32. A young child is scheduled to receive polio booster. He is planned for tonsillectomy. Following should be done:
- A) Delay surgery for 6 weeks following vaccination
 - B) Don't delay surgery
 - C) Delay surgery for 2 weeks following vaccination
 - D) Delay vaccination until after tonsillectomy
33. Widening of perivertebral retrotracheal tissue on X-ray neck at C2 vertebra level is pathologic if width is more than
- A) 1mm
 - B) 3 mm
 - C) 5 mm
 - D) 7 mm
34. Barium swallow showing aperistalsis, esophageal dilation and failure of lower sphincter to relax with retention of ingested material in esophagus is suggestive of:
- A) Diffuse esophageal spasm
 - B) Scleroderma
 - C) Achlasia cardia
 - D) Barrels esophagitis
35. Which investigation is best for a suspected esophageal perforation from a foreign body.
- A) Motion recording radiography
 - B) Endoscopic ultasound radiography
 - C) Air contrast esophagography
 - D) Water soluble contrast esophagography
36. A patient presenting with loss of sensation on base of tongue and aspiration. This can be due to lesion at
- A) Foramen Magnum
 - B) Jugular foramen
 - C) Hypoglossal canal
 - D) Carotid canal

37. Constrictor muscles of pharynx are supplied by which nerve:
- A) Descendence hypoglossi B) Accessory nerve
C) Vagus nerve D) Ansa hypoglossi
38. A parotid mass showing increased focal activity on radiosialography . Most likely diagnosis is
- A) Warthin tumour B) Acinic cell tumour
C) Adenoid cystic carcinoma D) Mucoepidermoid carcinoma
39. The tumour that arises from intercalated duct cells and terminal tubules of salivary gland is:
- A) Adenoid cystic carcinoma B) Adenocarcinoma
C) Acinic cell carcinoma D) Mucoepidermid carcinoma
40. A patient presenting with deep upper jugular and lateral retropharyngeal lymph adenopathy. He has carcinoma in oral cavity. Most likely site for the carcinoma is probably:
- A) Tongue B) Buccal mucosa
C) Upper gingival D) Upper lip
41. The most important route of spread of supraglottic cancer is:
- A) Anteriorly to pre-epiglottis space
B) Superiorly to base of tongue
C) Inferiorly to pyriform sinus
D) Posteriorly to esophagus
42. Medullary carcinoma of thyroid (MTC), pheochromocytoma and parathyroid hyperplasia is:
- A) MTC with MEN 2A B) MTC with MEN 2B
C) Familial non MEN MTC D) Sporadic MTC

43. Most common site of deep hemangiomas in head and neck is
- | | |
|---------------------------|------------------------|
| A) Omohyoid space | B) Masseter muscle |
| C) Supraclavicular region | D) Submandibular space |
44. Cysts arising from enamel before the development of any dental tissues is:
- | | |
|---------------------|-------------------|
| A) Primordial cyst | B) Eruption cyst |
| C) Dentigerous cyst | D) Radicular cyst |
45. In Grade 2 of Sade retraction of tympanic membrane, there is:
- | |
|---------------------------------------|
| A) Retracted tympanic membrane |
| B) Adhesive otitis media |
| C) Middle ear atelectasis |
| D) Retraction with contact onto incus |
46. The theory of cholesteatoma formation in which retraction pocket deepens because of negative middle ear pressure and desquamated epithelium can not be cleared is:
- | | |
|----------------------------------|------------------------|
| A) Epithelial invasion theory | B) Invagination theory |
| C) Basal cell hyperplasia theory | D) Funnel theory |
47. During stapedectomy, a segment of footplate enters the vestibule, one should:
- | |
|--|
| A) Abandon the surgery |
| B) Use a small hook to retrieve it |
| C) Do a burr hole and remove the segment |
| D) Proceed with surgery in normal way |
48. Nasal smear showing mastocytosis with sparsity of eosinophils is typical of:
- | | |
|---------------------------------------|---------------------------|
| A) Allergic rhinitis | B) Rhinitis Medicamentosa |
| C) Non allergic eosinophilic rhinitis | D) Vasomotor rhinitis |

56. Musculocutaneous flap which has the most tenous blood supply is :
- A) Pectoralis
B) Sternocleidomastoid
C) Lattismus dorsi
D) Deltopectoral
57. The blood supply of deltopectoral flap is
- A) Brachiocephalic artery
B) Subclavian
C) Pectoral artery
D) Internal mammary artery
58. During otoplasty removal of postauricular skin or mastoid soft tissue can cause:
- A) Telephone ear deformity
B) Mustarde defect
C) Helical deformity
D) Singapore ear
59. The single most important factor in increasing tip support in rhinoplasty is:
- A) Not using intercartilaginous incision
B) Using medial crura strut
C) Using intradomal suture
D) Not dividing lower lateral crura
60. The deepest point in the nasofrontal angle is:
- A) Radix
B) Nasion
C) Sill
D) Sallion
61. A marked decrease in speech recognition ability with increasing intensity level is a feature of
- A) Cochlear pathology
B) Central pathology
C) Conductive pathology
D) Retro-cochlear pathology
62. Posterior semicircular canal and saccule are innervated by:
- A) Jacobson's nerve
B) Auriculotemporal nerve
C) Inferior vestibular nerve
D) Superior vestibular nerve

63. When the stapedius muscle contracts:
- A) Impedance of tympanic membrane increases
 - B) Impedance of Tympanic membrane decreases
 - C) Admittance of Tympanic membrane decreases
 - D) Admittance of Tympanic membrane increases
64. Incidence of congenital microtia is:
- A) 1:20,000
 - B) 1:40,000
 - C) 1:50,000
 - D) 1:1,00,000
65. The transformer ratio of middle ear is about 22:1. This translates to approximately:
- A) 5 dB
 - B) 10 dB
 - C) 25dB
 - D) 40 dB
66. The audiometric test that is based on the principle that one increases the volume of one's voice in the presence of background noise that the noise is heard and interferes with self monitoring is called
- A) Lombard test
 - B) Stenger test
 - C) Chimani-Moose test
 - D) Bing test
67. Treatment of dry traumatic rupture of tympanic membrane is:
- A) Antibiotic ear drops
 - B) Ear pack soaked with antibiotic
 - C) Myringoplasty
 - D) Protection of ear against water
68. Kinocilia is located
- A) In the saccule
 - B) In the utricle
 - C) Nearesr the tallest stereocilia
 - D) On top of hair cells

69. Kobrak test is a simple that is done when the patient in the upright position and head tilted back at a
- A) 90 degrees
 - B) 30 degrees
 - C) 60 degrees
 - D) 45 degrees
70. Variant of Menieres disease in which there is dramatic restoration of hearing agter acute attack of vertigo is called:
- A) Tumarkins crisis
 - B) Cogan syndrome
 - C) Rollet syndrome
 - D) Lermoyez syndrome
71. Cochlear implant is contraindicated in :
- A) Mondinis deformity
 - B) Alexander deformity
 - C) Bing- sibbermann deformity
 - D) Michels deformity
72. In trans-labyranthine approach for acoustic neuroma, spinal fluid may be decompressed by opening the
- A) Cochlear aqueduct
 - B) Vestibular aqueduct
 - C) Lamina cribrosa
 - D) Sigmoid sinus
73. A patient presents with acute facial palsy. The differential diagnosis include all except:
- A) Schwannoma
 - B) Lymes disease
 - C) Herpes zoster
 - D) Kawasaki disease
74. Which test can predict facial nerve function or return 2-3 months before clinical evidence of recovery:
- A) Nerve excitability test
 - B) Maximum stimulation test
 - C) Electromyography
 - D) Nerve conduction time

75. Plica Mallearis is
- A) Another name for anterior malleolar fold
 - B) Thin membrane connecting malleus and incus
 - C) Thin membrane connecting pars tensa to handle of malleus
 - D) Part of lateral malleolar ligament
76. Tensor tympani takes its origin from:
- A) Lesser wing of sphenoid
 - B) Greater wing of sphenoid
 - C) Body of sphenoid
 - D) Malleus
77. Arnold's nerve has contributions from all except:
- A) Facial nerve
 - B) Glossopharyngeal nerve
 - C) Accessory spinal nerve
 - D) Vagus nerve
78. Which of the following statement about rodent ulcer of pinna is incorrect:
- A) Most common site is tragus and border of helix
 - B) Typical appearance is raised plaque with rolled over edges
 - C) Associated with enlarged lymph nodes
 - D) Best treatment is surgery
79. True statement regarding keratosis obturans is:
- A) Choleastotoma like mass in middle ear
 - B) Can cause bone erosion
 - C) Associated with canal stenosis
 - D) Not associated with bronchiectasis
80. Causes of cochlear degeneration are all except:
- A) Release of enzymes from middle ear
 - B) Bony invasion of scala tympani
 - C) Circulatory changes due to abnormal bony foci
 - D) Damage to cochlea by toxic metabolites from abnormal bone

81. What is visible in grade 3 overhang of posrero-superior canal wall:
- A) Stapedius mucle
 - B) Include-stapedial joint
 - C) Pyramid
 - D) Stapes footplate
82. Deafness with normal pure tone audiometry is called:
- A) Paroxysmal auditory disorder
 - B) Rare auditory disorder
 - C) Uncommon auditory disorder
 - D) Obscure auditory disorder
83. Bill's island is:
- A) Vertical bone between facial and cochlear nerve at fundus of Internal auditory canal
 - B) Horizontal bone between facial & cochlear nerve at fundus of Internal auditory canal
 - C) Bone between ampulla of 3 semicircular canals
 - D) Bone preserved over sigmoid sinus performing translabyrinthine surgery
84. Cochlear implant map is:
- A) Structured flow chart containing preop workup & postop rehabilitation scheme
 - B) A program containing patient's dynamic range of hearing with cochlear implant
 - C) A schematic diagram comparing performance of implanted device over years
 - D) A map showing location of centers with facility of cochlear implantation
85. Alexander's law states :
- A) Intensity of spontaneous nystagmus is equal in both directions
 - B) Intensity of spontaneous nystagmus is stronger when looking up
 - C) Intensity of spontaneus nystagmus is stromger when looking in direction of nystagmus
 - D) Intensity of spontaneus nystagmus is stronger when looking down

86. BADGE (Bekeasy Ascending Descending gap evaluation) is a test for:
- A) Recruitment
 - B) Hypacusis
 - C) Malingering
 - D) Derecruitment
87. Conley surgical approach is called as:
- A) Midfacial degloving approach
 - B) Transmandibular approach
 - C) Transhyoid approach
 - D) Transzygomatic approach
88. In Gangosa there is:
- A) Shooting pain in nasal cavity
 - B) Burning pain in nasal cavity
 - C) Radiating pain to ear
 - D) No pain
89. In type I uncinat, the frontal ecess opens:
- A) Between uncinat and middle turbinate
 - B) Medial to middle turbinate
 - C) Between middle turbinate and septum
 - D) Between middle and inferior turbinate
90. In glycerol test I diagnosis of Meniere's diseases is suggestive when:
- A) A raise in threshold of atleast 2 dB
 - B) A raise in threshold of atleast 5 dB
 - C) raise in threshold of atleast 10 dB
 - D) Increased deafness
91. Expansion of nasal bridge with thickening and discolouration of skin is seen in:
- A) Lupus pernio
 - B) Wegener's granuloma
 - C) Yaws
 - D) Leprosy

92. 2% Acriflavin is used in the treatment of:
- A) Rhinoscleroma
 - B) Rhinosporidiosis
 - C) Leprosy
 - D) Syphilis
93. All are true about Jacobson's nerve except:
- A) Is a branch of superior ganglion of vagus nerve
 - B) Supplies middle ear
 - C) Supplies secretomotor fibres to parotid gland
 - D) Nerve sectioning relieves gustatory sweating
94. Jahrsdoerfer's criteria is used to:
- A) Grade patients with hyperostosis of external canal
 - B) Select patients of meatal atresia who will benefit from surgery
 - C) Classification of anomalies of pinna
 - D) Classification of anomalies of branchial cleft
95. Stimulation of which nerve doesn't cause referred otalgia:
- A) Buccal nerve
 - B) Descendence hypoglossi
 - C) Vagus nerve
 - D) Lingual nerve
96. Parasympathetic innervation of submandibular gland is by:
- A) Lesser petrosal nerve
 - B) Greater superficial petrosal nerve
 - C) Deep petrosal nerve
 - D) Facial nerve
97. Which is correct regarding physiological stimulation of saliva:
- A) Basal saliva secretion is primarily from parotid gland
 - B) Parasympathetic stimulation decreases salivary flow
 - C) Parotid gland contains mucinous glands
 - D) Salivary ionic content is modified by intercalated duct cells

98. What describes the best for physiology of olfaction:

- A) The primary neuron cell body of olfactory nerve is located in olfactory bulb
- B) Vomeronasal organ detects tactile for passing odorants
- C) Noxious stimuli from posterior nasal cavity are detected by 9th nerve
- D) Olfactory receptor neurons do not regenerate

99. Which statement is false:

- A) Lidocaine acts to reversibly block sodium channels in nerve fibre
- B) Lidocaine causes vasoconstriction when given subcutaneously
- C) Alcoholic cirrhosis can reduce metabolism of bupivacaine
- D) Local anesthetics with low pKa have faster onset of action

100. Which of the following muscle is not attached to mastoid:

- A) Digastric
- B) Temporalis
- C) Splenius capitis
- D) Anterior auricular muscle

ROUGH WORK

DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE TOLD TO DO SO

Booklet Serial No. 213825

Test Booklet Series

TEST BOOKLET
ORTHOPAEDICS
Written Test - 2023
(72)

A

Time Allowed: Two Hours

Maximum Marks: 100

INSTRUCTIONS

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET **DOES NOT** HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS, ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET.
2. Please note that it is the candidate's responsibility to encode and fill in the Roll Number and Test Booklet Series Code A, B, C or D carefully and without any omission or discrepancy at the appropriate places in the OMR Answer /Response Sheet. Any omission/discrepancy will render the Response Sheet liable for rejection.
3. You have to enter your Roll Number on the Test Booklet in the Box provided alongside. **DO NOT write anything else** on the Test Booklet.
4. This Test booklet contains 100 items (questions). Each item comprises of four responses (answers). You will select the response which you want to mark on the Answer Sheet/Response Sheet. In case you feel that there is more than one correct response, mark the response which you consider the best. In any case, choose **ONLY ONE** response for each item.
5. You have to mark all your responses **ONLY** on the separate Answer /Response Sheet provided. See directions in the Response Sheet.
6. All items carry equal marks.
7. Before you proceed to mark in the Answer /Response Sheet, the response to various items in the Test Booklet, you have to fill in some particulars in the Answer /Response Sheet as per instructions sent to you with your Admission Certificate.
8. After you have completed filling in all your responses on the Response Sheet and the examination has concluded, you should hand over to the Invigilator **only the Answer /Response Sheet**. You are permitted to take away with you the Test Booklet and **Candidate's Copy of the Response Sheet**.
9. Sheets for rough work are appended in the Test Booklet at the end.
10. While writing Centre, Subject and Roll No. on the top of the Answer Sheet/Response Sheet in appropriate boxes use **"ONLY BALL POINT PEN"**.
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(72) (A)/2023

[P.T.O.]

12-12-12

1. Which of the following is the most likely long term outcome of utilizing a cylindrical fully porous-coated femoral stem prosthesis for a patient with Dorr type A femoral morphology?
 - A) Proximal bone remodelling due to stress shielding
 - B) Loosening of femoral stem
 - C) Subtrochanteric fracture
 - D) Proximal femoral osteolysis

2. Which of the following statements is false regarding outcome with reference to pain in middle aged patients with mild to moderate degenerative osteoarthritis of knee?
 - A) Significant reduction in pain and improvement in quality of life of patients who undergo monitored physical therapy program
 - B) Monitored physical therapy showed reduction in pain equal to that of patients who were taking NSAIDs
 - C) Physical therapy provides long term relief and is sustained even after exercises are stopped
 - D) Land based physical therapy, including aerobic exercises and traditional strengthening are the mainstay to improve on pain and joint movements

3. Treatment of increasing painless flexible varus deformity following soft tissue correction of hallux valgus deformity in an young adult should be all except:
 - A) Shoe modification
 - B) Toe taping
 - C) Split extensor hallucis longus tendon transfer
 - D) 1st MTP joint cheilectomy

4. Which of the following is an indication for operative treatment of posterior wall operative treatment of posterior wall acetabular fracture?
 - A) Fracture displacement of 1mm
 - B) Instability of the posterior wall on stress radiographs
 - C) Femoral head congruent with acetabulum
 - D) No intra articular loose bodies

5. A young adult athlete sustained a minor direct injury to his knee 1 year after ACL reconstruction. He has a positive Lachman test and pivot on examination. Which of the following factors most likely contributed to his failure?
- Femoral fixation failure
 - Tibial fixation failure
 - Graft choice
 - Returning to sport soon
6. Treatment for traumatic spondylolisthesis of C 2-3(Hangman's fracture) Type-III is
- Rigid cervical collar
 - Halo vest for 12 weeks
 - Anterior instrumentation and arthrodesis
 - Posterior open reduction, instrumentation and arthrodesis
7. A 17 Year old male football player has posterior shoulder pain and sense of giving way that occurs with bench press and blocking. Physical examination reveals a Grade-2 posterior load shift and positive jerk tests. X rays are normal. Which of the following is the most appropriate operative approach for this pathology?
- Arthroscopic Bankart's repair
 - Arthroscopic posterior labral repair and capsuloraphy
 - Posterior opening wedge glenoid osteotomy
 - Open modified McLaughlin procedure
8. A 12 Year old boy with spina bifida has L-4 functional level. One year back his Lumbar X-rays showed 10 degree scoliotic curve. Recently the curve has progressed to 40 degrees. Which of the following is the next most appropriate step for this patient?
- Spine Magnetic Resonance imaging
 - Posterior spinal fusion
 - TLSO brace to halt the curve
 - Posterior spinal fusion with pelvic fixation
9. Which of the following is true regarding rigid locking plate constructs in fracture fixation?
- Locking plates always enhance fracture healing more than conventional plates
 - Locking plates reduce interfragmentary strain more than conventional plating
 - Locking plates are best utilised in diaphyseal fractures
 - Locking plates are contraindicated in patients with osteoporosis

10. Treatment of continuing 'locking' and flexion contracture of 20 degrees at PIP joint of index finger following 6 months old A-1 pulley release for triggering is:
- A) Resection of flexor digitorum profundus tendon
 - B) Resection of ligament of skoog (Transverse Ligament of palmar Aponeurosis)
 - C) Resection of slip of flexor digitorum superficialis tendon
 - D) Resection of volar metacarpophalangeal capsule
11. Which of the following radiographic features would most likely be present with adult dysplasia of the hip?
- A) Coxa valga
 - B) Increased sphericity of the femoral head
 - C) Increased acetabular retroversion with cross over sign
 - D) Lateral Ceter-Edge angle of 34 degrees
12. Evidence based initial treatment of patellofemoral pain without ligament instability and good range of movement
- A) Bracing
 - B) Low impact quadriceps strengthening exercises
 - C) Glucosamine chondroitin supplementation
 - D) Stem cell therapies
13. When compared with adult hallux valgus deformity, juvenile hallux valgus deformity is associated with higher percentage of which of the following postoperative occurrences?
- A) Osteonecrosis of first metatarsal head
 - B) Hallux varus
 - C) Hallux valgus recurrence
 - D) Infection
14. A chronic granulomatous infection characterised by subcutaneous masses, draining sinuses and presence of granules in exudates in the region of ankle and foot is caused by:
- A) Sporotrichosis
 - B) Mycobacterium marinum
 - C) Actinomycetoma
 - D) Clostridium tetani

15. There are 13 types of Ehlers-Danlos syndromes (EDs.) Which amongst the following is the most common type?
- A) Hypermobile EDs
 - B) Classical EDs
 - C) Vascular EDs
 - D) Kyphoscoliotic EDs
16. Hip abduction of >60 degrees in a spica cast given as treatment for Developmental Dysplasia of Hip causes:
- A) Better chances of containment
 - B) More chances of recurrence
 - C) Osteonecrosis of femoral head
 - D) Anterior dislocation of femoral head
17. Procedure to convert an off-track lesion to an on-track lesion with 30% glenoid bone defect is:
- A) Arthroscopic Bankart's repair
 - B) Open Latarjet procedure
 - C) Arthroscopic Bankart procedure plus remplissage
 - D) Open glenoid reconstruction with distal tibia allograft
18. Most common complication of minimally invasive surgery done for L5-S1 foraminal discherniation without any other spine abnormality is:
- A) Latrogenic instability requiring fusion
 - B) Incomplete decompression
 - C) Arterial injury
 - D) Retrograde ejaculation
19. Treatment of choice for chronic Achilles tendon rupture in a 40 year old athlete
- A) A low-profile ankle
 - B) Tendon debridement and repair
 - C) Achilles tendon repair with soft tissue augmentation as necessary
 - D) Physical therapy
20. Persistent pain and mobility at fracture site in a 2 year old conservatively managed fracture clavicle is more likely due to:
- A) Fracture non-union
 - B) Fracture malunion
 - C) Delayed fracture union
 - D) Refracture

21. Deep dissection to the hip using direct anterior approach utilises which of the following internervous intervals?
- A) Superior gluteal nerve and femoral nerve
 - B) Inferior gluteal nerve and femoral nerve
 - C) Femoral nerve and obturator nerve
 - D) Superior gluteal nerve and inferior gluteal nerve
22. A 70 year old female presents with isolated displaced femoral neck fracture with preexisting osteoarthritis of hip. She is otherwise active in life and used to walk independently prior to the fracture. Which of the following is the best management option for this patient?
- A) Open reduction and internal fixation with compression screws
 - B) Hemiarthroplasty
 - C) Sliding hip screws
 - D) Total hip arthroplasty
23. An 20 year old female athlete training for marathon presents with lower leg pain for the previous 3 monts. Pain is worse with activity and relieved with rest. BMI is 19kg/sqm. X rays demonstrate a defect of anterior cortex of tibia coinciding with the maximum tender point Which of the following options is the most appropriate treatment?
- A) Immobilisation
 - B) Activity modification
 - C) Tibia intramedullary nail
 - D) Gait analysis followed by Orthotics and physical therapy for running
24. A 55 year old male patient presents with a recent onset bilateral symmetrical diffuse hand numbness. He has no balance problems, His physical examination show 3+ deep tendon reflexes, Gr V motor power, normal gait, downgoing Babinski without clonus, MRI shows mild cord compression at C5-C6 from disc-osteophyte complex without signal changes in the cord. Which of the followings is the most appropriate next step for this patient?
- A) EMG/NCV studies for peripheral nerve disease
 - B) Anterior cervical discectomy and fusion
 - C) Physiotherapy
 - D) Laminectomy C5-C6
25. Advantage of arthroscopic Bankart's repair versus an open Bankart's repair?
- A) Lower risk of recurrent dislocation
 - B) Faster return to sports
 - C) Improved cosmesis with arthroscopy
 - D) Lesser surgical time

26. Most efficient tool to confirm/rule out syringomyelia in progressive scoliosis and abnormal reflexes in paediatric age group is:
- A) Physical examination only
 - B) Total spine Magnetic Resonance Imaging
 - C) Electromyography and nerve conduction study
 - D) CT scan with myelography
27. Which of the following factors increase the fracture risk in a patient with osteoporosis?
- A) Progressive thickening of the trabeculae in cancellous bone
 - B) Increased cortical perimeter of the long bones
 - C) Progressive increase in cortical porosity
 - D) Greater mineral hydroxyapatite crystal size heterogeneity
28. Specific classification system used for basilar thumb (1st CMC joint) arthritis
- A) Eaton and Litter
 - B) Kellgren and Lawrence
 - C) Broberg and Morrey
 - D) Watson and Ballet
29. Transfer metatarsalgia is caused by:
- A) Sesamoiditis
 - B) Hallux valgus
 - C) First MTP arthritis
 - D) All of the above
30. Treatment of choice for Stage I (early) degenerative arthritis of knee with 12 degrees varus alignment and no other chondral pathology in an active middle aged male otherwise surgically fit is:
- A) Osteoarticular transfer system (OATS)
 - B) Tibial medial opening wedge osteotomy
 - C) Arthroscopic debridement of medial tibio-femoral joint
 - D) Total knee replacement
31. APC Type 2 pelvic ring injury is best managed definitively by:
- A) Protected weight bearing
 - B) Posterior stabilization with plate alone
 - C) Anterior symphyseal plating with or without posterior stabilization
 - D) Posterior stabilization with sacroiliac screws alone

32. A 50 years old male presents with noninsertional Achilles tendinitis that has not been relieved even after around a year of intensive physiotherapy and rehabilitation. He has 10 degrees of ankle dorsiflexion both in extension and flexion of knee. MRI confirms the diagnosis of noninsertional tendinitis. Which of the following is the next step in management?
- A) Gastrocnemius recession
 - B) Achilles tendon debridement, calcaneal exostectomy and flexor hallucis transfer
 - C) Continued nonoperative treatment with aggressive physical therapy
 - D) Operative debridement of the Achilles tendon with or without a flexor hallucis longus transfer
33. Which of the following statements regarding odontoid fractures is false?
- A) Odontoid fractures are relatively common fractures of C-2 that can be seen in low energy falls in elderly patients and high energy traumatic injuries in younger patients
 - B) Odontoid fractures in octogenarians (>80 years) are associated with lesser morbidity and mortality compared to younger patients regardless of intervention
 - C) Treatment of odontoid fractures may be nonoperative or operative depending on type and risk factors for nonunion
 - D) MRI is rarely indicated as these fractures are usually not associated with neurologic symptoms
34. Which of the following is the best radiographic view for identifying a Hill-Sachs's defect?
- A) Stryker notch view
 - B) Grashey view
 - C) Scapular 'Y' view
 - D) West 'Y' view
35. Triad of painless limited neck range of motion, short neck and low posterior hairline is suggestive of:
- A) Os odontoideum
 - B) Congenital muscular torticollis
 - C) Sprengel shoulder
 - D) Klippel-Feil syndrome
36. Stem cells can be obtained from all of the following except:
- A) Bone marrow
 - B) Periosteum
 - C) Skeletal muscle
 - D) Synovial fluid

37. Recurrence of symptoms after release of De Quervain's tenosynovitis with negative Tinel sign and normally appearing skin should be due to:
- A) Complex regional pain syndrome
 - B) Failure to decompress the EPL sub-sheath
 - C) Failure to decompress the EPB sub sheath
 - D) Failure to decompress the APB sub-sheath
38. Intermetatarsal angle (IMA) is a radiographic measurement used in hallux valgus. Normal IMA is:
- A) 15 degrees
 - B) <9 degrees
 - C) >9 degrees
 - D) <15 degrees
39. The presence of contiguous central meniscus on three consecutive slices of MRI scan of knee is suggestive of:
- A) Horizontal tear
 - B) Bucket-handle tear
 - C) Complex tear
 - D) Discoid meniscus
40. The interval between piriformis tendon and posterior border of gluteus minimus is identified and sharply dissected in:
- A) Watson Jones approach
 - B) Safe surgical dislocation of hip
 - C) Modified Gibson's approach
 - D) Kocher-Langenbeck approach
41. All of the following are true regarding acute traumatic posterior sternoclavicular joint dislocation except:
- A) The medial aspect of clavicle could likely press against vital organs
 - B) In all cases the joint is pinned situ irrespective of the clinical presentation
 - C) Emergent closed or open reduction of the dislocated joint would be necessary in some cases
 - D) Even in case patient complaints of choking and hoarseness of voice urgent swallowing study is not required

42. Operative treatment indicated in Golfer's elbow not relieved by non-operative methods is
- A) Ulnar collateral ligament reconstruction
 - B) Open debridement and reattachment of flexorpronator mass
 - C) Elbow arthroscopy and ulnar collateral ligament repair
 - D) Release of brachioradialis, ECRL and ECRB
43. Which of the following statements is false regarding role of epidural steroids in radiculopathy associated with spinal stenosis?
- A) Its use is associated with immediate reduction in pain and function
 - B) Benefits were large and sustained
 - C) There is no effect on long-term surgery risk
 - D) It has limited/no effectiveness for cord symptoms of spinal stenosis
44. Which is not a deep heat therapy?
- A) Shortwave diathermy
 - B) Infrared therapy
 - C) Microwave therapy
 - D) Local ultrasound
45. Clinical test to identify external snapping hip syndrome
- A) Log roll test
 - B) Scour test
 - C) Ober's test
 - D) Stinchfield test
46. Prognosis after secondary nerve suturing is better in pure than in mixed ones, Based on this criterion, which one of the following nerves should be given the best result after suturing in identical conditions?
- A) Common peroneal nerve
 - B) Radial nerve
 - C) Ulnar nerve
 - D) Median nerve

47. CTS-6 diagnostic tool used for carpal tunnel screening includes all except
- A) Numbness predominantly in median nerve distribution
 - B) Diurnal symptoms preceding nocturnal symptoms
 - C) Thenar atrophy or weakness
 - D) Loss of 2 point discrimination
48. Extension at DIP joint, flexion at PIP joint and slight extension at MTP joint is seen in:
- A) Claw toe
 - B) Hammer toe
 - C) Mallet toe
 - D) Curly toe
49. A 71 year old male patient presents with right knee pain. He has correctable 7 degree varus deformity and minimal flexion contracture. He is of moderate build and reports being minimally active. Radiographs show complete loss of joint space in the medial compartment. Non-operative measures to control pain have been unsuccessful. Which of the following is the best operative option?
- A) Arthroscopy
 - B) High tibial osteotomy
 - C) Unicompartamental knee arthroplasty
 - D) Knee arthrodesis
50. A patient undergoes total hip arthroplasty using a direct lateral (modified Hardinge) approach. Postoperatively, the patient notes a persistent limp and ambulates with a Trendelenburg gait. This outcome may have been caused by which of the following?
- A) Dissection through the iliotibial band
 - B) Excessive soft tissue dissection proximal to the greater trochanter
 - C) Release of the indirect head of the rectus femoris
 - D) Femoral nerve palsy
51. Which of the following congenital conditions is caused by glycine substitution/deletion in the procollagen molecule?
- A) Diastrophic dysplasia
 - B) Fibrous dysplasia
 - C) Ochronosis (alkaptonuria)
 - D) Osteogenesis imperfecta

52. A 24 year old male patient presents to the emergency department after being involved in a high speed motor vehicle collision and is diagnosed with a femoral shaft fracture. Which of the following is considered the gold standard of fixation for this type of fracture?
- A) Reamed, locked intramedullary nail
 - B) External fixation
 - C) Plate and screw fixation
 - D) Unreamed locked antegrade nail
53. A 20 year old male patient who is a college football player is seen of the sideline after sustaining a direct blow to the front of the left hip. He has a small hematoma and swelling adjacent to his anterior superior iliac spine, No crepitus is noted on palpation. His examination demonstrates limitations in hip strength and range of motion. Which of the following is the best next step in management?
- A) Ice, protective padding and return to play as tolerated
 - B) Radiograph of the pelvis before return to play
 - C) Computed tomography scan of the pelvis before return to play
 - D) Ice and restrict to play
54. Initial treatment of stable osteoporotic compression fractures should be
- A) Vertebroplasty
 - B) Thoracolumbosacral orthotics and physical therapy
 - C) Pain management and reevaluation
 - D) Operative decompression and posterior fusion
55. Criteria for acceptable reduction in non-operative treatment of closed fracture shaft humerus include all except:
- A) 20 degrees of anterior angulation (bowing)
 - B) Less than 30 degrees of varus valgus angulation
 - C) 25 degrees of rotation
 - D) Less than 3 cms of shortening
56. Characteristic feature of Gustilo Anderson type III A fracture is:
- A) Extensive soft tissue injury with periosteal stripping
 - B) Major wound contamination
 - C) Adequate soft tissue cover of bone despite extensive soft tissue damage
 - D) Comminuted fracture not permitting anatomic reduction

57. Which of the following best describes a cell and its phenotypic characteristics?
- A) Osteocytes are rounded inactive cells immobilized in mature bone
 - B) Chondrocytes are rounded cells with low metabolic rate found in collagen type II-rich matrix in cartilage
 - C) Osteoblasts comprise the majority of bone cells
 - D) Osteocytes are small discoid cells found on the surface of bone
58. All of the following are features of lumbricals of the hand except:
- A) Lumbricals are four small worm like muscles attached proximally to tendons of flexor profundus and distally to extensor expansion
 - B) The first and second lumbricals are supplied by the median nerve while the third and fourth are supplied by ulnar nerve
 - C) Lumbricals flex the metacarpophalangeal joints and extend the interphalangeal joints
 - D) Unlike the dorsal interossei, all lumbrical muscles are bipennate
59. After arthroscopic shoulder surgery a 45 year old male develops pain, weakness and decreased sensation over the lateral arm and shoulder. If this injury was due to portal placement, which of the following portals would be the most likely cause?
- A) Lateral superior
 - B) Posterior superior
 - C) Anterior portal
 - D) Posterior inferior
60. Which of the following statements is false regarding enchondroma?
- A) Enchondroma is one of the most common benign bone tumor
 - B) Males and females are equally affected
 - C) Infrequently they are symptomatic causing soft tissue swelling and less likely pain at the lesion site
 - D) Treatment is largely operative in form of curettage
61. Which of the following is the most common type of Monteggia fracture pattern in adults?
- A) Bado type 1
 - B) Bado type 2
 - C) Bado type 3
 - D) Bado type 4

62. In acute ankle sprain which of the following ligaments is injured most commonly?
- A) Anterior talofibular ligament
 - B) Calcaneofibular ligament
 - C) Posterior talofibular ligament
 - D) Deltoid ligament
63. Which of the following statements about the lateral femoral cutaneous nerve is true?
- A) Inadvertent sacrifice of the nerve during surgical dissection does not lead to any complication
 - B) Root value of the nerve is L5-S1
 - C) Courses under the inguinal ligament and pierces the fascia lata
 - D) It is absent in 50% of the general population
64. FRAX[®] in relation to orthopaedics stands for:
- A) Femoral reaming and nailing
 - B) Fibular resection and grafting
 - C) WHO fracture risk assessment tool
 - D) Forearm anterior and posterior x ray
65. Early postoperative physiotherapy is recommended after arthroscopic repair of rotator cuff tendon. When compared with an early range-of-motion protocol, a more prolonged immobilization protocol, a more prolonged immobilization protocol may lead to postoperatively?
- A) No difference in range of motion or VAS pain scores at 6 months
 - B) Higher re-tear rates and lower satisfaction scores
 - C) Worse stiffness and more pain
 - D) Lower VAS pain scores
66. Damage control orthopaedic treatment in cases of multiple fractures would be like:
- A) Open reduction and internal fixation of all fractures
 - B) Intramedullary nailing of long bone fractures and splinting of other fractures
 - C) External fixation of all fractures till early signs of fracture union
 - D) External fixation of all fractures with definitive fixation when general condition permits
67. Boxer's fracture is:
- A) Fracture of head of 5th metacarpal
 - B) Fracture of neck of 5th metacarpal
 - C) Fracture of shaft of 5th metacarpal
 - D) Fracture of base of 5th metacarpal

68. All of the following are true about spinal shock except:
- A) It is physiological response to acute spinal cord injury
 - B) All reflexes below the level of injury are absent
 - C) Hypertonia and spastic muscle paralysis below the level of injury is characteristic
 - D) Resolution is defined as appearance of bulbocavernosus reflex and/or anal wink
69. Comma sign in magnetic resonance arthrogram of shoulder is suggestive of:
- A) Failure of superior glenohumeral ligament leading to instability of long head of biceps tendon
 - B) Tear of anterior inferior labrum and inferior glenohumeral ligament from the glenoid
 - C) Tear of anterior band of inferior glenohumeral ligament from proximal humeral attachment
 - D) Posterior dislocation following tear of posterior inferior capsule
70. Known complication of Pavlik harness used for hip dysplasia is:
- A) Avascular necrosis of hip
 - B) Femoral nerve palsy
 - C) Loss of adduction of hip
 - D) Limb length discrepancy
71. Which of the following are characteristic radiographic signs of inflammatory arthritis?
- A) Subchondral sclerosis
 - B) Marginal erosions
 - C) Medial side joint space narrowing
 - D) Large periarticular osteophytes
72. Haglund deformity is best defined as:
- A) It is tumour like enlargement of Achilles tendon
 - B) Swelling on the back of heel due to chronic osteomyelitis of calcaneum
 - C) An enlargement of postero-superior tuberosity of the calcaneus due to chronic inflammation of retro-calcaneal bursa
 - D) A benign tumour presenting as bony mass on the heel arising from calcaneum
73. Reconstruction procedure in a case of comminuted fracture of the inferior pole of patella (5 fragments, 40% of patella) would be:
- A) Total patellectomy
 - B) Encerclage wiring
 - C) Cannulated screw fixation
 - D) Inferior pole patellectomy with suturing of patellar tendon to the proximal part

74. Which of the following is not an independent predictor used in the Thoraco Lumbar injury Classification and Severity (TLICS) score?
- A) Injury morphology
 - B) Level of injury
 - C) Posterior ligamentous complex status
 - D) Neurologic status
75. True statement about chondromalacia of patella:
- A) Symptoms include dull aching pain or discomfort localized to anterior knee, which is most prominent after sitting in one position for a long time
 - B) Early surgery is preferred over conservative treatment to halt or slow the progression of disease
 - C) In contrast to osteoarthritis of knee where initial changes occur in ground substance in the deep level of cartilage, initial changes of chondromalacia occur in surface of the cartilage
 - D) It occurs after acute septic arthritis
76. Growth abnormality of which structure leads to madelung deformity?
- A) Distal ulnar physis
 - B) Carpal bones of proximal row
 - C) Palmar part of distal radial physis
 - D) Both distal radius and distal ulnar physis
77. A carpenter has chronic pain over lateral aspect of elbow. He has pain while using the hammer. He has pain with restricted wrist extension while the elbow is fully extended. Which muscle is more likely involved?
- A) Supinator
 - B) Extensor carpi radialis brevis
 - C) Brachioradialis
 - D) Extensor carpi radialis longus
78. Progressive weakness and wasting of muscles is characteristic of muscular dystrophies. Which amongst the following dystrophies has fast progression effectively decreasing the survival of the affected?
- A) Duchenne
 - B) Becker
 - C) Emery-Dreifuss
 - D) Limb-girdle

79. All of the following are valid interventions that help restore anatomic limb length during total hip arthroplasty except
- A) Pre-op clinical and radiographic assessment of limb length
 - B) Use of arthroplasty system incorporating variable neck length
 - C) Intra-op assessment of limb length using markers
 - D) Alteration of femoral offset to correct length
80. Metastatic bony lesions that occur distal to the elbow or knee are most likely to originate from which one of the following primary organ?
- A) Breast
 - B) Lung
 - C) Prostate
 - D) Uterus
81. Which of the following best describes the mechanical and biochemical changes leading to the development of fat embolism syndrome following a fracture?
- A) Cytokines invade lung tissue, causing microvasucular blood clots
 - B) Hematopoietic particles embolize to the lungs, causing mechanical blockage and local tissue necrosis
 - C) Acidic lipid particles embolize to the lungs, causing mechanical blockage and local inflammation
 - D) Lipids are released into the microvascular system
82. Which of the following best describes the comparison of medial parapatellar approach with the subvastus approach for total knee arthroplasty?
- A) Lower lateral release rates with subvastus approach
 - B) Better range of motion at 1 year with the medial parapatellar approach
 - C) Better straight leg raising at 1 year with the medial parapatellar approach
 - D) Worse range of motion at 1 week with the subvastus approach?
83. Virchow's triad is associated with formation of thrombi. Which of the following is not a reason for the development of thromboembolism in joint replacement surgeries?
- A) Hemolysis leading to platelet dysfunction
 - B) Patient positioning, limb swelling and reduced mobility
 - C) Endothelial damage during limb manipulation intra operatively
 - D) Blood loss leading to fall in antithrombin iii

84. Which of the following laboratory values would be consistent with nutritional rickets?
- A) Increased calcium level
 - B) Increased phosphate level
 - C) Low alkaline phosphatase levels
 - D) Increased parathyroid hormone level
85. Which of the following are the differences between cemented and cementless fixation of the femoral component after total hip arthroplasty?
- A) Cementless fixation has superior outcomes with regards to wear
 - B) Cemented fixation has superior outcomes and survivorship
 - C) Cemented fixation has higher incidence of periprosthetic fracture
 - D) Cemented fixation has a higher incidence of periprosthetic fracture
86. Optimal treatment to maximize functional outcome in both bone forearm fractures in adults to restore length, rotation, alignment and interosseous space is
- A) Long arm cast
 - B) Closed reduction with percutaneous intramedullary fixation of both fractures
 - C) Open reduction and internal fixation with plates for both bones
 - D) Open reduction plate fixation for ulnar fracture with percutaneous intramedullary fixation of the radial fracture
87. Which of the following is the most common complication following operative management of a recurrent disc herniation?
- A) Different level reherniation
 - B) Dural tear
 - C) Postoperative infection
 - D) Permanent nerve injury
88. Which of the following is a critical step during the reoperative phase of secondary bone healing?
- A) Primary osteonal remodelling
 - B) Restoration of medullary canal
 - C) Soft callus formation
 - D) Formation of fracture hematoma

89. Traditional mechanical axis total knee arthroplasty involves which of the following?
- A) Restoring the hip-knee-ankle axis to pass through 62% coordinate of the knee as measured from medial to lateral on the tibia
 - B) Placement of the femoral implant parallel to the transepicondylar axis in proper flexion and with appropriate extension space balancing
 - C) Performing the distal femoral resection perpendicular to the anatomic axis of the femur
 - D) Cutting the tibia into 3 degrees on natural varus in order to preserve the native joint line and cutting the femur in 9 degrees of valgus
90. What is Pellegrini Stieda lesion seen around the knee?
- A) Calcification at femoral attachment of medial collateral ligament
 - B) Calcification at femoral attachment of lateral collateral ligament
 - C) Femoral avulsion of medial collateral ligament
 - D) Femoral avulsion of lateral collateral ligament
91. Which of the following would be the ideal implant for revision of a mechanically failed intramedullary fixation of intertrochanteric fracture?
- A) Revision cephalomedullary nail
 - B) Locking proximal femoral plate
 - C) Sliding hip screw
 - D) Angled blade plate
92. Bone is biomechanically weakest to resistance of which of the following forces?
- A) Tension
 - B) Compression
 - C) Shear
 - D) Centrifugal
93. Which of the following is considered a trauma related risk factor for radio-ulnar stenosis?
- A) Galeazzi fracture
 - B) Chest trauma
 - C) Fractures of the radius and ulna at different levels
 - D) Comminuted fracture of radius and ulna

94. Which of the following radiographic characteristics helps distinguish between tuberculosis from pyogenic spinal infections?
- A) Tuberculosis spinal infection is generally not associated with bone collapse and spinal deformity
 - B) The disc is relatively resistant to tuberculosis infection and often preserved until late in the infectious process despite extensive bone destruction
 - C) Presence of instrumented spinal fusion is a common risk factor of tuberculosis spinal infection
 - D) Isolated anterior column involvement is extremely rare for a tuberculosis spinal infection
95. Milking maneuver for integrity of ulnar collateral ligament of the elbow includes all the below steps except:
- A) Forearm supinated fully
 - B) Elbow flexed beyond 90 degrees
 - C) Thumb is pulled laterally producing a valgus force on the elbow
 - D) The patient then resists supination of forearm and flexion of elbow
96. Which amongst the following skeletal conditions is not typically of patients with Down's syndrome?
- A) Hypoplasia of the middle phalanx and clinodactyly of small fingers
 - B) Hypermobility of joints
 - C) Atlantoaxial instability
 - D) Kyphoscoliosis
97. Intra-articular injection of corticosteroids is a risk for which of the following if operative treatment is planned within 3 months?
- A) Intra-operative periprosthetic fracture
 - B) Prolonged length of hospital stay
 - C) Dislocation/instability
 - D) Infection
98. All of the following are common sites for Giant cell tumor of bone except
- A) Posterior elements of spine
 - B) Sacrum
 - C) Distal radius
 - D) Proximal tibia

99. A 72 year old male presents with an unstable inter-trochanteric hip fracture. When considering fixation constructs for this patient's injury, arthroplasty would be recommended to prevent which of the following complications associated with fixation using a cephalomedullary nail?
- A) Deep venous thrombosis
 - B) Excessive shortening
 - C) Increased blood loss
 - D) Higher mortality risk
100. A 70 year old female presents with severe lumbar stenosis undergoes an L4-S1 laminectomy. She does well and improves. However, 6 months post operatively she starts to develop similar symptoms. Examination reveals a well-healed incision. Which of the following is the appropriate next step?
- A) Refer to physical therapist
 - B) Pain management and epidural injections
 - C) Magnetic resonance imaging (MRI) with and without contrast
 - D) Computed tomography scanning
-

ROUGH WORK

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A

Written Test - 2023
(61)

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(61) (A)/2023

[P.T.O.]

SCHEMATIC

1. The treatment of choice in a patient who has developed gram negative folliculitis while on long term azithromycin for acne is:
 - A) Ciprofloxacin
 - B) Amoxicillin + clavulanic acid
 - C) Dapsone
 - D) Isotretinoin

2. 38-year-old woman who gave history of severe colicky abdominal pain for the last 3 years for which she was self-injecting developed very indurated unevenly thickened plaques on the shins and dorsal aspect of feet. At several places the plaques had ulcerated. The most likely diagnosis in her is:
 - A) Erythema induratum
 - B) Erythema nodosum
 - C) Pentazocine induced ulcers
 - D) Pancreatitis induced panniculitis

3. The index of UPF is related to:
 - A) Sun protection of organic sunscreens
 - B) Sun protection of inorganic sunscreens
 - C) Sun protection of clothing
 - D) Sun protection of clothes

4. A common prototype of a lenitive is:
 - A) Lotio calamine
 - B) Aluminium acetate
 - C) Aluminium chloride
 - D) Potassium hydroxide

5. Ventral pterygium is seen in
 - A) Lichen planus
 - B) Lichenoid eruption
 - C) Psoriasis
 - D) Raynauds phenomenon

6. Chronic telogen effluvium is characterized by:
 - A) Anagen: telogen ratio of 8:1
 - B) Anagen: telogen ratio of 14:1
 - C) Terminal hair: vellus hair ratio of 8:1
 - D) Terminal hair: vellus hair ratio of 1.8:1

7. Cranial nerves involved with Meischer's cheilitis include all except:
- A) Facial nerve
 - B) Optic nerve
 - C) Olfactory nerve
 - D) Auditory nerve
8. A 70-year-old male patient presents with a 7-year history of indolent erythematous glazed plaque on the glans. Biopsy revealed lozenge shaped keratinocytes. The most likely diagnosis in him is:
- A) Erythroplasia of Queryat
 - B) Fixed drug eruption
 - C) Plasma cell balanitis
 - D) Psoriasis
9. A woman in 3rd trimester of pregnancy presents with an extremely itchy rash of urticated plaques on the trunk, typically sparing the umbilicus. The effect this dermatosis would have on her fetus:
- A) No effect
 - B) New born will have a bullous eruption
 - C) New born will have heart block.
 - D) Premature birth
10. The most frequently used tool for assessing quality of life impairments in dermatology patients is
- A) Skindex
 - B) Dermatology life quality index
 - C) Dermatology QOL scale
 - D) Dermatology specific QOL instrument

11. The levels of which enzyme predict increased susceptibility to myelosuppression of azathioprine:
- A) Low levels of G6PD
 - B) Low levels of TPMT
 - C) High levels of TPMT
 - D) High levels of G6PD
12. The drug which is orally effective in treatment of post kala azar dermal leishmaniasis is:
- A) Potassium antimony tartarate
 - B) Liposomal amphotericin
 - C) Miltofosine
 - D) Albendazole
13. A rare but serious side effect with use of high doses of clofazimine is
- A) Pulmonary interstitial fibrosis
 - B) Eosinophilic enteritis
 - C) Lobular hepatitis
 - D) Necrotizing pancreatitis
14. The amount of potassium iodide required to make a saturated solution is approximately:
- A) 200g/100mL
 - B) 100g/100 mL
 - C) 50g/100 mL
 - D) 75g/100mL
15. The duration of contraception advised in females taking acitretin is:
- A) 1 month after stoppage of therapy
 - B) 3 months after stoppage of therapy
 - C) 12 months after stoppage of therapy
 - D) 24 months after stoppage of therapy

16. Laser most suitable for treating a vascular malformation in a child is
- A) 585nm pulse dye laser
 - B) 595 nm pulse dye laser
 - C) Carbon di oxide laser
 - D) IPL
17. Laser most suited for epilation in patients with pigmented skin is
- A) 1064 nm Nd:YAG with cooling device
 - B) 595 nm pulse dye laser
 - C) Diode laser
 - D) IPL
18. Laser most suitable for treating nevus of Ota is:
- A) Q switched Nd:YAG laser
 - B) 595 nm pulse dye laser
 - C) Q switched ruby laser
 - D) IPL
19. The laser most suitable for removing green pigment of a tattoo
- A) Q switched Nd:YAG laser
 - B) 595 nm pulse dye laser
 - C) Q switched ruby laser
 - D) IPL
20. An important side effect of topical EMLA in children is:
- A) Allergic dermatitis
 - B) Anaphylaxis
 - C) Irritant dermatitis
 - D) Methemoglobinemia

21. Eflornithine is a
- A) Reversible inhibitor of ornithine decarboxylase
 - B) Irreversible inhibitor of ornithine decarboxylase
 - C) Reversible blocker of tyrosinase
 - D) Reversible blocker of tyrosinase
22. Fournier's gangrene is:
- A) Necrotizing fasciitis of the genitalia
 - B) Eosinophilic fasciitis of the genitalia
 - C) Cellulitis of the genitalia
 - D) Vascular occlusion syndrome
23. Trachyonychia in children is characterized by:
- A) Roughened nails with onycholysis
 - B) Roughened surface of nail with thickening
 - C) Roughened surface of the nail with discoloration
 - D) Self-limiting roughening of the nail
24. Uncombable hair syndrome is characterized by:
- A) Pili trianguli et canalculi
 - B) Pili trianguli
 - C) Pili canalculi
 - D) Pili torti
25. Conditioners are based on:
- A) Cationic chemicals
 - B) Anionic chemicals
 - C) Amphoteric chemicals
 - D) Neutral chemicals

26. One fingertip unit of ointment in an adult weigh:
- A) 1-2 g
 - B) 0.1-0.2 g
 - C) 0.4-0.5 g
 - D) 0.7-0.8 g
27. In nail patella syndrome the digit nail most severely affected is:
- A) Little finger
 - B) Ring finger
 - C) Middle finger
 - D) Thumb
28. In pachyonychia congenita the defect involves:
- A) Keratin gene
 - B) MHC class I gene
 - C) MHC class II gene
 - D) PSOR gene
29. In Graham Little syndrome the findings in scalp include:
- A) Non scarring alopecia
 - B) Cicatricial alopecia
 - C) Frontal sclerosing alopecia
 - D) Tufted folliculitis
30. A middleaged patient complains of a very tender, ulcerated nodule over the helix. The most likely diagnosis in him is:
- A) Multicentric histiocytosis
 - B) Calcification of the pinna
 - C) Chondrodermatitis nodularis
 - D) Solar keratosis
31. Major criteria of Behcets syndrome include:
- A) Recurrent painful genital ulcers, erythema nodosum, pathergy test,
 - B) Recurrent aphthous stomatitis, arthralgia, thrombophlebitis
 - C) Recurrent genital ulcer, aneurysms, hematuria
 - D) Recurrent aphthous stomatitis, arthralgia and hematuria

32. Adequate quantity of sunscreen applied over skin is:
- A) $1\text{mg}/\text{cm}^2$
 - B) $2\text{mg}/\text{cm}^2$
 - C) $4\text{mg}/\text{cm}^2$
 - D) $6\text{mg}/\text{cm}^2$
33. Ichthammol is a
- A) Wood tar
 - B) Coal tar
 - C) Shale tar
 - D) Synthetic tar
34. Sunscreen useful in porphyrias is:
- A) Dibenzoyl methane
 - B) Cinnamates
 - C) Salicylates
 - D) PABA
35. The depilatory most frequently used to remove facial hair is:
- A) Strontium sulphide
 - B) Barium sulphide
 - C) Thioglycollic acid
 - D) Substituted mercaptans
36. The most effective emollient is:
- A) Coconut oil
 - B) Cream containing tocopherol
 - C) White soft paraffin
 - D) Olive oil
37. Eczema herpeticum is caused by
- A) Herpes simplex virus
 - B) Varicella zoster virus
 - C) Vaccinia virus
 - D) All of the above

38. "Slapped cheek" appearance is characteristic of
- A) Kawasaki disease
 - B) Erythema infectiosum
 - C) Chikungunya
 - D) Rubella
39. The following photosensitive disorder occurs more frequently in men
- A) Polymorphous light eruption
 - B) Actinic prurigo
 - C) Solar urticaria
 - D) Chronic actinic dermatitis
40. Immediate tanning of irradiated skin is mediated by the following wave band
- A) UV-A
 - B) UV-B
 - C) UV-C
 - D) Visible light
41. The recommended initial treatment for frostbite is :
- A) Rapid rewarming in very hot water
 - B) Rapid rewarming in warm water
 - C) Slow rewarming
 - D) Rubbing the affected part with snow or ice
42. Primary Raynaud's phenomenon is associated with:
- A) Cold intolerance since childhood
 - B) Nailfold telangiectasias
 - C) Presence of antinuclear antibody
 - D) Asymmetrical involvement of upper limbs
43. During gestation, eccrine glands develop earliest at the following site:
- A) Scalp
 - B) Axilla
 - C) Palm
 - D) Abdomen
44. Epidermal stem cells are located in the:
- A) Basal layer
 - B) Follicular bulge
 - C) Follicular matrix
 - D) Eccrine duct

45. Cholesterol biosynthesis in the epidermis occurs predominantly in the following layer
- A) Stratum corneum
 - B) Stratum granulosum
 - C) Stratum spinosum
 - D) Stratum basale
46. Racquet shaped granules are an ultramicroscopic feature of
- A) Langerhans cells
 - B) Merkel cells
 - C) Mast cells
 - D) Melanocytes
47. The barrier function of the epidermis is served by the following layer:
- A) Stratum corneum
 - B) Stratum granulosum
 - C) Stratum spinosum
 - D) Stratum basale
48. Cholesterol sulfate is maximally present in the following layer of the epidermis
- A) Stratum corneum
 - B) Stratum granulosum
 - C) Stratum spinosum
 - D) Stratum basale
49. The coral pink fluorescence of erythrasma under Wood's light is due to the presence of
- A) Pyocyanin
 - B) Furocoumarin
 - C) Salicylanilide
 - D) Porphyrin
50. Porphyrins are absent in urine in the following type of porphyria
- A) Congenital erythropoietic porphyria
 - B) Erythropoietic protoporphyria
 - C) Porphyria cutanea tarda
 - D) Variegate porphyria

51. The Alcian blue stain is used to identify the following component in the skin
- A) Glycogen
 - B) Mucopolysaccharide
 - C) Elastin
 - D) Calcium
52. The immunohistochemical marker used to identify cells showing histiocytic differentiation is
- A) CD3
 - B) CD20
 - C) CD31
 - D) CD68
53. The histopathological finding of a thickened basement membrane on skin biopsy is a feature of
- A) Sjogrens syndrome
 - B) Systemic sclerosis
 - C) Dermatomyositis
 - D) Generalised morphea
54. Transverse sectioning of skin biopsies is a useful technique for the evaluation of
- A) Alopecias
 - B) Granulomatous disorders
 - C) Panniculitis
 - D) Skin appendageal tumours
55. Thalidomide is contraindicated in the treatment of
- A) Lichen planus hypertrophicus
 - B) Erythema elevatum divinum
 - C) Epidermolyses bullosa simplex
 - D) Toxic epidermal necrolysis
56. In patients who have NSAID induced urticaria, the following NSAID can be used safely
- A) Ibuprofen
 - B) Acetyl salicylic acid
 - C) Naproxen
 - D) Etoricoxib

57. The mechanism of action of mycophenolate mofetil as an immunosuppressive agent is very similar to that of
- A) Corticosteroids
 - B) Methotrexate
 - C) Azathioprine
 - D) Cyclophosphamide
58. The most reliable test for suspected food allergy is
- A) Diet diary
 - B) Skin prick tests
 - C) Radio allergosorbent test (RAST)
 - D) Challenge test
59. In immunodeficiency disorders, candidiasis is associated with defects in the function of
- A) T cells
 - B) B cells
 - C) Neutrophils
 - D) Complement
60. Anti C1q antibodies are a feature of the following type of vasculitis:
- A) Henoch Schonlein purpura
 - B) Hypocomplementemic urticarial vasculitis
 - C) Churg Strauss syndrome
 - D) Wegener's granulomatosis
61. Sterile maggots of the following fly are used for debridement of wounds
- A) Blowfly
 - B) Tumbu fly
 - C) Green bottle fly
 - D) Flesh fly
62. Lines of Blaschko represent the distribution of
- A) Nerve supply
 - B) Lymphatic channels
 - C) Blood supply
 - D) Developmental growth pattern
63. The proportion of patients with neurofibromatosis who represent sporadic cases due to new mutations is
- A) 25%
 - B) 50%
 - C) 75%
 - D) >90%

64. Multiple sebaceous tumors are a feature of
- A) Gardner's syndrome
 - B) Cowden's syndrome
 - C) Muir-Torre syndrome
 - D) Turcot's syndrome
65. Reticulate pigmentation, nail dystrophy and oral leukoplakia are features of the following syndrome
- A) Dyskeratosis congenita
 - B) Rothmund Thompson syndrome
 - C) Cockayne syndrome
 - D) Bloom syndrome
66. Dystrophic epidermolysis bullosa is caused by mutations in the following gene
- A) Laminin 5 gene
 - B) Plectin gene
 - C) Type VII collagen gene
 - D) Keratin K14 gene
67. The histopathological appearance of subcutaneous fat necrosis of the newborn closely resembles that seen in
- A) Post steroid panniculitis
 - B) Erythema induratum
 - C) Lipodermatosclerosis
 - D) Lupus panniculitis
68. Localised scarring of a limb associated with hypoplasia is a feature of
- A) Antenatal exposure to methimazole
 - B) Fetal varicella syndrome
 - C) Congenital polychlorinated biphenyl (PCB) poisoning
 - D) Intrauterine toxoplasmosis
69. A skin biopsy from an epidermal nevus revealed vacuolar degeneration of keratinocytes in the granular layer and the underlying cells of the spinous layer. The most likely diagnosis is
- A) Linear Darier's disease
 - B) Linear Hailey-Hailey disease
 - C) Linear porokeratosis
 - D) Linear epidermolytic hyperkeratosis

70. All of the following are complications of infantile hemangiomas except
- A) Ulceration
 - B) Infection
 - C) Malignant change
 - D) Heart failure
71. Flash lamp pumped pulsed dye laser is effective in the treatment of
- A) Port wine stain
 - B) Infantile hemangioma
 - C) Tufted angioma
 - D) Cavernous hemangioma
72. Elevated IgE levels in the blood are seen in the following proportion of patients with atopic dermatitis
- A) <10%
 - B) 40%
 - C) 80%
 - D) >90%
73. A 29-year-old man developed erythema followed by hyperpigmented scaling with superficial fissuring strictly beneath his vest, following a long train journey in summer. The likely diagnosis is
- A) Detergent dermatitis
 - B) Clothing dermatitis
 - C) Frictional sweat dermatitis
 - D) Miliaria rubra
74. Allergic contact dermatitis to the following metal is commoner in men than in women.
- A) Nickel
 - B) Cobalt
 - C) Chromium
 - D) Gold
75. The depigmenting agent in "bindi" adhesive is
- A) Hydroquinone
 - B) Monobenzyl ether of hydroquinone
 - C) Paratertiary butyl phenol
 - D) Paratertiary butyl catechol

76. A 25-year-old man presented with the sudden onset of black macules on his feet over a few days. Biopsy revealed a yellowish-brown material in the stratum corneum. The likely diagnosis is:
- A) Black piedra
 - B) Tinea nigra
 - C) Black heel
 - D) Argyria
77. The following acids have been used in chemopeeling except
- A) Carboxylic acid
 - B) Phosphoric acid
 - C) Kojic acid
 - D) Trichloroacetic acid
78. An 18-year old female presented with pigmentation of acne scars. She had been treated with various antibiotics like tetracyclines, doxycycline, minocycline and azithromycin. The antibiotic most likely to have caused the pigmentation is:
- A) Tetracycline
 - B) Doxycycline
 - C) Minocycline
 - D) Azithromycin
79. A 33-year-old house wife presented with whitish lacey streaks on the tongue associated with prolongation of the proximal nail fold on to nail bed) The most likely diagnosis in him is:
- A) Leukoplakia
 - B) Geographic tongue
 - C) Lichen planus
 - D) Oral candidiasis with paronychia
80. A 34-year-old patient presented with cicatricial alopecia on the scalp. The area of alopecia showed perifollicular grey pigmentation. The commonest association in such a patient will be:
- A) Discoid annular plaques on the face and ears
 - B) White streaks in buccal mucosa
 - C) Nail pitting
 - D) Arthropathy
81. The following condition is characterized by pseudoisomorphic phenomenon:
- A) Vitiligo
 - B) Lichen planus
 - C) Psoriasis
 - D) Plane warts

82. A 32-year-old farmer presented with single indurated verrucous plaque on the foot. The most likely diagnosis in her is:
- A) Tuberculosis verrucosa cutis
 - B) Mycetoma
 - C) Verruca vulgaris
 - D) Lichen planus hypertrophicus
83. Which of the following absorbable suture is not a monofilament suture?
- A) Polyglyconate
 - B) Polyglycolic acid
 - C) Polyglecaprone
 - D) Polyglytone
84. Baker and Gorden peel contain:
- A) 55% phenol
 - B) 40% TCA
 - C) 35% Phenol
 - D) 60% Salicylic acid
85. Which one is wrong about TRT (Thermal Relaxation Time)?
- A) It is time taken for target to dissipate 63% of the incident thermal energy
 - B) It is related to size of the target chromophore
 - C) It is longer than TDT (Thermal Damage Time)
 - D) TRT of melanosomes is 0.5- 1 us
86. Which one of the vascular laser do not target deeper vessels?
- A) KTP - 532nm laser
 - B) PDL - 585-600nm
 - C) Frequency doubled Nd: YAG laser
 - D) Alexandrite laser
87. Which one is false regarding pigment laser?
- A) Q switched NdYAG laser target for deeper dermal pigment
 - B) Er-YAG laser is preferable for Becker's melanoses
 - C) Green Ink tattoo responds best to Q switched ruby while red pigment to Qswitched alexandrite
 - D) Amateur tattoo responds poorly than other pigmented tatoos
88. Which stage of hair follicle is most susceptible to damage by laser energy?
- A) Anagen
 - B) Catagen
 - C) Telogen
 - D) Equal in all stages

89. In comparison of CO₂ & Er-YAG laser which one is true?
 A) Er-YAG laser: less affinity to water compared to CO₂
 B) Er-YAG laser: more thermal damage
 C) Er-YAG laser: less effective hemostasis
 D) Er-YAG laser: more scarring
90. Which of following match is wrong?
 A) Diameter of micro thermal zone: 10nm
 B) Ablative CO₂ laser: 10600nm
 C) Ablative Er YAG laser: 1540nm
 D) Non ablative diode: 1450nm
91. Most commonly used spectrum of light in photodynamic therapy:
 A) 410- 450nm
 B) 510-535nm
 C) 630-635nm
 D) 520-590nm
92. Scarring will be minimised by putting incision site:
 A) Parallel to contraction of underlying muscle
 B) Perpendicular to dermal collagen bundle
 C) Parallel to Langer's line
 D) Perpendicular to related skin tension line
93. Facial nerve block does not involve which nerve:
 A) Supra orbital
 B) Supra trochlear
 C) Infra orbital
 D) Mental nerve
94. Which combination statement of (1-4) is correct?
 1. Excision above eyebrow should be closed horizontally to prevent eyebrow lift
 2. Excision above eyebrow should be closed vertically to prevent eyebrow lift
 3. Risk of ectropion is decreased by horizontal closure of infra orbital area
 4. Risk of ectropion is decreased by vertical closure of infra orbital area
 A) 1,3
 B) 1,4
 C) 2,4
 D) 2,3
95. Ofuji disease has been seen in association with which of the following drugs?
 A) Azathioprine
 B) Dantrolene
 C) Lithium
 D) Indeloxamine HCL

96. Which of the following drug do not have any effect on sperm counts?
- A) Methotrexate
 - B) Colchicine
 - C) Sulfasalazine
 - D) Isotretinoin
97. Which of the following is not an example of delayed toxicity?
- A) Discolouration due to mercury intake
 - B) Hepatotoxicity due to Methotrexate
 - C) Keratosis due to arsenic
 - D) None
98. G6 PD deficient individual are susceptible to hemolysis by all of the following drugs except:
- A) Dapsone
 - B) Aspirin
 - C) Chloramphenicol
 - D) Penicillin
99. Which of the following drug causes pigmentation of tongue as a manifestation of fixed drug eruption?
- A) Heroin
 - B) Mercury
 - C) Gold
 - D) Penicillamine
100. Periorbital leucoderma is known to be caused by which of the following drug?
- A) Thiotepe
 - B) Cisplatin
 - C) Phenobarbitone
 - D) Surfasalazine
-

ROUGH WORK.

DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE TOLD TO DO SO

Booklet Serial No. **213441**

Test Booklet Series

TEST BOOKLET
EPIDEMIOLOGIST/ASSISTANT
PROFESSOR COMMUNITY MEDICINE
Written Test - 2023
(63)

A

Time Allowed: Two Hours

Maximum Marks: 100

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(63) (A)/2023

[P.T.O.]

TABLE

1. The average growth of a certain variety of pine tree is 10.1 inches in three years. A biologist claims that a new variety will have a greater three-year growth. A random sample of 25 of the new variety has an average three-year growth of 10.8 inches and a standard deviation of 2.1 inches. The appropriate null and alternate hypotheses to test the biologist's claim are:
 - A) $H_0: \mu = 10.1$ against $H_a: \mu > 10.1$
 - B) $H_0: \mu = 10.8$ against $H_a: \mu \neq 10.8$
 - C) $H_0: \mu = 10.8$ against $H_a: \mu > 10.8$
 - D) $H_0: \mu = 10.1$ against $H_a: \mu < 10.1$

2. In the definition of epidemiology, "determinants" generally includes all EXCEPT:
 - A) Agents
 - B) Causes
 - C) Control measures
 - D) Risk factors

3. Epidemiology, would include all of the following activities EXCEPT?
 - A) Describing the demographic characteristics of persons with acute aflatoxin poisoning in District A
 - B) Prescribing an antibiotic to treat a patient with community-acquired methicillin-resistant *Staphylococcus aureus* infection
 - C) Comparing the family history, amount of exercise, and eating habits of those with and without newly diagnosed diabetes
 - D) Recommending that a restaurant be closed after implicating it as the source of a hepatitis A outbreak

4. John Snow's investigation of cholera is considered a model for epidemiologic field investigations because it included all of the following EXCEPT:
 - A) Biologically plausible hypothesis
 - B) Comparison of a health outcome among exposed and unexposed groups
 - C) Multivariate statistical model
 - D) Spot map

5. Which of the following activities is NOT included in Public health surveillance:
 - A) Diagnosing whether a case of encephalitis is actually due to West Nile virus infection
 - B) Soliciting case reports of persons with symptoms compatible with SARs from local hospitals
 - C) Creating graphs of the number of dog bites by week and neighborhood
 - D) Writing a report on trends in seat belt use to share with the state legislature

6. The hallmark feature of an analytic epidemiologic study is:
- A) Use of an appropriate comparison group
 - B) Laboratory confirmation of the diagnosis
 - C) Publication in a peer-reviewed journal
 - D) Statistical analysis using logistic regression
7. A number of passengers on a cruise ship from Goa to Kanya Kumari have recently developed a gastrointestinal illness compatible with norovirus (formerly called Norwalk-like virus). Testing for norovirus is not readily available in any nearby island, and the test takes several days even where available. Assuming you are the epidemiologist called on to board the ship and investigate this possible outbreak, your case definition should include, at a minimum: (Choose one best answer)
- A) Clinical criteria, plus specification of time, place, and person
 - B) Clinical features, plus the exposure(s) you most suspect
 - C) Suspect cases
 - D) The nationally agreed standard case definition for disease reporting
8. Comparing numbers and rates of illness in a community, rates are preferred for:
- A) Conducting surveillance for communicable diseases
 - B) Deciding how many doses of immune globulin are needed
 - C) Estimating subgroups at highest risk
 - D) Telling physicians which strain of influenza is most prevalent
9. When analysing surveillance data by age, which of the following age groups is preferred? (Choose one best answer)
- A) 1-year age groups
 - B) 5-year age groups
 - C) 10-year age groups
 - D) Depends on the disease
10. Which of the following is NOT correct?
- A) The rejection region is controlled by the α and the alternative hypothesis
 - B) The p-value measures the probability that the null hypothesis is true
 - C) The power of a test depends upon the sample size and the distance between the null hypothesis and the alternative hypothesis
 - D) The probability of a type II error is controlled by the sample size n

11. The Iowa Women's Health Study, in which researchers enrolled 41,837 women in 1986 and collected exposure and lifestyle information to assess the relationship between these factors and subsequent occurrence of cancer, is an example of which type(s) of study?
- A) Experimental
 - B) Cohort
 - C) Case-control
 - D) Clinical trial
12. British investigators conducted a study to compare measles-mumps-rubella (MMR) vaccine history among 1,294 children with pervasive development disorder (e.g., autism and Asperger's syndrome) and 4,469 children without such disorders. (They found no association.) This is an example of which type(s) of study?
- A) Experimental
 - B) Cohort
 - C) Case-control
 - D) Clinical trial
13. A cohort study differs from a case-control study in that:
- A) Subjects are enrolled or categorized on the basis of their exposure status in a cohort study but not in a case-control study
 - B) Subjects are asked about their exposure status in a cohort study but not in a case-control study
 - C) Cohort studies require many years to conduct, but case-control studies do not
 - D) Cohort studies are conducted to investigate chronic diseases, case-control studies are used for infectious diseases
14. Which one of the following is NOT a Key feature of a cross-sectional study:
- A) It usually provides information on prevalence rather than incidence
 - B) It is limited to health exposures and behaviors rather than health outcomes
 - C) It is more useful for descriptive epidemiology than it is for analytic epidemiology
 - D) It is synonymous with survey
- (63) (A) (5) [P.T.O.]

15. The following are percentages of fat found in 5 samples of each of two brands of baby food: A: 5.7, 4.5, 6.2, 6.3, 7.3; B: 6.3, 5.7, 5.9, 6.4, 5.1 Which of the following procedures is appropriate to test the hypothesis of equal average fat content in the two types of ice cream?
- A) Paired t-test with 5 d.f
 - B) Paired t-test with 4 d.f
 - C) Two sample t-test with 9 d.f
 - D) Two sample t-test with 8 d.f
16. Indirect transmission does NOT include which of the following?
- A) Droplet spread
 - B) Mosquito-borne
 - C) Foodborne
 - D) Doorknobs or toilet seats
17. Disease control measures are generally directed at all of the following EXCEPT?
- A) Eliminating the reservoir
 - B) Eliminating the vector
 - C) Eliminating the host
 - D) Interrupting mode of transmission
18. A propagated epidemic is usually the result of what type of exposure?
- A) Point source
 - B) Continuous common source
 - C) Intermittent common source
 - D) Person-to-person
19. $1-\alpha$ is defined as
- A) Probability of not rejecting H_0 when H_0 is true
 - B) Probability of rejecting H_0 when H_1 is true
 - C) Probability of not rejecting H_0 when H_1 is true
 - D) Probability of rejecting H_0 when H_0 is true
20. Sentinel surveillance indicates
- A) Identifying the missing cases
 - B) Identifying high risk group
 - C) Surveillance of water population
 - D) Surveillance of environmental control

21. Odds ratio is calculated in
- A) Case control study
 - B) Cross sectional study
 - C) Cohort study
 - D) Randomized trial
22. Prevention of emergence or development of risk factors is type of
- A) Primary prevention
 - B) Secondary prevention
 - C) Tertiary prevention
 - D) Primordial prevention
23. Which of the following statements is correct
- A) A large p-value indicates that the data is consistent with the alternative hypothesis
 - B) An extremely small p-value indicates that the actual data is different significantly from the expected if the null hypothesis is true
 - C) The p-value measures the probability of making a Type II error
 - D) The larger the p-value, the stronger the evidence against the null hypothesis
24. In statistical hypothesis test of equality of means, such as $H_0: \mu = 10$, if $\alpha = 5\%$
- A) 5% of the time we will say that there is no real difference when there is a difference
 - B) 95% of the time the null hypothesis will be correct
 - C) 95% of the time we will make an incorrect inference
 - D) 5% of the time we will say that there is a real difference when there is no difference
25. Level of resistance of a community or group of people to a particular disease is
- A) Passive immunity
 - B) Active immunity
 - C) Herd immunity
 - D) Mixed immunity

26. First step of epidemic investigation?
- A) Preparing case definition
 - B) Mapping the epidemic
 - C) Confirmation
 - D) Searching for the cases
27. An abstract of the journal article doesn't contain
- A) Methodologies
 - B) Result
 - C) Objectives
 - D) Ethical consideration
28. Variance is:
- A) Half of SD
 - B) Square root of SD
 - C) Square of SD
 - D) Twice of SD
29. Normal curve is
- A) S shaped
 - B) Parabolic
 - C) Hyperbolic
 - D) Bell shaped
30. The level of significance α denotes:
- A) Probability of rejecting a true hypothesis
 - B) Probability of accepting a true hypothesis
 - C) Significance of result
 - D) Confidence limit
31. When there is perfect positive correction between two variables then what is the value of r (Karl people's correlation coefficient):
- A) 1
 - B) -1
 - C) 0
 - D) Between 0 and 1

32. Which empirical relation is correct?
A) Mode = 3 median - 2 mean
B) Mode = 2 mean - 3 median
C) Mean = 3 median - 2 mode
D) Mean = 2 mode - 3 median
33. The mean BP of a group of persons was determined and after an intervention trial the mean BP was estimated again. The test to be applied to determine the significance of intervention is:
A) Chi square test
B) Paired t test
C) Correlation coefficient
D) z test
34. Cholesterol levels are measured on a random sample of 1,000 persons, and the sample standard deviation is calculated. Suppose a second survey were repeated in the same population, but the sample size tripled to 3,000. Then which of the following is true?
A) The new sample standard deviation would tend to be smaller than the first and approximately about one-third the size.
B) The new sample standard deviation would tend to be larger than the first and approximately about three times the size.
C) The new sample standard deviation would tend to be larger than the first, but we cannot approximate by how much.
D) None of the above is true because there is no reason to believe one standard deviation would tend to be larger than the other.
35. Which of the following is unrelated to the chi square test of significance?
A) Degree of freedom
B) Life table
C) Significance level
D) Qualitative data
36. Which is true of cluster sampling?
A) Every Nth case is chosen for study
B) Involves use of random numbers
C) A natural group is taken as sampling unit
D) Stratification of population is done
37. For a survey a village is divided into 5 lanes. Then each lane is sampled randomly. It is an example of:
A) Simple random sampling
B) Stratified random sampling
C) Systematic random sampling
D) Multi-phase random sampling

38. In a small observational study, 100 industrial workers are followed for one year to assess for the development of respiratory symptoms (defined as productive cough lasting at least one week). 30 of 60 smokers experience respiratory symptoms over the year versus 10 of 40 non-smokers. Which of the following is the best estimate of the attributable risk of respiratory disease in smokers?
- A) 0.75
 - B) 0.50
 - C) 0.25
 - D) 0.30
39. Measurements on a (random) sample of babies born to mothers who took "Prescription Drug A" during pregnancy were compared to measurements on a (random) sample of babies born to mothers who did not take "Prescription Drug A". A statistically significant difference in the mean head circumference was found between children born to the two groups of mothers ($p = .03$). Based only on this information you can conclude:
- A) There is a 3% chance the null hypothesis is true.
 - B) Taking "Prescription Drug A" during pregnancy causes a reduction in child's head circumference.
 - C) Taking "Prescription Drug A" is associated with an increased child head circumference.
 - D) None of the above.
40. Normal distribution curve depends upon
- A) Mean and sample
 - B) Mean and median
 - C) Mean and standard deviation
 - D) Median and standard error
41. The truth about normal distribution curve is all EXCEPT
- A) Mean median and mode all coincide
 - B) Standard deviation is one
 - C) Mean of the curve is hundred
 - D) The total area of the curve is one
42. Confidence limit can be calculated by using
- A) Mean and range
 - B) Mean and standard deviation
 - C) Median and range deviation
 - D) Median and standard deviation
43. If probability of being Rh negative is $1/10$ then probability of being Rh positive will be
- A) $1/10$
 - B) $9/10$
 - C) $1/2$
 - D) 1

44. Standard error is measure of
- A) Conceptual error
 - B) Sampling error
 - C) Instrumental error
 - D) Observer error
45. A new chemotherapy regimen used in patients with ovarian carcinoma is tested in a small clinical trial. Out of 50 patients treated with the new regimen, 25 survive 5 years without relapse. Out of 100 patients treated with the conventional regimen, 25 survive 5 years without relapse. How many patients need to be treated with the new regimen as opposed to the conventional regimen in order for one more patient to survive 5 years without relapse?
- A) 2
 - B) 4
 - C) 6
 - D) 8
46. Which of the following type of the diagrams can be used to find out the relationship between two variables?
- A) Pictogram
 - B) Bar diagram
 - C) Histogram
 - D) Scatter diagram
47. Which of the following is a discrete variable?
- A) Skin color
 - B) Blood pressure
 - C) Weight
 - D) Boys in the class
48. Which of the following does not have sampling error
- A) Sample population
 - B) Census
 - C) Stratified sampling
 - D) Systematic random sampling
49. Accepting null hypothesis when it is false is
- A) type I error
 - B) type II error
 - C) α error
 - D) μ error
50. Married-unmarried, child-adult, male- female is
- A) Ordinal scale
 - B) Interval scale
 - C) Ratio scale
 - D) Nominal scale

51. The common characteristic that both experimental and quasi-experimental study should possess is
- A) Manipulation
 - B) Control groups
 - C) Randomization
 - D) None
52. Focus group discussion is the group discussion ofpersons.
- A) 3-5
 - B) 6-12
 - C) 10-14
 - D) 15-20
53. A variable that is associated with problem as well as with a possible cause of the problem is
- A) Causative variable
 - B) Confounding variable
 - C) Dependent variable
 - D) Independent variable
54. Which of the following is not the ethical principle for health and bio-medical researches?
- A) Beneficence
 - B) Justice
 - C) Informed consent
 - D) Reliability
55. If observed changes in a group are due to the fact that it is being studied rather than due to experimentation, the effect is termed as
- A) Placebo effect
 - B) Confounding
 - C) Withdrawal effect
 - D) Hawthorne effect

56. Validity of research findings denote:
- A) Consistency
 - B) Relativity
 - C) Accuracy
 - D) Reliability
57. Observation checklist is the _____ of data collection
- A) Tool
 - B) Method
 - C) Manual
 - D) Guideline
58. Which of the following is a description for 'descriptive epidemiology'?
- A) Examining the incidence of disease in relation to person, place and time
 - B) Identifying the associations between disease and causes
 - C) Intervention to change exposure to the factor being studied
 - D) Actions to reduce exposure to factors which impact on health
59. Which of the following studies might be carried out to help health services plan future services?
- A) Cohort study
 - B) Cross-sectional study
 - C) Case-control study
 - D) Community trail
60. Enabling people to increase control over their own health is known as
- A) Health protection
 - B) Public health
 - C) Health promotion
 - D) Governance
61. Ganges river is a community of 100,000 persons in Uttarakhand. During the year of the flood (2013) there were 1000 deaths from all causes. A study of all cases of tuberculosis found the number of deaths at 300 (200 males and 100 females). During 2012 there were only 60 deaths from Tuberculosis, 50 of them males. The crude mortality rate for Ganges River in 2013 was
- A) 300 per 100,000
 - B) 60 per 1000
 - C) 10 per 1000
 - D) 100 per 11000

62. A group of investigators conducts a study to evaluate the association between serum homocysteine level and the risk of myocardial infarction. They conclude that a high baseline plasma homocysteine level is associated with an increased risk of myocardial infarction and report a risk ratio (RR) of 1.08 and a p value of 0.01. Which of the following is the most accurate statement about the results of the study?
- A) There is an 8% chance that increased homocysteine levels cause myocardial infarction
 - B) There is a 1% probability that there is no association
 - C) The 95% confidence interval for the RR includes 1.0
 - D) The study has insufficient power to reach a definite conclusion
63. All of the following are true of odds ratio EXCEPT
- A) It is an estimate of relative risk
 - B) It is the only measure of risk that can be obtained directly from a case control study
 - C) It tends to be biased towards 1 at high rates of disease
 - D) It is the ratio of incidence in exposed divided by incidence in non-exposed
64. The mode of transport of an infectious agent through the environment to a susceptible host is called a
- A) Carrier
 - B) Reservoir
 - C) Vector
 - D) Vehicle
65. Which of the following is NOT a part of continuum of natural history of the disease?
- A) Stage of Susceptibility
 - B) Stage of preclinical
 - C) Stage of prevention
 - D) Stage of recovery
66. High plasma C-reactive protein (CRP) level is believed to be associated with increased risk of acute coronary syndromes. A group of investigators is planning a study that would evaluate that association, taking into account a set of potential confounders. Which of the following is the best statement of null hypothesis for the study?
- A) High plasma CRP level carries increased risk of acute coronary syndromes
 - B) High plasma CRP level is related to the occurrence of acute coronary syndromes
 - C) High plasma CRP level has no association with acute coronary syndrome
 - D) Acute coronary syndrome can be predicted by high plasma CRP

67. Number of current cases (new and old) of specified disease identified over a given time interval from estimated population at mid interval is called;
- A) Prevalence
 - B) Period Prevalence
 - C) Point Prevalence
 - D) Disease Prevalence
68. A state of disorder that results from communication ONLY by direct contact is termed as;
- A) Infectious disease
 - B) Contamination
 - C) Epidemic
 - D) Contagious disease
69. Sampling done on the basis of some pre-determined ideas and its result cannot be generalized is defined as follow;
- A) Snow ball sampling
 - B) Purposive sampling
 - C) Probability sampling
 - D) Non-probability sampling
70. The most essential component of an effective Infection Prevention surveillance program is:
- A) The capability to monitor everything
 - B) Collection of meaningful data
 - C) Outbreak detection
 - D) Complying with accreditation agencies
71. In 1945 there were 1,000 women who worked in a factory painting radium dial on watches. The incidence of bone cancer in these women up to 1975 was compared with that of 1,000 women who worked as telephone operators in 1975. Twenty of the radium dial painters and four of the telephone operators developed bone cancer between 1945 and 1975. This study is an example of a:
- A) Experimental study
 - B) Clinical trial
 - C) Case control study
 - D) Cohort study

72. The following table gives the results of a screening test for diabetes compared to a confirmatory evaluation (oral glucose tolerance test).

Test result	True diagnosis		Total
	Diabetic	Not Diabetic	
Positive	34	20	54
Negative	116	9830	9946
Total	150	9850	10,000

The sensitivity of this screening test for diagnosing diabetes is:

- A) 23%
 - B) 63%
 - C) 29%
 - D) 99%
73. What is the difference between incidence and prevalence?
- A) Incidence refers to the proportion of the population with a disease, while prevalence refers to the number of new cases of a disease in a population over a period of time
 - B) Incidence refers to the number of new cases of a disease in a population over a period of time, while prevalence refers to the proportion of the population with a disease
 - C) Incidence and prevalence are the same thing
 - D) Incidence and prevalence are measures of mortality
74. What is the purpose of a case-control study?
- A) To determine the incidence of a disease in a population
 - B) To determine the cause of a disease
 - C) To determine the prevalence of a disease in a population
 - D) To compare the characteristics of individuals with a disease to those without a disease
75. What is the difference between a cohort study and a case-control study?
- A) In a cohort study, participants are selected based on their disease status, while in a case-control study, participants are selected based on their exposure status
 - B) In a cohort study, participants are followed over time to observe outcomes, while in a case-control study, outcomes have already occurred
 - C) Cohort studies are more expensive than case-control studies
 - D) Case-control studies are more rigorous than cohort studies

76. What is a randomised controlled trial (RCT)?
- A) An observational study that compares the incidence of a disease in a population with different levels of exposure to a risk factor
 - B) A study that compares the characteristics of individuals with a disease to those without a disease
 - C) A study that randomly assigns participants to an intervention or control group to evaluate the effectiveness of a treatment or prevention strategy
 - D) A study that compares the prevalence of a disease in a population with different levels of exposure to a risk factor
77. What is the difference between sensitivity and specificity?
- A) Sensitivity is the proportion of true negatives, while specificity is the proportion of true positives
 - B) Sensitivity is the proportion of true positives, while specificity is the proportion of true negatives
 - C) Sensitivity and specificity are the same thing
 - D) Sensitivity and specificity are measures of prevalence
78. A ten-year prospective study is conducted to assess the effect of regular supplementary folic acid consumption on the risk of developing Alzheimer's dementia. The investigators report a relative risk of 0.77 (95% confidence interval 0.59-0.98) in those who consume folic acid supplements compared to those who do not. Which of the following p values most likely corresponds to the results reported by the investigators?
- A) 0.03
 - B) 0.05
 - C) 0.07
 - D) 0.09
79. Which of the following is NOT a key element of outbreak investigation?
- A) Identification of the outbreak
 - B) Characterization of the outbreak
 - C) Determination of the cause of the outbreak
 - D) Implementation of a vaccination campaign

80. A randomized double-blind clinical trial is conducted to evaluate the effect of a new hypolipidemic drug on the survival of patients after PTCA 1000 patients undergoing PTCA are randomly assigned to the drug or placebo (500 patients in each group) and then followed for 3 years for the development of acute coronary syndrome. Severe acute myositis is reported as a rare side effect of the drug therapy, but the difference between the two groups in the occurrence of this side effect is not statistically significant ($p = 0.09$). The same side effect was reported in several small clinical trials of this drug. The failure to detect a statistically significant difference in the occurrence of acute myositis between the treatment and placebo groups is most likely due to
- A) Selection bias
 - B) Short follow-up period
 - C) Inappropriate selection of the patients
 - D) Small sample size
81. What is the difference between a pandemic and an epidemic?
- A) A pandemic is a disease outbreak that occurs in a specific geographic area, while an epidemic is a disease outbreak that occurs across multiple continents
 - B) A pandemic is a disease outbreak that affects a large region or multiple continents, while an epidemic is a disease outbreak that affects a smaller geographic area or population
 - C) Pandemic and epidemic are interchangeable terms that describe the same thing
 - D) A pandemic is a disease outbreak that affects animals, while an epidemic is a disease outbreak that affects humans
82. What is the difference between passive and active surveillance in disease monitoring?
- A) Passive surveillance involves healthcare providers reporting cases to public health authorities, while active surveillance involves public health authorities actively seeking out cases
 - B) Passive surveillance involves monitoring of cases in the general population, while active surveillance involves monitoring of cases in specific high-risk populations
 - C) Passive surveillance is more expensive than active surveillance
 - D) Passive surveillance is more accurate than active surveillance

83. What is the difference between quarantine and isolation?
- A) Quarantine is the separation of individuals who are ill from those who are not ill, while isolation is the restriction of movement for individuals who have been exposed to a disease but are not yet ill
 - B) Quarantine is the restriction of movement for individuals who have been exposed to a disease but are not yet ill, while isolation is the separation of individuals who are ill from those who are not ill
 - C) Quarantine and isolation are interchangeable terms that describe the same thing
 - D) Quarantine and isolation are both measures used to prevent the spread of disease within a population
84. A large prospective study is designed to assess the association between postmenopausal hormone replacement therapy (HRT) and the risk of dementia, Alzheimer type. Small studies conducted earlier suggest a possible protective effect of HRT. What is the probability that the study will show an association if in fact HRT does affect the risk of dementia?
- A) α
 - B) β
 - C) $1 - \alpha$
 - D) $1 - \beta$
85. Which of the following is an example of a vector-borne disease?
- A) HIV
 - B) Tuberculosis
 - C) Malaria
 - D) Influenza
86. What is the basic reproduction number (RO) of a disease?
- A) The average number of individuals infected by one person with the disease
 - B) The total number of individuals in a population who have been infected with the disease
 - C) The proportion of individuals in a population who are immune to the disease
 - D) The proportion of individuals in a population who have been vaccinated against the disease

87. A researcher, reported a study in which healthy women aged 45 to 65 received either a calcium supplement or a placebo for 12 weeks. He reported, "The calcium group had significantly lower blood pressure compared with the placebo group." Which of the following sets of data is consistent with his statement?
- A) Difference = 10 mm Hg with 95% CI 2.4 to 17.6
 - B) Difference = 20 mm Hg with 95% CI -5 to 45.
 - C) Difference = 30 mm Hg with 95% CI - 0.1 to 60.
 - D) Difference = 20 mm Hg with 95% CI -2 to 40.
88. A key factor facilitating the application of nested case-control studies was:
- A) Data collection
 - B) Establishment of a repository of biologic specimens
 - C) Participant interest
 - D) Administration of the questionnaire by staff
89. Which of the following is not a method of control of confounding
- A) Restriction
 - B) Matching
 - C) Stratified analysis
 - D) Ensuring use of accurate instruments.
90. Which of the following is NOT an essential characteristic of a confounding variable?
- A) It should lie in the direct chain of causation between exposure and the outcome variable
 - B) It should be related to the exposure variable
 - C) It should be related to the outcome variable, independent of it's relationship with the exposure variable
 - D) It should be differentially distributed
91. Which of the following is not a method of control of confounding
- A) Restriction
 - B) Matching
 - C) Stratified analysis
 - D) Ensuring use of accurate instruments.

92. A particular infectious disease can display a broad scope of manifestations and severities. This is known as the:
- A) Incubation period
 - B) Gradient of infection
 - C) Endemic level of disease
 - D) Stage of susceptibility
93. Indirect and direct causes of disease may form a complex network of events that determines the level of disease in a community. The complex inter-relation of events is called the:
- A) Necessary cause of disease
 - B) Iceberg phenomenon
 - C) Causal web
 - D) Epidemiological triangle
94. While conducting experimental study, arrange the following steps in sequential manner
1. Randomization
 2. Blinding
 3. Statistical analysis
 4. Enumerate the inclusion and exclusion criteria
- A) 4, 1, 2, 3
 - B) 4, 2, 1, 3
 - C) 2, 1, 3, 4
 - D) 2, 1, 4, 3
95. Cases of viral hepatitis are monitored by the District Health Officer in his district. Each case of viral hepatitis is indicated by a dot on the map of the district. He also records the seasonal variations annually by monitoring the number of cases each month. He classifies the cases according to age, gender, occupation, source of water supply and other personal attributes. Identify the study design.
- A) Descriptive
 - B) Case control
 - C) Cohort
 - D) Ecological

96. A convalescent carrier is:
- A) A person who transmits the agent prior to the onset of disease
 - B) An animal carrier
 - C) An infected person who has recovered from disease but still harbors and transmits the agent
 - D) None of the above
97. Which of the following is a chemical barrier to infection.
- A) Intact skin
 - B) Respiratory cilia
 - C) Natural killer cells
 - D) Gastric acidity
98. What is the major attribute of Correlation Analysis?
- A) Association among variables
 - B) Difference among variables
 - C) Regression among variables
 - D) Variations among variables
99. Which of the following features are considered as critical in qualitative research?
- A) Collecting data with the help of standardized research tools.
 - B) Design sampling with probability sample techniques.
 - C) Collecting data with bottom-up empirical evidence.
 - D) Gathering data with top-down schematic evidence.
100. A research intends to explore the result of possible factors for the organization of effective mid-day meal interventions. Which research method will be most appropriate for this study?
- A) Descriptive survey method
 - B) Historical method
 - C) Ex-post facto method
 - D) Experimental method

ROUGH WORK

ROUGH WORK

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Booklet Serial No. **213765**

Test Booklet Series

TEST BOOKLET
MEDICAL RECORD OFFICER ALLIED
ANCILLARY SECTION CENTRAL RECORD SECTION
Written Test - 2023
(69)

A

Time Allowed: Two Hours

Maximum Marks: 100

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(69) (A)/2023

[P.T.O.]

REVISED

1. Registration of Births and Deaths Act was passed in India in the year _____
 - A) 1990
 - B) 1969
 - C) 1980
 - D) 1999

2. The Indian Evidence Act came in force in the year _____
 - A) 1890
 - B) 1869
 - C) 1872
 - D) 1901

3. What is the ICD-10 code option for COVID virus identified in patient?
 - A) U07.2
 - B) U07.1
 - C) U08.9
 - D) U09.9

4. Non-Communicable Diseases are to be reported to _____
 - A) Local Administrative Authority
 - B) Local Police Authority
 - C) Local Municipal Authority
 - D) None of the above

5. Oncology deals with _____
 - A) Bones
 - B) Liver
 - C) Kidney
 - D) Cancer

6. Left Parietal Lobe is a part of _____
 - A) lungs
 - B) Liver
 - C) Brain
 - D) Spleen

7. As per WHO guidelines optimal Bed occupancy rate in Hospital must be:
 - A) 95%
 - B) 85%
 - C) 75%
 - D) 100%

8. Average Length of Stay in Hospital can be computed with _____
- A) Total Days of care / Total Discharges
 - B) Total Discharges/Days of Care
 - C) Total discharges – Deaths /Days of care
 - D) Total discharges x Deaths /Days of care
9. IFHIMA: International Federation of Health Information Management Association possess official linkage with _____
- A) Govt. of UK
 - B) Govt. of India
 - C) Govt. of USA
 - D) WHO
10. NABH: National Accreditation Board for Hospitals assures and ensures _____
- A) Average quality health care services and patient safety.
 - B) Medium quality health care services and patient safety.
 - C) Lowest quality health care services and patient safety.
 - D) Highest quality health care services and patient safety.
11. ICD(International Classification of Diseases) 11th edition has been prepared by _____
- A) Govt. of UK
 - B) Govt. of India
 - C) Govt. of USA
 - D) WHO
12. Following is correct about the role of Medical Record Officers in Hospital Functioning:
- A) Maintaining, Coordinating, Supervision, and Administration of Medical record section.
 - B) Focus on quality health care services and patient safety.
 - C) Focus on Medical Research, Legal matters, and statutory compliances.
 - D) All of the above.
13. ABHA is a Digital Platform which maintains health records of patients in digital form which is
- A) Accessible to all people.
 - B) Only accessible by Treating Doctors
 - C) Only accessible by Patient concerned.
 - D) Only accessible by family of patients.

14. As per NCAHP Act 2021, the nomenclature of the subject/department of Medical Records Science has been changed to
- A) Health Record Management Department.
 - B) Health Informatics Management Department
 - C) Health Information Management Department
 - D) Physiorecordology Department.
15. Dr. G.R. Mc Giboney has defined Medical Records
- A) Patient care service records to focus on quality health care services and patient safety.
 - B) Patient care service records to focus on Research, Education, legal matters and NGO's.
 - C) Hospital Medical Records that deal with Patients, Police, Public, Research, Education, Court Cases, Govt. and NGO's.
 - D) As a clinical, scientific, administrative and medico-legal document related to the patients care, which contains sufficient data in sequence of events to justify the diagnosis, warrant the treatment and end results.
16. Choose correct ICD-10 code for Fracture Femur Shaft:
- A) S72.3
 - B) S72.0
 - C) S82.4
 - D) S62.3
17. Pathogenic bacteria generates _____
- A) A geographical environment.
 - B) A disaster environment.
 - C) A Disease environment.
 - D) None of the above
18. CRANIOTOMY means _____
- A) Excision of a part of the skull.
 - B) Incision of the skull.
 - C) Inflammation of the skull.
 - D) None of the above
19. Vitamin-A deficiency causes _____
- A) Rickets.
 - B) Night Blindness.
 - C) Beriberi.
 - D) Scurvy.

20. PANCREAS secretes _____
- A) CSF.
 - B) RBC.
 - C) WBC.
 - D) Insulin.
21. The patient has a right to get _____ of Medical Records?
- A) Copy of all related to him/her
 - B) Original Set
 - C) Discharge summary and Investigation reports only
 - D) None of the above
22. Medical Records are the property of?
- A) Hospital
 - B) Patients
 - C) Relatives
 - D) Physicians
23. Death rate including all deaths occurring in the hospital before and after 48-hours of admission is known as ?
- A) Gross Death rate
 - B) Net Death rate
 - C) Ward Death rate
 - D) Hospital Death rate
24. Ward Census is taken at what time?
- A) Morning 8 am
 - B) Evening 8 pm
 - C) Day Time 12 noon
 - D) Midnight
25. POMR is ?
- A) Place On Medical Record
 - B) Problem Oriented Medical Record
 - C) Problem Originated Medical Record
 - D) Problem Omitted Medical Record

26. Medical negligence involves ?
- A) Act of Omission
 - B) Act of Commission
 - C) Both A and B
 - D) None of the above
27. The Audit done by other than the treating team of doctors is known as?
- A) Internal Medical Record Audit
 - B) External Medical Record Audit
 - C) All Medical Record Audit
 - D) Infection Control Audit
28. Following is a Viral disease?
- A) Hansen's disease
 - B) Poliomyelitis
 - C) Typhoid
 - D) Tuberculosis
29. Histology is the study of?
- A) Cell
 - B) Tissue
 - C) Tumors
 - D) All of above
30. The ability to detect changes in the Environment is?
- A) Movement
 - B) Sensitivity
 - C) Sensation
 - D) Power

31. Which of the following is Ductless Gland
- A) Endocrine Gland
 - B) Pituitary Gland
 - C) Thyroid Gland
 - D) All the above
32. Blood Cells are manufactured in the?
- A) Bone
 - B) Liver
 - C) Gall Bladder
 - D) Bone Marrow
33. A Small Bone to which the Tongue is attached?
- A) Maxillary
 - B) Ethmoid
 - C) Frontal
 - D) Hyoid
34. Write the meaning of Steato?
- A) Fat
 - B) High
 - C) Behind
 - D) Thick
35. Medical term for Breast Bone is?
- A) Sternum
 - B) Ribs
 - C) Collar Bones
 - D) Clavicle
36. Alpha Fetoprotein in a blood test is done to detect?
- A) Down's Syndrome
 - B) Hormone Deficiency
 - C) Vitamin Deficiency
 - D) Iodine Deficiency

37. 'Green Stick' Fractures are usually seen in?
- A) Injuries due to Stick
 - B) Children
 - C) Old age due to Osteoporosis
 - D) Road Traffic Accident
38. Fracture of the ankle involving one or both the malleolus is called as?
- A) Green Stick fracture
 - B) Trasverse fracture
 - C) Pott's fracture
 - D) Avulsion fracture
39. Whiplash Injuries are seen in?
- A) Road Traffic Accident
 - B) Custodial Torture and Death
 - C) Cases of whipping and torture
 - D) All the above cases
40. Scientific measurement of the dimension of the head?
- A) Cephalography
 - B) Cephalopathy
 - C) Cephalometry
 - D) Cephalonomy
41. Computerized X-ray of cross sectional layers of tissue is known as?
- A) PET Scan
 - B) MRI
 - C) CT scan
 - D) USS
42. Write medical name of a muscle having two heads?
- A) Biceps
 - B) Bicyps
 - C) Bilateral
 - D) Bicus

43. Enlargement of Salivary Glands is called?
- A) Sialadenitis
 - B) Sialadenoma
 - C) Sialadenopathy
 - D) Sialden
44. The scientific name of Food Pipe is ?
- A) Oropharynx
 - B) Oesophagus
 - C) Larynx
 - D) Nasopharynx
45. Following is a Benign tumor ?
- A) Hemangioma
 - B) Sarcoma
 - C) Astrocytoma
 - D) Glioma
46. Histology is useful for what?
- A) Cancer Registry
 - B) Coding of Medical Records
 - C) Pathology
 - D) Sonography
47. The term used for Fluid Balance Sheet is?
- A) TPR Chart
 - B) Urine Sugar Monitoring Chart
 - C) Input Output Chart
 - D) Neuro Observation Chart
48. Surgical Death (Perioperative mortality) has to be considered as death following ?
- A) Within 24 hour of Surgery.
 - B) Within one year of surgery.
 - C) Within one month of Surgery
 - D) Within 30 days of Surgery

49. A letter or group of letters added at the end of a word gives further information about the word. It is called as ?
- A) Prefix
 - B) Root
 - C) Suffix
 - D) Combining
50. Life span of platelet is?
- A) 7-14 days
 - B) 1-2 days
 - C) 4-6 days
 - D) 5-6 days
51. What is the meaning of 'Kerato'?
- A) Eye
 - B) Cornea
 - C) Eye Lid
 - D) Retina
52. How many bones does an adult human skeleton have?
- A) 205
 - B) 207
 - C) 206
 - D) 209
53. How many bones does human ankle has?
- A) 7
 - B) 6
 - C) 9
 - D) 8
54. Which area does not have Lymph Nodes?
- A) Spinal Cord
 - B) Stomach
 - C) Neck
 - D) Lungs

55. Which part of the Brain Controls the Heart?
- A) Cerebellum
 - B) Medulla Oblongata
 - C) Hypothalamus
 - D) None of these
56. Which of the following listed below connects muscle to the bones?
- A) Cartilage
 - B) Areola
 - C) Ligament
 - D) Tendon
57. The Femur bones of the human body is also known as?
- A) Wrist bones
 - B) Thigh bones
 - C) Shoulder bones
 - D) Collar bones
58. What is the largest part of the Human Brain?
- A) Hypothalamus
 - B) Medulla oblongata
 - C) Cerebrum
 - D) Cerebellum
59. How many bones does a new born human baby have?
- A) 305
 - B) 211
 - C) 206
 - D) 411
60. Which of the following blood cells play an important role in blood clotting?
- A) Thrombocytes
 - B) Erythrocytes
 - C) Neutrophils
 - D) Leukocytes

61. Serum differs from blood as it lacks?
- A) Antibodies
 - B) Clotting Factors
 - C) Albumin
 - D) Globulin
62. Under the IT Act 2000, the medical records are classified as:
- A) Classified personal information
 - B) Private access information
 - C) Sensitive personal information
 - D) Hospital access information
63. The architecture of electronic health records is governed by:
- A) ISO 18308:2011 Health Informatics
 - B) ISO/HL7 10781:2015 Health Informatics
 - C) ISO 13940 Health Informatics
 - D) ISO 13606 Health Informatics
64. All of the following are responsibilities of the health care provider except:
- A) To store medical records of the patients
 - B) To provide copy of complete medical records to the patients on request
 - C) To provide certified copy of medical records to insurance agencies on their request if patient has given authorization
 - D) To provide copy of entire medical records to local municipality on request
65. Logical Observation Identifiers Names and Codes (LOINC) coding is to be used for:
- A) Processing results and reports with laboratory and imaging information systems.
 - B) Processing information related to cross referrals
 - C) Processing records of other health care institutions
 - D) Processing notifiable diseases
66. Every health care facility in India is required to report a case of:
- A) Coryza
 - B) Hepatitis E
 - C) Legionella
 - D) Leprosy

67. Deaths have to be registered within a period of ____ days from their occurrence
- A) 7
 - B) 14
 - C) 21
 - D) 3
68. Choose the correct workflow in the MRD:
- A) Indexing-sorting-coding-incomplete record check
 - B) Indexing-incomplete record check-sorting-coding
 - C) Sorting-incomplete record check-indexing-coding
 - D) Sorting-coding-indexing-incomplete record check
69. SOAP stands for:
- A) Standardized objective assessment of patients
 - B) Subjective objective assessment plan
 - C) Standardized operational advanced plan
 - D) Subjective operational advanced plan
70. In addition to births and deaths, Medical record office is obligated to report:
- A) IVF
 - B) Still-births
 - C) Organ transplants
 - D) All of the above
71. Medical record storage area must have mandatory:
- A) Environmental clearance
 - B) Fire clearance
 - C) Theft clearance
 - D) Land clearance
72. The manual processing of voice reports dictated by physicians into text format is called:
- A) Medical indexing
 - B) Medical transcription
 - C) Medical auditing
 - D) Medical conducting

73. The Ayushman Bharat Digital Mission allows for:
- Mandatory sharing of medical records of patients with health care providers
 - Sharing of medical records with consent of patient
 - Sharing of medical record with consent of health care provider
 - Sharing of medical record with consent of treating hospital
74. Which of the following is the responsibility of the MRD:
- To ensure that the patients know about hospital services
 - To provide insurance cover to patients
 - To design and provide registration forms and OPD cards
 - To give advice on discharge
75. Hospital admission rate =
- $\frac{\text{Total admissions during the year} \times 1000}{\text{Mid-year population}}$
 - $\frac{\text{Total admissions during the year} \times 100}{\text{Mid-year population}}$
 - $\frac{\text{Total admissions during the year} \times 1000}{\text{Total number of patients seen by the hospital in that year}}$
 - $\frac{\text{Total admissions during the year} \times 100}{\text{Total number of patients seen by the hospital in that year}}$
76. Crude death rate is directly proportional to:
- Number of deaths reported in a hospital
 - Number of deaths reported in the emergency of a hospital
 - Number of deaths reported in the hospital after the first 24 hours of admission
 - Number of deaths reported in a hospital after the first 48 hours of admission
77. Daily average OPD attendance is given by:
- $\frac{\text{Total number of outpatient attendance during the period}}{\text{Number of OPD working days during the period}}$
 - $\frac{\text{Total number of outpatient attendance during the period}}{\text{Number of Total working days during the period}}$
 - $\frac{\text{Total number of outpatient attendance during the period}}{\text{Number of IPD working days during the period}}$
 - $\frac{\text{Total number of outpatient and emergency attendance during the period}}{\text{Number of OPD and emergency working days during the period}}$

78. The denominator used to calculate the Cesarean section rate is:
- A) Total number of pregnant women admitted in that period
 - B) Number of live births in that period
 - C) Number of births in that period
 - D) Number of patients with EDD in that period
79. Ratio of actual patient days to the maximum possible patient days during a given period
- A) Bed turnover interval
 - B) Average length of stay
 - C) Bed occupancy rate
 - D) Bed turnover rate
80. Which of the following are included as hospital beds in the census
- A) Beds in the post operative area
 - B) Beds in nephrology ward
 - C) Beds in emergency ward
 - D) Beds in the labor room ward
81. Pick out the correct statement: On request, ...
- A) Medical records of an adult married living patient can be given to the spouse
 - B) Medical records of an adult married patient who has expired can be given to the parents
 - C) Medical records of an adult married living patient can be given to the children
 - D) Medical records of an adult married patient who has expired can be given to the spouse
82. In a hospital ward, medical file of a patient must be kept:
- A) Next to the patient's bed.
 - B) In safe keeping with the attendant.
 - C) At the nurses' counter.
 - D) With the concerned doctor.
83. Please choose the correct statement
- A) Medical records of foreign national patients have to be shared with their embassy.
 - B) Medical records needs to be produced in a court of law on demand.
 - C) Medical records of victims of sexual harassment are to be sent to the State Commission for Women.
 - D) Medical records of a patient are to be shared with his/her close family members.

84. Final disposition of medical record should be done by:
- A) Shredding and selling as waste.
 - B) Shredding and incineration.
 - C) Shredding and water treatment.
 - D) Shredding and land fill.
85. The main aim of indexing is:
- A) To organize medical records to save space.
 - B) For easy retrieval of files.
 - C) To locate lost files.
 - D) To help in coding
86. The system of coding of medical records followed worldwide and recommended by the WHO at present is:
- A) ICD - 9
 - B) ICD - 10
 - C) ICD - 11
 - D) ICD - 12
87. Which of the following statements is not correct?
- A) An EMR is mainly used for diagnosis and treatment.
 - B) EMR allows a patient's medical information to be accessed from different places.
 - C) EMR is a digital version of a patient TPR and Input Output chart.
 - D) EMR is facility specific.
88. Records pertaining to medico legal cases should be retained for atleast:
- A) 3 yrs.
 - B) 5 Yrs.
 - C) 10 Yrs.
 - D) Lifetime.
89. The disadvantage of the serial unit numbering system of record keeping is:
- A) It creates multiple records at various places.
 - B) It is time consuming.
 - C) It does not link patient record to previous visits.
 - D) It makes record retrieval difficult.
90. Patient's medical records must be linked with:
- A) Two identifiers: ward and bed number.
 - B) Two identifiers other than bed number.
 - C) One identifier other than bed number.
 - D) Name and address of the patient.

91. The following does not constitute a patient's medical record:
- A) Patient's OPD card.
 - B) Patient's consent.
 - C) Patient's billing information.
 - D) Patient's discharge summary.
92. The ABHA ID has a provision for:
- A) Voluntary opt-in for the health care provider.
 - B) Voluntary opt in/opt-out for the patient.
 - C) Automatic opt-out for the patient.
 - D) Voluntary opt-out for health care provider.
93. Consent for treatment must not be:
- A) Voluntary
 - B) Coerced
 - C) Informed
 - D) Unambiguous.
94. The age of consent for physical examination of a victim of sexual harassment is
- A) 21 Years
 - B) 18 Years
 - C) 16 Years
 - D) 12 Years
95. Electronic medical record is acceptable as evidence in a court of law if:
- A) It is encrypted / signed with a private key
 - B) If it is verified physically
 - C) It is acceptable in all circumstances
 - D) Is not acceptable at all
96. Which of the following is not a feature of SNOMED-CT
- A) It provides a standardized clinical terminology
 - B) It encourages easy interpretation of clinical terms across different languages
 - C) It has a numerical reference system
 - D) It is mono-hierarchical

97. Medical records of a patient are exempt from disclosure under RTI because of:
- A) Fiduciary relationship
 - B) Impede the process of investigation
 - C) Sensitive information
 - D) Endanger the life of the patient
98. The final assembly of medical records in the MRD places the Anesthesia charts before the
- A) Discharge summary
 - B) ICU charts
 - C) Operation notes
 - D) Progress sheets
99. The first medical records unit was set up in 1667 in :
- A) St Catherine's hospital in the UK
 - B) Sloan Kettering Centre in the US
 - C) St. Bartholomew's hospital in the UK
 - D) At Agnes' hospital in Netherlands
100. Medical records should be:
- A) Voluminous
 - B) Accurate
 - C) Brief
 - D) Referred
-

ROUGH WORK

DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE TOLD TO DO SO

Booklet Serial No. **213945**

Test Booklet Series

**TEST BOOKLET
TUBERCULOSIS AND RESPIRATORY
DISEASES**

A

Written Test - 2023

(81)

Time Allowed: Two Hours

Maximum Marks: 100

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3. You have to enter your Roll Number on the Test Booklet in the Box provided alongside.
DO NOT write anything else on the Test Booklet.
4. This Test booklet contains **100** items (questions). Each item comprises of four responses (answers). You will select the response which you want to mark on the Answer Sheet/Response Sheet. In case you feel that there is more than one correct response, mark the response which you consider the best. In any case, choose **ONLY ONE** response for each item.
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(81) (A)/2023

[P.T.O.]

1. A 50-year-old female presents with persistent breathlessness, wheezing and recurrent exacerbations of asthma for the last 5 years despite being on high dose of inhaled corticosteroids and maximal inhaled bronchodilators. She is referred to a tertiary care hospital where the physician suspects refractory Type 2 inflammation in the patients. What investigation/s can confirm the presence of persistent type 2 inflammation as the cause of symptoms in the patient
 - A) Fractional exhaled Nitric oxide
 - B) Sputum eosinophil level
 - C) Blood eosinophil level
 - D) All of the above

2. A 70-year-old male with 40 pack years of smoking history was diagnosed to be suffering from COPD and was put on dual bronchodilator. He was also on treatment for diabetes and coronary artery disease. He remained stable on treatment with mild dyspnoea (mMRC grade II) for next one year except that he developed single moderate exacerbation that was treated on outpatient basis. His spirometry during stable phase showed post bronchodilator FEV1 of 60% predicted, FVC of 75% predicted and FEV1/FVC of 52%. What will be his grading of COPD as per GOLD guidelines?
 - A) Spirometry grade 1 group A
 - B) Spirometry grade 2 group B
 - C) Spirometry grade 2 group A
 - D) Spirometry grade 1 group B

3. Correct statement about bronchopulmonary sequestration include
 - A) Bronchopulmonary sequestraion are more common in the right lung
 - B) Intralobar pulmonary sequestration has its own visceral pleural lining
 - C) Extra-lobar pulmonary sequestration are more common than intra-lobar sequestration
 - D) Surgical excision is the preferred treatment of symptomatic pulmonary sequestration

4. A 68-year-old male with 30 pack years of smoking history presented with incidental finding of 7mm solid nodule on contrast enhanced Chest CT. What is the most appropriate next step in management
 - A) Repeat CT chest after 3-6 months
 - B) Repeat chest CT after 6-12 months
 - C) No follow up is required
 - D) CT guided biopsy of the nodule

5. A 61-year-old smoker male presented with cough, right sided chest pain and hemoptysis for 2 months. CECT thorax showed 4 cm mass lesion in right upper lobe that was not touching the periphery or any of the mediastinal structures. On routine bronchoscopy the mass was not visualized any of the lobar or segmental bronchus. PET scan showed additional FDG avid ipsilateral mediastinal lymph nodes with no other active focus in the body. His clinical TNM stage is
- IIB
 - IIIA
 - IIIB
 - IIIC
6. A 60-year-old COPD patient presented with acute exacerbation in emergency. He was already on antibiotics, oral steroids and diuretics for the past 5 days with partial response. An arterial blood gas at presentation was pH: 7.41, PCO₂ 65 mmHg; PO₂: 52 mmHg, HCO₃: 40. What is the ABG interpretation.
- Acute Respiratory Acidosis
 - Acute on chronic respiratory acidosis
 - Chronic respiratory acidosis
 - Respiratory acidosis with metabolic alkalosis
7. A 20-year-old-male presented with 1 month history of cough, fever and weight loss. X-ray chest showed bilateral cavitory disease. Sputum was positive for acid fast bacilli. CBNAAT showed Mycobacterium DNA with Rifampicin resistance detected. First & second line LPA didn't show any mutation to Isoniazid and levofloxacin. His pretreatment evaluation, blood tests and ECG was normal. What is the preferred ATT regimen for this patient?
- All oral Longer Bedaquiline containing regimen
 - All oral shorter Bedaquiline containing regimen
 - 24 month regimen without Bedaquiline
 - None of the above
8. The form of chemotherapy commonly used for the management of locally advanced non-small cell lung cancer is called as
- Adjuvant chemotherapy
 - Concurrent chemotherapy
 - Palliative chemotherapy
 - Neo-adjuvant chemotherapy
9. All are ideally required for the evaluation of adult house hold contact of smear positive Pulmonary TB patients to start tuberculosis preventive treatment, except.
- Symptom assessment
 - X-ray chest PA
 - Mantoux test
 - None of the above

10. According to latest guidelines, choice for tuberculosis preventive therapy for multi-drug resistant TB patients include
- A) 6 months of Levofloxacin
 - B) 4 months of linezolid
 - C) 6 months of Bedaquiline
 - D) 4 months of pyrazinamide
11. A 50-year-old male presented with fever and pain abdomen for last 1 month. He had no past history of tuberculosis treatment. In view of abdominal distension, ascitic fluid tapping was done showed lymphocytic rich fluid, serum to ascitic fluid albumin gradient of 0.8 g/dl, ascitic fluid proteins 4 g/dl and ADA of 30U/L. what is the next step in his management?
- A) Start Anti-tuberculosis treatment
 - B) Ultrasound abdomen
 - C) Ultrasound guided core biopsy
 - D) CECT abdomen
12. In the Prevent -Detect - Treat - Build Approach of NSP 2017 -2025, 'Build' pillar includes all the following points, except.
- A) Community engagement
 - B) Inter-ministerial and corporate sector engagement
 - C) Integrated health system approach
 - D) Free TB drugs for all TB cases
13. In 2023, patient support schemes for TB patients currently running under the National TB Elimination Programme include all the following, except
- A) Ni-Kshay Poshan Yojana
 - B) TB Notification
 - C) Honorarium for Treatment Supporters
 - D) Pradhan Mantri TB Mukh Bharat Abhiyaan -Ni-Kshay Mitra
14. Under NTEP, TB notification can be done through
- A) Ni-kshay Portal
 - B) Call Centre
 - C) Physical Performa
 - D) All of the above
15. According to Jones and Campbell classification of peripheral tuberculous lymph nodes. Stage 4 is
- A) Cold abscess -central softening due to abscess formation
 - B) Collar-stud abscess formation
 - C) Sinus tract formation
 - D) Peri adenitis -large rubbery nodes fixed to surrounding tissue

16. Characteristic feature of lymph nodes in sarcoidosis includes
- A) Peripheral enhancement with Conglomeration
 - B) Peripheral enhancement and discrete
 - C) Homogenous and discrete
 - D) Homogenous with Conglomeration
17. Typical CSF findings in a case of tubercular meningitis include
- A) Proteins >100 mg/dl, 100 - 500 cells/ μ l, glucose <40% of the blood glucose level
 - B) Proteins <10 mg/dl, < 10 cells/ μ l, glucose <40% of the blood glucose level
 - C) Proteins >100 mg/dl, >5000 cells/ μ l, glucose <20% of the blood glucose level
 - D) Proteins <10 mg/dl, <100 cells/ μ l, glucose same as blood glucose level
18. Out of the following, which anti-tubercular drug has the lowest CSF penetration
- A) Linezolid
 - B) Pyrazinamide
 - C) Isoniazid
 - D) Rifampicin
19. In intestinal tuberculosis, Diarrhoea is most commonly seen in
- A) Ulcerative involvement of small intestine
 - B) Stricture involvement of small intestine
 - C) Ulcerative involvement of large intestine
 - D) Hypertrophic involvement of large intestine
20. Radiological features characteristic of intestinal tuberculosis include
- A) Short segment involvement with Concentric strictures
 - B) Short segment involvement with Eccentric strictures
 - C) Long segment involvement with Eccentric strictures
 - D) Long segment involvement with Concentric strictures
21. Following antibiotics have good penetration into respiratory secretions except:
- A) Carbapenems
 - B) Ciprofloxacin
 - C) Azithromycin
 - D) Clindamycin
22. All of the following drugs are used for treating Pneumocystis Jiroveci infection except:
- A) Clindamycin
 - B) Pantamidine
 - C) Trimethoprim-sulphamethaxazole
 - D) Metronidazole

23. All are true about primary Ciliary Dyskinesia (PCD) except:
- A) PCD typically presents early in life.
 - B) PCD is characterized by complete loss of cough clearance
 - C) Bronchiectasis is common with predilection for right middle lobe and lingular lobe.
 - D) Non-seasonal rhinosinusitis begins at < 6 years of age.
24. Which of the following airway clearance techniques/agents are used in the management of bronchiectasis?
- A) Inhaled Mannitol
 - B) hypertonic Saline
 - C) High-frequency chest wall oscillation
 - D) All of the above
25. Which of the following *Mycobacterium abscessus* sub-species has non-functional erm 23 SrRNA methylase gene rendering macrolide susceptibility:
- A) *M. abscessus*
 - B) *M. bolleti*
 - C) *M. massiliense*
 - D) None of the above
26. As per 2019 IDSA/ATS guideline for CAP, blood culture should be done in all of the following situations except:
- A) Patients receiving empiric treatment for *Pseudomonas aeruginosa* or Methicillin resistant *Staphylococcus aureus*
 - B) Patients with prior infection with *P. Aeruginosa* or MRSA
 - C) All CAP patients.
 - D) Patients who have been hospitalised and received parenteral antibiotics in last 90 days.
27. Which of the following parameter have been assigned highest point in pneumonia severity index?
- A) $BUN \geq 30$ mg/dl
 - B) $PaO_2 < 60$ mmHg
 - C) Altered mental status
 - D) $pH > 7.35$
28. All of the following are the risk factors of having MDR pathogens in patients with hospital acquired pneumonia, except:
- A) COPD patients
 - B) Home wound care
 - C) Septic shock at the time of VAP onset
 - D) Patient developing ARDS after VAP onset

29. All of the following are the recommended strategies to prevent Nosocomial pneumonia except:
- A) Short course antibiotic therapy (when clinically applicable)
 - B) Chest physiotherapy
 - C) Oral Chlorhexidine
 - D) Closed endo-tracheal suctioning
30. All of the following are risk factors for developing pulmonary NTM infection except:
- A) Advance age
 - B) Female sex
 - C) Obesity (BMI > 30 kg/m²)
 - D) Scoliosis
31. Which of the following statement is false regarding opportunistic mold infections of the lung:
- A) Mucorales causes the vast majority of fungal pneumonia, followed by aspergillus.
 - B) Mucorales are associated with presence of diabetes mellitus, acidosis and malnutrition.
 - C) Mucorales are broad-based non-septate fungi.
 - D) Pulmonary mucormycosis has a predilection for the upper lobes.
32. Which of the following is part of treatment recommendations for severe acute pulmonary histoplasmosis?
- A) Methyl prednisolone
 - B) Itraconazole
 - C) Liposomal Amphotericin B
 - D) All of the above
33. Which of the following diagnostic test is most sensitive for identification of blastomycosis.
- A) Urinary Antigen test
 - B) Serology complement fixation test
 - C) Sputum culture
 - D) Sputum KOH
34. Which of the following virus has dsDNA genome?
- A) Influenza virus
 - B) Corona virus
 - C) Adenovirus
 - D) Respiratory syncytial virus

35. Mechanism of action of newer antibiotic 'Omadacycline' is
- A) Inhibit ribosomal proteins and prevent efflux pump
 - B) Cell wall synthesis inhibitor
 - C) Inhibit topoisomerase IV
 - D) Bind to iron and enters bacteria through iron channel
36. Which of the following statement is false regarding pathogenesis of invasive pulmonary aspergillosis (IPA)?
- A) Spread only via inhalational route
 - B) Iron overload promotes IPA
 - C) Invasive aspergillosis can spread to contiguous organ, across the diaphragm to stomach.
 - D) Non angio-invasive IPA common in non-neutropenic patients (taking corticosteroids)
37. Which of the following measure is not recommended regarding the use of antibiotic therapy in Hospital acquired pneumonia?
- A) Promptly initiate empiric antibiotic therapy when there is clinical suspicion of infection.
 - B) Use of narrow spectrum agent for patients with no risk factors for MDR pathogens.
 - C) No use of adjunctive aerosolized aminoglycosides in patients with highly resistant gram- negative MDR pathogens.
 - D) Drug of choice for Acinetobacter is a carbapenem
38. Which of the following organism is a causal factor for haemorrhagic mediastinitis:
- A) Histoplasma
 - B) Bacillus anthracis
 - C) Brucella
 - D) Actinomyces
39. In North America, chronic fibrosing mediastinitis is most commonly caused by:
- A) Blastomycosis
 - B) Coccidiomycosis
 - C) Aspergillosis
 - D) Histoplasmosis
40. Which of the following statement is false about Bronchogenic cyst?
- A) May have their own pleura
 - B) Intra pulmonary cyst is more common than mediastinal cyst
 - C) Lined by respiratory epithelium, but no gas exchange potential
 - D) Lower lobe involvement more common than upper lobe

41. Which of the following statement is false about thymoma?
- A) A clinical diagnosis is often sufficient to proceed to resection without biopsy.
 - B) Presence of acetyl choline receptor antibodies is indicative of thymoma.
 - C) Thymoma commonly occur in children < 5 years age.
 - D) Total Thymectomy should be performed in all cases of thymoma where AchR-Abs are present in asymptomatic patients.
42. All are common abnormalities of anterior mediastinum except:
- A) Teratomatous neoplasm
 - B) Hernia through foramen of Morgagni.
 - C) Lymphomas
 - D) Bronchogenic cyst
43. Posterior mediastinum includes all except:
- A) Descending thoracic aorta
 - B) Pulmonary artery
 - C) Oesophagus
 - D) Thoracic duct
44. Following is the best sequence from most common to least common mediastinal tumour in adults.
- A) Neurogenic tumour >> Thymoma >> Lymphoma
 - B) Lymphoma >> Neurogenic tumour >> Thymoma
 - C) Thymoma >> Lymphoma >> Neurogenic tumour
 - D) Thymoma >> Neurogenic tumour >> Lymphoma
45. Following statement is false about nerve sheath tumour?
- A) Schwannoma are one of most common mediastinal neurogenic tumours.
 - B) Post excision-recurrence is high
 - C) Surgical resection is the definitive treatment
 - D) Most patients are asymptomatic
46. Most common symptom of Pulmonary Hypertension is
- A) Dyspnoea on exertion
 - B) Dyspnoea at rest
 - C) Presyncope
 - D) Chest pain
47. The following group of patients are most likely to be reactive to Calcium channel blockers
- A) Idiopathic PAH
 - B) Heritable PAH
 - C) Drug related PAH
 - D) All of the above

48. All are true regarding acute vasoreactivity test except
- A) A positive test is characterized by reduction of mPAP by 10 mm Hg or more to an absolute mPAP of 40 mm Hg or less
 - B) An increased or unchanged CO.
 - C) Calcium channel blockers should be used to gauge acute response
 - D) Those patients with negative acute vasoreactivity do not benefit from CCB therapy
49. In a Basic Life support (BLS) algorithm, the ratio of chest compressions to no of rescue breaths that should be given to a unresponsive patient without pulse is
- A) 20 chest compressions and 2 breaths
 - B) 20 chest compressions and 4 breaths
 - C) 30 chest compressions and 2 breaths
 - D) 30 chest compressions and 4 breaths
50. Whis of the following is the component of the team dynamics that should be followed by a critical care team
- A) Open loop communication
 - B) Constructive intervention
 - C) Fast messaging
 - D) Working beyond our limits
51. A 31-year-old woman with family history of pulmonary hypertension is referred to local Pulmonary hypertension service for assessment. Her right heart catheterization results from the tertiary centre are
- Mean pulmonary artery pressure: 28mm Hg
Pulmonary artery wedge pressure :12mmHg
- What is the single best interpretation of these results?
- A) Combined Precapillary and post capillary PH
 - B) Inconclusive result : unable to confirm or exclude PH
 - C) Precapillary PH: consistent with idiopathic PAH
 - D) Post capillary PH, consistent with associated left heart disease

52. Optimal management for Chronic thromboembolic pulmonary hypertension is:
- A) Warfarin
 - B) Pulmonary thromboendarterectomy
 - C) Balloon Pulmonary angioplasty
 - D) Riociguat
53. A 33-year-old woman presented to emergency department with complaints of breathlessness and 3 syncopal episodes in the last 24 hours. She has history of tibial fracture 3 weeks back. Her spo2 is 89% on room air, her Heart Rate is 116 bpm, BP - 76/44mmHg. The doctor on duty advised to thrombolysse the patient ad told she cannot be taken for CT scan. Which one of the following findings indicate the need for immediate thrombolysis ?
- A) D- dimer : 1000ng/ml
 - B) High PESI score
 - C) Spo2 89% RA
 - D) RV dysfunction on Echocardiogram
54. A pregnant female develops sudden onset of breathlessness. Her PESI score is 86, her wells score is 5. What is the initial investigation of choice for this patient?
- A) CT Angiography
 - B) 2 D echocardiogram
 - C) Doppler of lower limbs
 - D) ventilation perfusion scan
55. Which of the following anti-tubercular drug is known to cause vestibular toxicity
- A) Amikacin
 - B) Isoniazid
 - C) Linezolid
 - D) All of the above
56. Roflumilast, a drug used in severe COPD comes under which class?
- A) Endothelin receptor antagonist
 - B) Anti-IL 5
 - C) PDE-5 inhibitor
 - D) PDE-4 inhibitor
57. Most commonly affected organ in microscopic polyangitis is
- A) Lungs
 - B) Skin
 - C) Kidney
 - D) Peripheral nerves

58. Which of the following is associated with good prognosis in Eosinophilic granulomatosis with polyangiitis
- A) Presence of nasal symptoms
 - B) cardiac involvement
 - C) GI involvement
 - D) Absence of nasal symptoms
59. Anti-tubercular drug that can be given in divided doses is
- A) Linezolid
 - B) Pyrazinamide
 - C) Cycloserine
 - D) Ethambutol
60. Adjunct airway device that is used to open the airway in a critically sick conscious patient is
- A) Nasopharyngeal airway
 - B) Oropharyngeal airway
 - C) Endotracheal tube
 - D) None of the above
61. A 30-year-old female complains of cough, hemoptysis and shortness of breath. There is profound generalized weakness, but no fever. On examination there is pallor and chest auscultation revealed bilateral scattered crepitations. Hb- 6.7gm/dl. TLC-6300, N70 Chest X-ray showed bilateral diffuse parenchymal infiltrates. PFT showed FVC 92%, FEV1/FVC - 84%, DLCO - 128% predicted. Most likely diagnosis is
- A) Pulmonary tuberculosis
 - B) Bilateral bronchiectasis
 - C) Diffuse pulmonary alveolar hemorrhage
 - D) Lymphangioliomyomatosis
62. In a normal ECG, normal PR interval is
- A) 0.04-0.08 seconds
 - B) 0.08-0.12 seconds
 - C) 0.12-0.20 seconds
 - D) 0.20-0.28 seconds

63. All are true except about Pulmonary alveolar proteinosis
- A) Serum LDH is increased in primary Pulmonary alveolar proteinosis (PAP)
 - B) Serum GM CSF is elevated in autoimmune Pulmonary alveolar proteinosis
 - C) Serum Cytokeratin 19 is elevated in hereditary PAP
 - D) Routine blood counts and chemistry are usually normal in primary PAP
64. A 20-year-old patient was diagnosed as pulmonary Tuberculosis with AFB smear showing 2+ positivity. Rifampicin resistance was not detected on CBNAAT. After 2 months of treatment, patient improved clinically. However, his sputum smear showed scanty positivity for AFB. Which of the following can't be the likely reason for the lack of sputum conversion?
- A) Delayed conversion
 - B) Isoniazid mono resistance
 - C) Immune reconstitution inflammatory syndrome
 - D) Dead bacilli
65. A 50-year-old male was suffering from severe snoring and daytime sleepiness. He underwent polysomnography and diagnosed with OSA and started on CPAP treatment. Few weeks later patient was totally uncomfortable with the device and denied to continue it further. He seeks some alternative management. What will be your advice for the same?
- A) Continue CPAP at low pressure
 - B) shift to BiPAP
 - C) Mandibular advancement devices
 - D) Surgical uvulopalatopharyngoplasty
66. 'Out of centre' sleep testing is performed in all except:
- A) high pre-test probability of OSA
 - B) no sleep related comorbidities
 - C) immobile patient
 - D) patients with risk of CSA
67. All are true regarding treatment of OSA, except
- A) CPAP is the treatment of choice
 - B) Auto CPAP improves adherence compared to fixed CPAP therapy
 - C) Adherence is defined as more than 4 hours of use for more than 70% nights
 - D) Oral appliances are used as alternatives to CPAP for moderate OSA
68. The emergence of central apnoea during CPAP titration for treatment of OSA is called
- A) Mixed sleep apnoea
 - B) Complex sleep apnoea
 - C) Idiopathic central sleep apnoea
 - D) Central hypoventilation sleep apnoea

69. A 5-month-old baby was admitted to NICU because of frequent episodes of respiratory arrest for a few seconds at the onset of sleep. There were no rales or heart murmurs. The muscle tone was good. No family history of respiratory conditions. Arterial blood gas analysis shows increased paCO_2 and bicarbonate concentration. What is the diagnosis?
- A) Central hypoventilation syndrome
 - B) Pickwickian syndrome
 - C) Metabolic Alkalosis
 - D) Metabolic acidosis
70. Obesity hypoventilation includes all except
- A) $\text{BMI} > 30 \text{ kg/m}^2$
 - B) Daytime $\text{PaCO}_2 > 45 \text{ mm Hg}$
 - C) Rise in PaCO_2 of $> 10 \text{ mm Hg}$ during sleep
 - D) Absence of other known causes of hypoventilation
71. Pleural effusion associated with constrictive pericarditis is?
- A) Always transudate
 - B) Typically exudate, occasionally transudate
 - C) Always exudate
 - D) Typically transudate, occasionally exudate
72. Nature of pleural effusion in conditions like hypothyroid effusion, pulmonary embolism, sarcoidosis and trapped lung is ?
- A) Always transudate
 - B) Typically exudate, occasionally transudate
 - C) Always exudate
 - D) Typically transudate, occasionally exudate
73. Elevated beta-2 transferrin levels in pleural effusion is seen in which of the following clinical conditions ?
- A) Urinothorax
 - B) Glycinothorax
 - C) Biliopleural fistula
 - D) Ventriculoperitoneal shunt migration
74. Pick the wrong statement in LENT Score :-
- A) It is prospectively validated scoring system to estimate survival in malignant pleural effusion
 - B) 'N' in 'LENT' stands for N/L ratio in pleural fluid
 - C) 'T' in 'LENT' stands for the primary tumour type
 - D) 'E' in 'LENT' stands for performance status

75. According to cerfolio classification of air leak, grade 3 air leak is seen during
- A) Expiration only
 - B) During forced expiration only, usually asking the patient to cough
 - C) Inspiration only
 - D) Both inspiration and expiration
76. Which of the following statement is true regarding thoracic ultrasound in pneumothorax?
- A) Presence of A lines confirms pneumothorax
 - B) Presence of B lines are very specific for pneumothorax
 - C) Linear array transducers are more sensitive than convex array transducers for detecting pneumothorax
 - D) Absence of lung sliding confirms pneumothorax
77. Which of the following commonly done procedure is associated with highest risk of iatrogenic pneumothorax?
- A) Mechanical Ventilation
 - B) CT guided percutaneous fine needle aspiration
 - C) Transbronchial cryobiopsy
 - D) Navigational bronchoscopy
78. What is the estimated size of pneumothorax by light's formula if the diameter of collapsed lung is 6cm and the diameter of the hemithorax is 10cm?
- A) 58%
 - B) 68%
 - C) 78%
 - D) 88%
79. Chromosomal translocation that occur in primary pleural synovial sarcoma is?
- A) t(14,18)
 - B) t(20,22)
 - C) t(X,18)
 - D) t(20,14)
80. Modality of choice for the treatment of solitary fibrous tumour of the pleura ?
- A) Neoadjuvant chemotherapy
 - B) Sequential chemo-radiotherapy
 - C) Surgical resection
 - D) Only Radiotherapy

81. The following trials have been done in ARDS patients ?
- A) NHLBI
 - B) EXPRESS
 - C) FACTT
 - D) All of the above
82. Which of the following cytokines/chemokines are implicated in the patho-physiology of ARDS ?
- A) Von-Willebrand factor (VWF)
 - B) Angiopoietin-2
 - C) Thrombomodulin
 - D) All of the above
83. In which of the following clinical condition, ventilatory strategy of permissive hypercapnia in ARDS patients is contraindicated?
- A) Acute myocardial ischemia
 - B) Patients on beta-blockers
 - C) Right ventricular failure
 - D) All of the above
84. Which mode of NIPPV should be first line therapy in patient with low AHI and malignant OHS?
- A) Manual CPAP
 - B) AVAPS
 - C) Bilevel PS with/without VAPS
 - D) Auto CPAP
85. Most common genetic abnormality seen in patients of congenital central hypoventilation syndrome is:-
- A) Mutation in 8p14
 - B) Mutation in 4p12
 - C) Mutation in 2q10
 - D) Mutation in 4q8
86. Patients on Varenicline for smoking cessation should be regularly monitored for
- A) Hepatitis
 - B) Coagulation abnormalities
 - C) Neuropsychiatric behavior
 - D) Anaemia
87. Laryngoscopic view in grade 3 Cormack-Lehane score is ?
- A) 40 % of vocal cords visualised
 - B) 80% of vocal cords visualised
 - C) Epiglottis not visualised
 - D) Only Epiglottis visualised

88. Which of the following is not a step in using metered dose inhaler in a mechanically ventilated patient ?
- A) Assure tidal volume > 500 ml
 - B) Aim for an inspiratory time > 0.30 of the total breath time
 - C) Breath hold at end expiration for 3-5sec
 - D) Ventilator breath is synchronized with patient's inspiration
89. Which of the following is the rescue or salvage interventions used in severe hypoxemia resistant to conventional mechanical ventilation and PEEP ?
- A) Pressure controlled inverse ratio ventilation
 - B) Inhaled Nitric Oxide
 - C) Corticosteroids
 - D) All of the above
90. Nocturnal hypoventilation can be diagnosed if ?
- A) PaCO₂ is > 45mmHg for greater than equal to 15 min
 - B) PaCO₂ is > 50mmHg for greater than equal to 10min
 - C) PaCO₂ is > 55mmHg for greater than equal to 10min
 - D) PaCO₂ is > 60mmHg for greater than equal to 15min
91. In a Basic life support (BLS) algorithm, what is the rate of chest compressions in an unresponsive patient with no pulse?
- A) 60-80/minute
 - B) 80-100/minute
 - C) 100-120/minute
 - D) 120-140/minute
92. Which of the following is/are the accepted indication/s of acute oxygen therapy?
- A) Severe acute anemia
 - B) Severe trauma
 - C) Low cardiac output with metabolic acidosis
 - D) All of the above
93. Which of the following trial has been done in COPD patients regarding use of continuous oxygen?
- A) BMRC trial
 - B) LOTT trial
 - C) LOVS trial
 - D) NOTT trial

94. For adults with septic shock, severe metabolic acidemia with pH less than or equal toand AKI, AKIN score 2 or 3, NaHCO₃ therapy is suggested by surviving sepsis guidelines?
- A) 7.3
B) 7.2
C) 7.1
D) None
95. Most common configuration used in VV-ECMO is ?
- A) Femero jugular
B) Jugulo femoral
C) Femero femoral
D) Jugulo IVC
96. Which of the following can act as a mucolytic agent?
- A) Promethazine hydrochloride
B) Azithromycin
C) Pancreatin
D) Dornase alpha
97. Lung volume reduction surgery in a COPD patient would be of maximum benefit in the following setting?
- A) Mild, predominant upper and middle lobe emphysema
B) Severe, lower zone bullous emphysema and mild upper zone paraseptal emphysema
C) Severe upper zone bullous emphysema with relatively spared lower zone
D) Severe upper zone bullous emphysema with moderate lower zone centrilobular emphysema
98. Samter's triad refers to a condition in an individual having combination of Asthma, nasal inflammation, and recurring nasal polyps along with?
- A) ABPA
B) Sensitivity to aspirin
C) Occupational asthma
D) Cystic fibrosis
99. Bronchial hyper-responsiveness is defined as the inhaled concentration of the bronchoprovocative agent that reduces FEV₁ by?
- A) 10%
B) 15%
C) 20%
D) 25%
100. Bronchodilator reversibility is said to be positive if after 15min of inhaled SABA, there is a documented increase in FEV₁ of?
- A) 12% and 200ml
B) 20% and 120ml
C) 12% or 200 ml
D) 20% or 120ml

ROUGH WORK

DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE TOLD TO DO SO

Booklet Serial No. 214009

Test Booklet Series

**TEST BOOKLET
ANESTHESIOLOGY
Written Test - 2023
(55)**

A

Time Allowed: Two Hours

Maximum Marks: 100

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2. Please note that it is the candidate's responsibility to encode and fill in the Roll Number and Test Booklet Series Code A, B, C or D carefully and without any omission or discrepancy at the appropriate places in the OMR Answer /Response Sheet. Any omission/discrepancy will render the Response Sheet liable for rejection.
3. You have to enter your Roll Number on the Test Booklet in the Box provided alongside. **DO NOT write anything else** on the Test Booklet.
4. This Test booklet contains **100** items (questions). Each item comprises of four responses (answers). You will select the response which you want to mark on the Answer Sheet/Response Sheet. In case you feel that there is more than one correct response, mark the response which you consider the best. In any case, choose **ONLY ONE** response for each item.
5. You have to mark all your responses **ONLY** on the separate Answer /Response Sheet provided. See directions in the Response Sheet.
6. *All* items carry equal marks.
7. Before you proceed to mark in the Answer /Response Sheet, the response to various items in the Test Booklet, you have to fill in some particulars in the Answer /Response Sheet as per instructions sent to you with your Admission Certificate.
8. After you have completed filling in all your responses on the Response Sheet and the examination has concluded, you should hand over to the Invigilator **only the Answer /Response Sheet**. You are permitted to take away with you the Test Booklet and **Candidate's Copy of the Response Sheet**.
9. Sheets for rough work are appended in the Test Booklet at the end.
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THERE WILL BE PENALTY FOR WRONG ANSWERS MARKED BY THE CANDIDATE IN THE WRITTEN TEST (OBJECTIVE TYPE QUESTIONS PAPERS).
 - (i) There are four alternatives for the answer to every question. For each question for which a wrong answer has been given by the candidate, **(0.25)** of the marks assigned to that question will be deducted as penalty.
 - (ii) If a candidate gives more than one answer, it will be treated as a **wrong answer** even if one of the given answers happens to be correct and there will be same penalty as above for that question.
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(55) (A)/2023

[P.T.O.]

000112

1. Disability adjusted life year is a unit to quantify
 - A) Premature death and disability
 - B) Expected life expectancy
 - C) Resource allocation for disease and disability
 - D) Socio demographic index for death

2. Following statements regarding Oxygen concentrators are true
 - I Oxygen concentrators utilize technique of swing adsorption
 - II It has zeolite crystals to extract Nitrogen from air to produce oxygen
 - III Purity of oxygen is high with high flow rates
 - IV They can be used to provide supplemental oxygen in PACU.
 - A) I, II, III are correct
 - B) I, II, IV are correct
 - C) Only I and II are correct
 - D) Only III and IV are correct

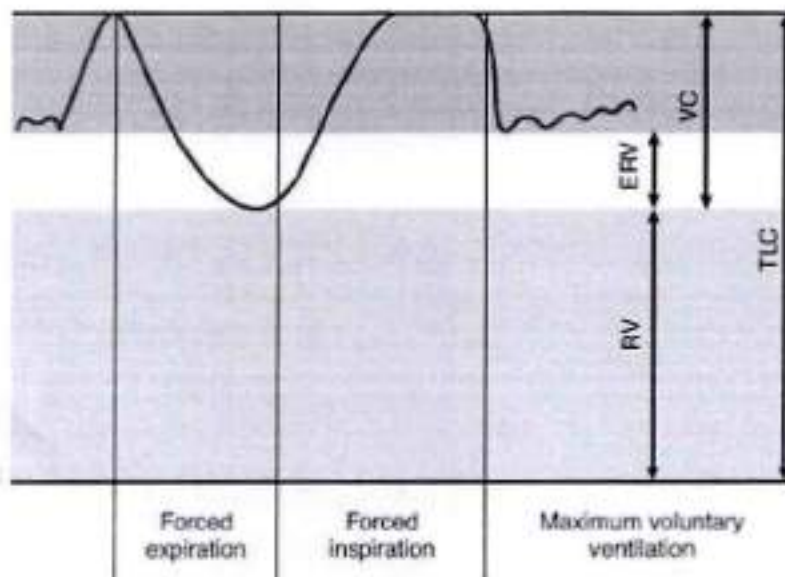
3. **I-PASS** scripted model for patient handout stands for
 - A) **I**nformation, **P**reparation, **A**ssociation, **S**edation, **S**urgery
 - B) Infirmary, Preparation, Anesthetic check up, Safety concerns, Severity
 - C) Illness severity, Patient summary, Action list, Situation awareness and contingency Plan, Synthesis by receiver
 - D) Indisposition, Patient complaints, Affirmations, Surgery, Synchronize

4. Microsimulation involves:
 - A) Trainers in form of anatomic form up devices
 - B) Trainers with virtual environment in the computer
 - C) Trainers that are mannequin based simulator system
 - D) Trainers that are screen based simulating part or entire aspect of clinical anaesthesia

5. The most relevant clinical competence is :
 - A) Fact Gathering / Factual Knowledge
 - B) Real time performance
 - C) Demonstration of performance
 - D) Interpretation and application of facts/ knowledge

6. Following is **NOT** a night time symptom for Obstructive sleep apnea
- A) Frequent awakening during night
 - B) Awakeing from choking sensation
 - C) Bradycardia
 - D) Sleep that is not restorative
7. Melatonin levels are decreased with :
- A) Increasing Age
 - B) Opioids
 - C) Vasopressors
 - D) Nebulised beta 2 agonists
8. Calculate cerebral perfusion pressure (CPP) from the following data: blood pressure (BP) 100/70, heart rate (HR) 65 beats/min, cardiac output 5 L/min, CVP of 5 cm/H₂O, and ICP 15 mm Hg
- A) 60 mm Hg
 - B) 65 mm Hg
 - C) 70 mm Hg
 - D) 75 mm Hg
9. Complete suppression of EEG in hypothermia is observed at temperature range :
- A) 18-20 Degree C
 - B) 22-24 degree Celcius
 - C) 26-28 Degree Celcius
 - D) 24 – 26 Degree Celcius
10. When preparing to place a thoracic epidural, you palpate the inferior border of the scapula. This landmark corresponds to which level of the vertebral column?
- A) C7-T1
 - B) T4-T6
 - C) T10-T11
 - D) T7-T8

11. Post tetanic stimulation is seen due to increase of which ion in the nerve endings
- Magnesium
 - Calcium
 - Sodium
 - Potassium
12. For any given concentration of volatile anesthetic, the splitting ratio is dependent on which of the following characteristics of that volatile anesthetic?
- Saturated Vapor pressure
 - Molecular weight
 - Specific heat
 - Minimum alveolar concentration (MAC) at 1 atmosphere
13. In the pulmonary capillaries, The oxygen dissociation curve shifts to :
- Right
 - Left
 - Alternates between right and left
 - None
14. The following graph represents following condition:



- Restrictive lung disease
- Normal lung capacity
- Obstructive lung disease
- Extrathoracic obstruction

15. The units of measurement of airway resistance is :
- A) $\text{Cm H}_2\text{O/L/Sec}$
 - B) $\text{Ml/cm H}_2\text{O}$
 - C) Mm Hg
 - D) Dynes/cm/sec
16. Read the following statements regarding atelectasis under anaesthesia:
- I. Atelectasis is unrelated to type of anaesthesia
 - II. It is seen in spontaneous respiration and after muscle paralysis
 - III. It is seen with both intravenous and inhaled anaesthetics.
 - IV. Degree of atelectasis is relatively less after thoracic surgery
- A) I, II and IV are correct
 - B) I, II and III are correct
 - C) II, III and IV are correct
 - D) I, III and IV are correct
17. Increased VCO_2 is seen in all conditions **EXCEPT**:
- A) Fever
 - B) Malignant Hyperthermia
 - C) Hypothyroidism
 - D) Use of sodium Bicarbonate
18. The H zone in a sarcomere in the following diagram contains :
- A) Only myosin filaments
 - B) Only actin filaments
 - C) Both Actin and myosin filaments
 - D) Depicts end of the sarcomere
19. Read the following statements about Bezold Zarisch reflex:
- I. It is in response to noxious ventricular stimuli
 - II. It induces Hypotension, bradycardia and coronary artery dilatation
 - III. It is more pronounced in patients with Atrial Fibrillation
 - IV. It is a cardioprotective reflex
- A) I, II and III are correct
 - B) II, III and IV are correct
 - C) I, II and IV are correct
 - D) I, III and IV are correct

20. Match the color coding of cylinders

- | | | | |
|-----|-----------------|----|-------|
| I | Oxygen | a. | Gray |
| II | Carbon di oxide | b. | Brown |
| III | Nitrous oxide | c. | Green |
| IV | Helium | d. | Blue |
- A) I-a, II-d, III b, IV- a
B) I-d, II-b, III -c, IV- a
C) I- b, II-c, III, a, IV-d
D) I-c, II-a, III- d, IV- b

21. If you lose the oxygen pipeline pressure and you have a pressure of 475 psig in the oxygen cylinder, how long can you supply oxygen from that cylinder?

- A) 60 minutes
B) 165 minutes
C) 30 minutes
D) 100 minutes

22. The Vortex approach is a cognitive aid designed to facilitate management of

- A) Unanticipated difficult airway
B) Anticipated difficult airway
C) Difficult Supraglottic device placement
D) Difficult regional anesthesia block placement

23. Calculate the body mass index (BMI) of a man 200 cm (6 feet 6 inches) tall Weighing 100 kg:

- A) 20 kg/m²
B) 25 kg/m²
C) 30 kg/m²
D) 35 kg/m²

24. The P50 for fetal haemoglobin is approximately

- A) 10 mm Hg
B) 30 mm Hg
C) 26.5 mm Hg
D) 18 mm Hg

25. Which of the following acid-base disturbances is the least well-compensated?
- A) Metabolic alkalosis
 - B) Respiratory alkalosis
 - C) Increased anion gap metabolic acidosis
 - D) Normal anion gap metabolic acidosis
26. Consider the following statements regarding rapid sequence induction
- I. It is specialized method of induction in patients at risk of pulmonary aspiration
 - II. Goal is to reduce the time between loss of consciousness and securing the airway
 - III. Cricoid pressure is applied to occlude the upper pharynx
 - IV. Recommended force is 30 N after loss of consciousness
- A) I,II and III are correct
 - B) II,III and IV are correct
 - C) I, II and IV are correct
 - D) All the options are correct
27. Following is marker of difficult mask ventilation:
- A) Female Gender
 - B) BMI < 30kg/ m²
 - C) Mallampati class II
 - D) Obstructive sleep apnea
28. The second generation all silicone LMA that allows continuous monitoring of cuff pressure is:
- A) LMA Gastro
 - B) I Gel
 - C) LMA Protector
 - D) LMA supreme
29. All of the following patients with respiratory failure may be candidates for noninvasive positive pressure ventilation (NIPPV) **EXCEPT**
- A) Decompensated heart failure and SpO₂ 85% on room air
 - B) HIV-positive patient with bilateral opacities on chest X-Ray and PaO₂/FiO₂ 150
 - C) Urosepsis requiring norepinephrine with tachypnea and SpO₂ 90% on 6 L nasal cannula
 - D) Acute chronic obstructive pulmonary disease (COPD) exacerbation and PaCO₂ 70 mm Hg

30. Alcohol-based hand rubs are not effective in removing following bacteria
- A) Clostridium difficile
 - B) Vancomycin-resistant enterococci
 - C) Methicillin-resistant Staphylococcus aureus (MRSA)
 - D) Mycobacterium tuberculosis (MTB)
31. Consider the following statement regarding ICU Acquired weakness (ICUAW): (ICUAW) EXCEPT which one?
- I Treatment of hyperglycemia
 - II Minimizing use of steroids
 - III Minimizing use of neuromuscular blockers
 - IV Passive exercises in sedated patients
 - V Early diagnosis with electrophysiology studies
- A) All the options are correct
 - B) Only I,II,III,IV are correct
 - C) Only II, III, IV are correct
 - D) None as ICU AW is independent to the factors mentioned

32. The following capnograph is usually seen with :



- A) Presence of leak in sidestream sample line
 - B) Faulty inspiratory valve
 - C) Esophageal intubation
 - D) Faulty expiration valve
33. A delay in the ABG sample analysis at room temperature or at 4° C can lead to :
- A) Rise in $P_a\text{CO}_2$ levels
 - B) Rise in $P_a\text{O}_2$ levels
 - C) Decline in $P_a\text{O}_2$ levels
 - D) Decline in $P_a\text{CO}_2$ levels

34. The following image on lung Ultrasonography depicts which of the following :



- A) Pncumothorax
- B) Normal Lung scan
- C) B line artifacts
- D) Pleural effusion

35. Frost bite injury is an occupational hazard encountered in personnels handling :

- A) Oxygen Cylinders
- B) Nitrous Cylinders
- C) Carbon dioxide Cylinders
- D) Air cylindres

36. The negative pressure suctioning of trachea in adults is:

- A) 70- 150 mm Hg
- B) 50- 60 mm Hg
- C) 150- 200 mm Hg
- D) 45- 90 mm Hg

37. The relationship of radius and length on the flow through the vascular catheters involves following principles of physics:

- A) Reynold's number
- B) Hagen – Poiseuille equation
- C) Graham's Law
- D) Bernoulli's Principle

38. Elective surgery should be postponed after a myocardial infarction for at least

- A) 30 days
- B) 8 weeks
- C) 3 months
- D) 6 months

39. A 65-year-old male with a history of mitral valve replacement 2 years back presents for a knee replacement. He is on warfarin since the time of valve replacement. As per ASRA guidelines, the ideal time to stop his warfarin prior to surgery would be
- A) 12 hours
 - B) 3 days
 - C) 5 days
 - D) 10 days
40. Which of the following cardiovascular abnormalities is *least* likely to be present in a patient with end-stage alcoholic cirrhosis
- A) Increased peripheral vascular resistance
 - B) Widened pulse pressure
 - C) Resting tachycardia
 - D) Increased cardiac output
41. Positive-pressure ventilation with a face mask is contraindicated in which of the following condition?
- A) Laryngospasm
 - B) Trauma
 - C) Congenital diaphragmatic hernia
 - D) Asthma
42. Which of the following indicates adequacy of CPR during resuscitation:
- A) $P_eT\text{CO}_2$ more than 10 mm Hg during CPR
 - B) Diastolic BP less than 20 mm Hg
 - C) Peripheral cyanosis
 - D) Mist formation in the endotracheal tube
43. The factors that is not important in the local anaesthetic distribution and block height in a neuraxial block is :
- A) Baricity
 - B) Dose of the local anesthetic drug
 - C) Advanced age
 - D) Gender

44. Identify the type of spinal needle by electron micrograph of the needle tip design



- A) Whitacre Needle
- B) Sprotte needle
- C) Quinke Babcock needle
- D) Pitkin needle

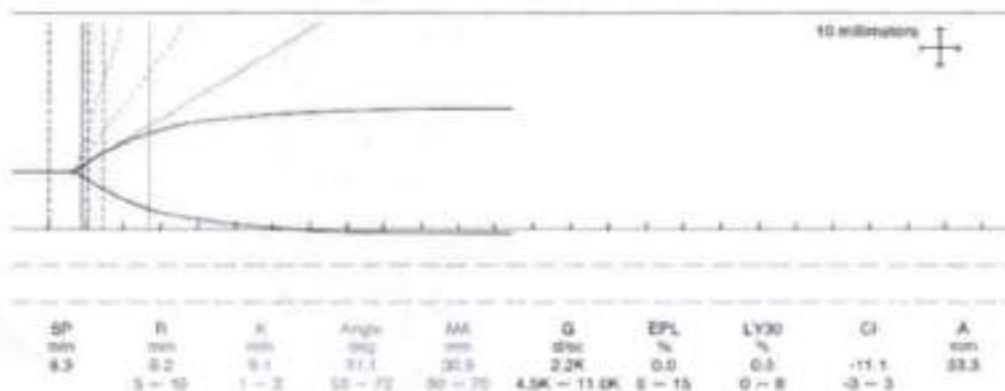
45. Urinary retention encountered after neuraxial Anesthesia can be attributed to :

- A) S_2, S_3 and S_4 nerve root inhibition
- B) By the use of neuraxial opioids
- C) Both the factors can contribute
- D) It is an independent entity with no factors attributing to it

46. Stress related mucosal injury :

- I is encountered in patients with acute , life threatening illness
 - II. Is due to splanchnic vasoconstriction and hypoperfusion
 - III. Mechanical ventilation is a high risk factor for stress ulcer bleeding
 - IV. Maintain $pH > 4$ in gastric aspirates.
- A) All options are correct
 - B) Only I,II,III are correct
 - C) Only II, III and IV are correct
 - D) Only I, III and IV are correct

47. All the conditions can cause hyperkalaemia EXCEPT:
- Tubulointerstitial Nephritis
 - Mineralocorticoid excess
 - Reperfusion of Ischemic tissue
 - Succinylcholine
48. The synthetic blood has all advantages over the Allogenic blood EXCEPT:
- Stable at room temperature
 - No risk of disease transmission
 - Duration of action is for 60 - 90 days
 - Provides rapid Oxygen delivery independent of 2, 3 DPG levels
49. A 45 yr old female was scheduled to undergo total abdominal hysterectomy. The patients was transfused 3 units of Packed Red blood cells during the surgery along with the crystalloids. After the completion of surgery, the patient was observed in PACU and transferred to the ward after 45 minutes. In two hours a call was received with complaints of dyspnea, cough and orthopnea with elevated CVP pressures. Radiographic image was similar to that of pulmonary edema. The most likely diagnosis is in this case is :
- Tranfusion related Acute Lung Injury
 - Transfusion associated circulatory overload
 - Delayed hemolytic reaction to blood transfusion
 - Non hemolytic ransfusion reactions
50. The following thromboelastograph represents following state:



- Hypofibrinogenemia
- Normal TEG
- Hyperfibrinolysis
- Hyperthermia

51. The SPIKES (Setting, perception, Invitation, Knowledge, Empathy and sequel) is a framework of protocol for :
- Written Informed Consent
 - Explaining Perioperative complications
 - Breaking bad news
 - Responding to the emotions including anger
52. Calculate the predicted post operative FEV_1 in a 38 years old male, undergoing right lower lobectomy with preoperative FEV_1 of 70 %
- 45 %
 - 50 %
 - 40 %
 - 60 %
53. Factor that correlates with increased desaturation during one lung ventilation (OLV) is :
- Left sided thoracotomy
 - Lateral positioning during OLV
 - Low percentage of ventilation or perfusion to the operative lung on preoperative V/Q scan
 - Normal preoperative spirometry
54. A 150 kg male patient is scheduled to undergo lumbar spine fixation in view of Pott's spine. He has never visited hospital before and gives history of snoring at bed time only. On polysomnography, done as a part of the workup, the patient is found to have Apnea-hypopnea index (AHI) of around 25 per hour. He fits into which category of obstructive sleep apnea disease:
- Mild
 - Moderate
 - Severe
 - Very severe
55. Which of the following cardiovascular parameter is decreased in terms of physiological changes of pregnancy:
- Pulmonary Vascular resistance
 - Erythrocyte volume
 - Stroke volume
 - Plasma Volume

56. When used in labor analgesia remifentanyl is:
- A) superior to epidural analgesia
 - B) Equivalent to epidural analgesia
 - C) Inferior to Epidural analgesia
 - D) It is not employed for labor analgesia
57. General anaesthesia is induced in a 35-year-old patient for elective cesarean section. No part of the glottis apparatus is visible after two unsuccessful attempts to intubate, but mask ventilation is adequate. The most appropriate step at this point would be to:
- A) Use a laryngeal mask airway
 - B) Attempt a blind nasal intubation
 - C) Continue mask ventilation and cricoid pressure
 - D) Awaken the patient
58. Following statement regarding fat embolism syndrome (FES) is False:
- A) Increased intramedullary pressure with disruption of venous sinusoids leads to FES
 - B) Injury to Pulmonary endothelium is triggered by release of free fatty acids
 - C) Surgical manipulation and reaming is not considered to play role in the entity
 - D) Petechial rashes form a part of clinical presentation of the FES
59. A patient brought to emergency with history of road side accident is, confused, opening eyes to speech and is localizing the painful stimuli has a GCS of :
- A) 15
 - B) 12
 - C) 11
 - D) 8
60. Which of the following is NOT a goal for early resuscitation in patients sustain trauma and major heamorrhage:
- A) Maintain hematocrit 25% - 30 %
 - B) Maintain normal serum ionized calcium
 - C) Prevent increase in serum lactate
 - D) Maintain core temperature lower than 35 °C

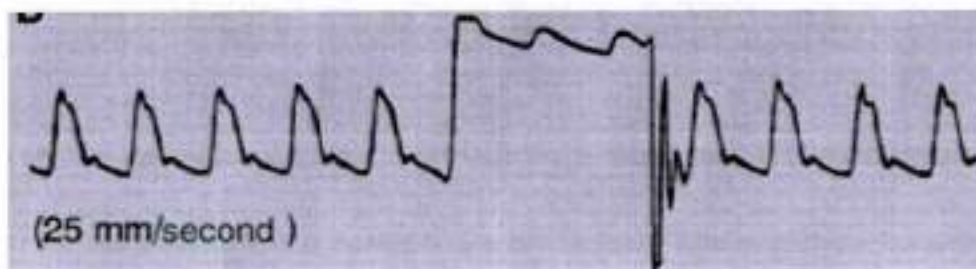
61. Read the following statements regarding the fluid infusion system in haemorrhagic shock:

- I It enables the fluid administration at rate of around 1500 ml
 - II Fluids are infused at controlled temperature
 - III It has a fail safe detection system to prevent infusion of air
 - IV It is not compatible with the administration of red blood cells and plasma
- A) I, II and III are correct
 - B) II, III and IV are correct
 - C) I, II and IV are correct
 - D) All the option are correct

62. To achieve uniform arterial occlusion, the length and width of the sphygmomanometer bladder should be :

- A) At least 60% and 40 % respectively
- B) At least 80 % and 40 percent respectively
- C) At least 80 % and 50 % respectively
- D) At least 60 % and 50 % respetively

63. After a rapid flush test, the following arterial trace is suggestive of :



- A) Normal arterial system
- B) Overdamped Arterial system
- C) Underdamped Arterial system
- D) Artifact

64. Consider the following parameters in patient presenting with shock
CVP - High ; Cardiac output – Low; Systemic vascular resistance - High
The most probable type of shock in this patient is :

- A) Hypovolemic shock
- B) Anaphylactic shock
- C) Vasogenic shock
- D) Cardiogenic shock

65. A shift of oxygen dissociation curve to left is seen in :
- A) Acidemia
 - B) High temperature
 - C) Decreased 2,3 DPG levels
 - D) Increased CO_2
66. Which of the following is the chemical marker of inadequate tissue oxygenation:
- A) Arterial Base deficit $>2\text{mM/L}$
 - B) $\text{VO}_2 < 200 \text{ ml/ min}$
 - C) $\text{SVO}_2 < 50 \%$
 - D) $\text{SAO}_2 \text{ SVO}_2 > 50 \%$
67. The aqueous epinephrine dilution used in Asystole /PEA is :
- A) 1: 100
 - B) 1: 1000
 - C) 1: 10,000
 - D) 1:100,000
68. The drug of choice in Torsade De Pointes is :
- A) Procainamide
 - B) Magnesium
 - C) Sotalol
 - D) Quinidine
69. The group of drugs that is commonly known as Superaspirins is :
- A) Thienopyridines
 - B) Heparin
 - C) Glycoprotein receptor antagonist
 - D) Thrombolytic agents
70. Thrombotic Microangiopathy is a clinical disorder that is encountered in :
- A) Thalassemia
 - B) Sickle Cell anemia
 - C) Von Willebrand disease
 - D) HELLP syndrome

71. The effect of age on Normal A-a gradient is:
- A) Increases with age
 - B) Decreases with age
 - C) Age has no effect on A- a gradient
 - D) Shows a biphasic rise and then declines
72. Which measures is important for preventing Ventilator associated pneumonia:
- A) Frequent Endotracheal suctioning
 - B) Oral Decontamination
 - C) Inflation of the cuff to pressure > 35 mm Hg to prevent secretions goin to trachea
 - D) Frequent Nebulizations with antibiotics
73. Urinary spot Sodium (Na) < 20 mEq/L is indicative of :
- A) Renal disorder
 - B) SIADH
 - C) Pre renal disorder
 - D) Acute tubular Necrosis
74. Calculate the plasma osmolality of a patient admitted in ICU, the following values are given:
Na- 140 mEq; Glucose 90 mg/dl ; BUN – 14 mg/dl;
- A) 300 mOsm/ kg H₂O
 - B) 250 mOsm/ kg H₂O
 - C) 290 mOsm/ kg H₂O
 - D) 400 mOsm/ kg H₂O
75. A 67 year old patient is scheduled to undergo parathyroidectomy. The patient is hypercalcemic with a serum of 20 mg/dl. Anesthetic considerations for this patient include:
- I Careful titration of neuromuscular blocking agents
 - II Hydration with normal saline and use of diuretics to maintain urine output
 - III Hypoventilation to decrease ionized calcium levels
 - IV Careful layngoscopy in view of risk of vertebral compression
- A) I,II,III are correct
 - B) I,II,III and IV are correct
 - C) II, III, IV are correct
 - D) I,II and IV are correct

76. Anatomical location of musculocutaneous nerve in the upper forearm is most frequently found within which muscle:
- A) Coracobrachialis
 - B) Triceps Brachii
 - C) Brachialis
 - D) Biceps Brachii
77. The expression that for a fixed mass of gas at constant temperature, the product of pressure and volume is constant is known as
- A) Graham's law
 - B) Charles' law
 - C) Boyle's law
 - D) Dalton's law
78. During the laparoscopic cholecystectomy, there is sudden reduction of oxygen saturation along with low EtCO₂ on capnograph. Which of the following will provide the earliest diagnosis for air embolism in such situation:
- A) Measurement of lung compliance
 - B) Precordial Doppler
 - C) Pulse Oximeter
 - D) Oesophageal stethoscope
79. Sonographically, the adductor canal block is best determined by identification of :
- A) Quadriceps femoris and Piriformis
 - B) Adductor longus and adductor Brevis
 - C) Sartorius and Vastus medialis
 - D) Adductor Brevis and Adductor Magnus
80. The vessel rich group receives following percentage of the cardiac output:
- A) 10 %
 - B) 25 %
 - C) 15 %
 - D) 75%

81. The oxygen supply failure alarm will sound within 5 seconds when the oxygen pressure falls below:
- A) 55 psig
 - B) 45 psig
 - C) 30 psig
 - D) 75 psig
82. The flow meters in the anaesthesia workstations are also known as :
- A) Constant pressure flow meters
 - B) Constant velocity flow meters
 - C) Constant density flow meters.
 - D) Constant radius flow meters.
83. Mapleson's systems are inefficient in relation to :
- A) Low resistance to gas flows.
 - B) Conservation of heat and moisture.
 - C) Relatively small and fewer parts.
 - D) No degradation of volatile anaesthetic agents.
84. The interaction between propofol and midazolam is :
- A) Additive.
 - B) Potentiation of effects of one drug.
 - C) Synergistic.
 - D) Inhibition of effects of one drug.
85. Fentanyl belongs to which group of opioid:
- A. Diphenylpropylamine derivative
 - B. Benzomorphan derivative
 - C. Morphinan derivative
 - D. Phenylpiperidine derivative

86. Pain assessment of a sedated patient on ventilator in ICU is done by utilizing the following pain scale:
- A) Numerical Ranking scale
 - B) Behavioral pain scale
 - C) Visual Analogue scale
 - D) Defense and Veterans pain scale
87. 15 years old male undergoes craniotomy for fronto temporal tumour lasting 5 hours, received 3 L of NS, extubated, conscious, receiving oxygen by venturi mask, haemodynamically stable with good urine output. An ABG in ICU was as follows
- pH - 7.22/ PCO_2 - 34.7 mm Hg / pO_2 - 181.5 mm Hg / HCO_3^- -16.7 mEq/L / SaO_2 99.6%
- Na - 135 mEq/L/ K - 3.9 mEq/L / Cl - 110 mEq/L / Lactate - 2.0 mmol/L
- The ABG picture is that of:
- A) Partially compensated Respiratory Acidosis
 - B) Partially Compensated Metabolic Acidosis
 - C) Non Anion Gap metabolic Acidosis
 - D) High Anion Gap Metabolic Acidosis
88. Which of the following is the best evidence in evaluating the study quality in the "Evidence Pyramid" :
- A) Meta Analysis
 - B) Systematic review
 - C) Randomized controlled trial
 - D) Clinically appraised literature evidence based practice guidelines
89. Which of the following valves prevents transfilling between compressed-gas cylinders?
- A) Fail-safe valve
 - B) Check valve
 - C) Pressure-sensor shutoff valve
 - D) Adjustable pressure-limiting valve

90. A 8 year old child who underwent herniotomy under general anesthesia developed laryngospasm at the time of removal of supraglottic airway device. The jaw thrust and CPAP of 5 cm of H₂O failed to relieve the laryngospasm. The following dose of intravenous (IV) succinylcholine can be employed to achieve the skeletal muscle relaxation:
- A) 2 – 3 mg/kg body weight
 - B) 1.5 – 2 mg/kg Body weight
 - C) 0.1 – 1 mg/kg Body weight
 - D) 5 mg/kg body weight
91. When used as an adjunctive procedure, a cuff leak test performed in edema or hematoma, reintubation is usually required in:
- A) No percentage difference between exhaled volume before and after cuff deflation
 - B) High percentage difference between exhaled volume before and after cuff deflation
 - C) Less percentage difference between exhaled volume before and after cuff deflation
 - D) High percentage of the exhaled tidal volume
92. Non invasive positive pressure ventilation is relatively contraindicated in :
- A) Life threatening arrhythmias
 - B) Cardiogenic pulmonary edema
 - C) Chronic Respiratory Failure
 - D) Post operative patients with obstructive sleep apnea (OSA)
93. APFEL score is an assessment tool to assess the patients at risk for :
- A) Post operative pain score
 - B) Post operative nausea and Vomiting
 - C) Post operative shivering
 - D) Post operative urinary retention
94. Patients with known or suspected airborne infections should be kept in:
- A) Positive pressure rooms
 - B) General wards
 - C) Negative pressure rooms
 - D) Emergency room
95. During setting up of an Intravenous patient controlled analgesia system (IV- PCA), an inadvertently set long lock out period may lead to :
- A) Overdose of the analgesic
 - B) Adequate Analgesia
 - C) Respiratory depression
 - D) Inadequate analgesia

96. The following drug has hydrophilic property:
- A) Fentanyl
 - B) Sufentanil
 - C) Morphine
 - D) Clonidine
97. Catheter incision – congruent analgesia results in:
- A. Increased pain
 - B. Early removal of the epidural catheter
 - C. Inferior analgesia and side effects
 - D. Superior analgesia and less side effects
98. The yield energy of lipids is :
- A) 9.1 kcal /gm
 - B) 3.4 kcal/gm
 - C) 5kcal/gm
 - D) 2kcal/gm
99. The use of feeding formulas that influence the inflammatory response is known as :
- A) Immune modulation
 - B) Immuno supplementation
 - C) Immunonutrition
 - D) Immunoprotection
100. A regeneration or peaking effect is usually seen with:
- A) Inhaled anaesthetics
 - B) Soda lime
 - C) Vasopressors
 - D) Thiopentone
-

ROUGH WORK

Booklet Serial No.

211133

Test Booklet Series

TEST BOOKLET
CASUALTY MEDICAL OFFICER/CASUALTY
MEDICAL OFFICER CENTRAL CASUALTY SERVICES

A

Written Test - 2023

(58)

Time Allowed: Two Hours

Maximum Marks: 100

INSTRUCTIONS

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET *DOES NOT* HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS, ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET.
2. Please note that it is the candidate's responsibility to encode and fill in the Roll Number and Test Booklet Series Code A, B, C or D carefully and without any omission or discrepancy at the appropriate places in the OMR Answer /Response Sheet. Any omission/discrepancy will render the Response Sheet liable for rejection.
3. You have to enter your Roll Number on the Test Booklet in the Box provided alongside.
DO NOT write anything else on the Test Booklet.
4. This Test booklet contains **100** items (questions). Each item comprises of four responses (answers). You will select the response which you want to mark on the Answer Sheet/Response Sheet. In case you feel that there is more than one correct response, mark the response which you consider the best. In any case, choose *ONLY ONE* response for each item.
5. You have to mark all your responses *ONLY* on the separate Answer /Response Sheet provided. See *directions in the Response Sheet*.
6. *All* items carry equal marks.
7. Before you proceed to mark in the Answer /Response Sheet, the response to various items in the Test Booklet, you have to fill in some particulars in the Answer /Response Sheet as per instructions sent to you with your Admission Certificate.
8. After you have completed filling in all your responses on the Response Sheet and the examination has concluded, you should hand over to the Invigilator *only the Answer /Response Sheet*. You are permitted to take away with you the Test Booklet and *Candidate's Copy of the Response Sheet*.
9. Sheets for rough work are appended in the Test Booklet at the end.
10. While writing Centre, Subject and Roll No. on the top of the Answer Sheet/Response Sheet in appropriate boxes use "**ONLY BALL POINT PEN**".
11. **Penalty for wrong answers:**
THERE WILL BE PENALTY FOR WRONG ANSWERS MARKED BY THE CANDIDATE IN THE WRITTEN TEST (OBJECTIVE TYPE QUESTIONS PAPERS).
 - (i) There are four alternatives for the answer to every question. For each question for which a wrong answer has been given by the candidate, (0.25) of the marks assigned to that question will be deducted as penalty.
 - (ii) If a candidate gives more than one answer, it will be treated as a **wrong answer** even if one of the given answers happens to be correct and there will be same penalty as above for that question.
 - (iii) If a question is left blank, i.e., no answer is given by the candidate, there will be **no penalty** for that question.

NO. 100-10720-1

FILED

APR 11 1961

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1. You see a 47-year-old man in clinic with a three-month history of epigastric dull abdominal pain. He states that the pain is worse in the mornings and is relieved after meals. On direct questioning, there is no history of weight loss and the patient's bowel habits are normal. On examination, his abdomen is soft and experiences moderate discomfort on palpation of the epigastric region. The most likely diagnosis is:
- A) Gastro-esophageal reflux disease (GERD)
 - B) Duodenal ulcer
 - C) Gastric carcinoma
 - D) Gastritis
2. A 65-year-old man presents with central crushing chest pain for the first time. He is transferred immediately to the closest cardiac unit to undergo a primary percutaneous coronary intervention. There is thrombosis of the left circumflex artery only. Angioplasty is carried out and a drug-eluting stent is inserted. What are the most likely changes to have occurred on ECG during admission?
- A) ST depression in leads V1-4
 - B) ST elevation in leads V1-6
 - C) ST elevation in leads V5-6
 - D) ST elevation in leads II, III and AVF
3. A 67-year-old man presents to accident and emergency with a 3-day history of shortness of breath. On examination you palpate the radial pulse and notice that the patient has an irregular heart beat with an overall rate of 140 bpm. You request an electrocardiogram (ECG) which reveals that the patient is in atrial fibrillation. Which of the following would you expect to see when assessing the JVP?
- A) Raised JVP with normal waveform
 - B) Large 'v waves'
 - C) Cannon 'a waves'
 - D) Absent 'a waves'

4. A 48-year-old woman has been diagnosed with essential hypertension and was commenced on treatment three months ago. She presents to you with a dry cough which has not been getting better despite taking cough linctus and antibiotics. You assess the patient's medication history. Which of the following antihypertensive medications is responsible for the patient's symptoms?
- A) Amlodipine
 - B) Lisinopril
 - C) Frusemide
 - D) Atenolol
5. A 61-year-old man presents with a 2-hour history of moderately severe retrosternal chest pain, which does not radiate and is not affected by respiration or posture. He complains of general malaise and nausea, but has not vomited. His ECG shows ST segment depression and T wave inversion in the inferior leads. Troponin levels are not elevated. He has already been given oxygen, aspirin and intravenous GTN; he is an occasional user of sublingual GTN and takes regular bisoprolol for stable angina. What would be the most appropriate next step in his management?
- A) IV low-molecular weight heparin
 - B) Thrombolysis with alteplase
 - C) IV nicardapine
 - D) Angiography with stenting
6. A 56-year-old man presents to the accident and emergency department with a 2-hour history of central chest pain radiating to the left arm. He is anxious, nauseated and sweaty. His pulse rate is 120/minute in sinus rhythm and the ECG reveals ST elevation in leads II, III and aVF. The troponin level is significantly raised. This is certainly acute MI. Which is the most likely coronary vessel to be occluded?
- A) Circumflex artery
 - B) Left anterior descending artery
 - C) Right coronary artery
 - D) Left main coronary artery

7. A 29-year-old woman goes to see her GP complaining of fatigue and palpitations. She says she has also lost weight, though without dieting. On examination, her pulse rate is approximately 120/min and irregularly irregular. Her blood pressure is 142/89 mmHg and her body mass index is 19. There are no added cardiac sounds. The ECG confirms the diagnosis of atrial fibrillation. What would you suggest as the most useful next investigation?
- A) Thyroid function tests (TSH, free T4)
 - B) ECG
 - C) Chest x-ray
 - D) Fasting blood sugar
8. A 57-year-old man is reviewed in a hypertension clinic, where it is found that his blood pressure is 165/105 mm Hg despite standard doses of amlodipine, perindopril, doxazosin and bendroflumethiazide. Electrolytes and physical examination have been, and remain, normal. Which of the following would be your next stage in his management?
- A) Arrange for his medication to be given under direct observation
 - B) Arrange urinary catecholamine assays
 - C) Request an adrenal CT scan
 - D) Add verapamil to his medication
9. A 67-year-old woman is admitted to accident and emergency with pyrexia (38.1°C) and a cough productive of green sputum. The observations show a pulse rate of 101, BP 80/60 and respiratory rate of 32. She is alert and orientated in space and time. Blood results reveal a WCC of 21, urea of 8.5 and chest x-ray shows a patch of consolidation in the lower zone of the right lung. She is treated for severe community-acquired pneumonia. Which of the following is the correct calculated CURB-65 score?
- A) 6
 - B) 8
 - C) 4
 - D) 1

10. Which of the following organisms would typically be found in a patient with atypical community-acquired pneumonia?
- A) *Staphylococcus aureus*
 - B) *Pseudomonas spp.*
 - C) *Streptococcus pneumonia*
 - D) *Legionella pneumophila*
11. You are asked to interpret an arterial blood gas of a 76-year-old patient who was admitted to accident and emergency with an acute onset of breathlessness and low oxygen saturations. The test was taken on room air and read as follows: pH 7.37, PO₂ 7.8, PCO₂ 4.1, HCO₃ 24, SO₂ 89 per cent. Choose the most likely clinical interpretation from these arterial blood gas results:
- A) Compensated respiratory acidosis
 - B) Type 1 respiratory failure
 - C) Compensated respiratory alkalosis
 - D) Type 2 respiratory failure
12. A 45-year-old woman with unexpected weight loss, loss of appetite and shortness of breath presents to you in clinic. On examination, there is reduced air entry and dullness to percussion in the right lung. A pleural tap is performed and the aspirate samples sent for analysis. You are told that the results reveal a protein content of >30 g/L. From the list below, select the most likely diagnosis:
- A) Bronchogenic carcinoma
 - B) Congestive cardiac failure
 - C) Liver cirrhosis
 - D) Nephrotic syndrome
13. You see a 46-year-old man who has presented to accident and emergency with an acute onset of shortness of breath. Your registrar has high clinical suspicion that the patient is suffering from a pulmonary embolism and tells you that the patient's ECG has changes pointing to the suspected diagnosis. From the list below, which of the following ECG changes are classically seen?
- A) Inverted T-waves in lead I, tall/tented T-waves in lead III and flattened T-waves in lead III
 - B) Deep S-wave in lead I, pathological Q-wave in lead III and inverted T-waves in lead III
 - C) No changes in lead I, deep S-wave in lead III
 - D) Deep S-wave in lead I with no changes in lead III

14. A 30-year-old man presents to your clinic with a cough and finger clubbing. From the list below, which of these answers is not a respiratory cause of finger clubbing?
- A) Empyema
 - B) Bronchogenic carcinoma
 - C) Cystic fibrosis
 - D) COPD
15. A 68-year-old woman has presented with acute onset shortness of breath 24 hours after a long haul flight. Her blood results show a raised D-dimer level and the arterial blood gas shows a PO₂ of 8.3 kPa and PCO₂ of 5.4 kPa. Your consultant suspects a pulmonary embolism and the patient needs to be started on treatment while a CT-PA is awaited. From the list below, please select the most appropriate treatment regime.
- A) Commence loading with warfarin and aim for an international normalized ratio (INR) between 2 and 3
 - B) Aspirin 75 mg daily
 - C) Prophylactic dose subcutaneous low molecular weight heparin + loading with warfarin and aim for INR between 2 and 3
 - D) Treatment dose subcutaneous low molecular weight heparin + loading with warfarin and aim for INR between 2 and 3
16. You see a 56-year-old man who was admitted for an elective upper GI endoscopy due to longstanding Gastro Esophageal Reflux Disease (GERD) which has failed to improve on antacids and PPIs. You suspect that this patient may have Barrett's esophagus. The most appropriate description of Barrett's esophagus is:
- A) Metaplasia of the squamous epithelium of the lower third of the esophagus to columnar epithelium
 - B) Metaplasia of the columnar epithelium of the upper third of the esophagus to squamous epithelium
 - C) Metaplasia of the columnar epithelium of the lower third of the esophagus to squamous epithelium
 - D) Metaplasia of the squamous epithelium of the middle third of the esophagus to columnar epithelium

17. A 35-year-old woman presents with a 24-hour history of watery diarrhoea. She has opened her bowels nine times since the onset of her symptoms. You diagnose gastroenteritis after learning that the patient and her family all ate at a new restaurant and the rest of her family have had similar problems. The most appropriate management is:
- A) Oral rehydration advice, anti-emetics and discharge home
 - B) Oral antibiotic therapy and discharge home
 - C) Admission for intravenous fluid rehydration
 - D) Admission for intravenous antibiotic therapy
18. Which of the following organisms is not responsible for causing blood-stained diarrhoea?
- A) *Salmonella* spp.
 - B) *Escherichia coli*
 - C) *Shigella* spp.
 - D) *Staphylococcus* spp.
19. A 49-year-old woman presents with jaundice and abdominal pain. She has a past medical history of gallstones and you suspect this is a recurrence of the same problem. The most appropriate imaging investigation for her will be:
- A) Abdominal x-ray
 - B) Abdominal ultrasound
 - C) Magnetic resonance imaging (MRI)
 - D) Endoscopic retrograde cholangiopancreatography (ERCP)
20. A 60-year-old man with alcoholic liver disease was admitted with an upper GI bleed secondary to oesophageal varices. The patient undergoes endoscopic variceal banding and is discharged after 2 weeks. Which of the following medications would act as prophylaxis in preventing a rebleed from his oesophageal varices?
- A) Amlodipine
 - B) Ramipril
 - C) Propranolol
 - D) Irbesartan

21. You see a 56-year-old man in your clinic with suspected alcoholic liver disease. Liver function tests reveal a bilirubin of 36 IU/L, AST of 150 IU/L, ALT 75 IU/L and ALP 100 IU/L. Which of the following blood test parameters would support a diagnosis of alcoholic-related liver disease?
- A) Normal mean cell volume (MCV)
 - B) Normal mean cell haemoglobin (MCH)
 - C) Low MCH
 - D) Raised MCV
22. A 47-year-old man presents with complaint of weight gain. On examination, there is abdominal distension with a fluid thrill. Which of following is not a cause of ascites secondary to venous hypertension?
- A) Congestive heart failure
 - B) Cirrhosis
 - C) Budd-Chiari syndrome
 - D) Nephrotic syndrome
23. Which of the following tumour markers are elevated in hepatocellular carcinoma?
- A) Alpha-fetoprotein
 - B) Carcinoembryonic antigen (CEA)
 - C) CA 15-3
 - D) CA 125
24. A 21-year-old man presents with painless haematuria which he has noticed in the last 3 days. He suffers from type 1 diabetes which is well controlled, but is otherwise fit and healthy. The patient has recently recovered from a mild throat infection. Urine dipstick analysis reveals blood and protein in the urine. The most likely diagnosis is:
- A) Henoch-Schonlein purpura
 - B) IgA nephropathy
 - C) Diabetic nephropathy
 - D) Urinary tract infection (UTI)

25. A 33-year-old woman presents to accident and emergency with severe right flank pain. The pain started 3 hours ago and is not constant, occasionally moving towards her right iliac fossa. The patient also feels nauseous and has a low-grade fever. The most appropriate investigation is:
- A) Abdominal x-ray
 - B) Intravenous urography
 - C) Computed tomography (CT) scan
 - D) Abdominal ultrasound (US) scan
26. A 28-year-old woman patient who is 13 weeks pregnant presents for an antenatal clinic appointment. The patient feels embarrassed when asked to provide a urine sample and produces enough for a urine dipstick test only which is positive for leukocytes and nitrites. The patient denies any symptoms. The most appropriate treatment is:
- A) Trimethoprim
 - B) Quinolone
 - C) Cephalexin
 - D) Ampicillin
27. A 38-year-old woman presents with a 2-week history of dysuria, haematuria and shortness of breath. She suffers from chronic headaches and has been taking ibuprofen in order to treat them. She has a history of cardiovascular disease in the family and a friend recommended she use aspirin to keep healthy. The most appropriate investigation is:
- A) Retrograde pyelography
 - B) Renal biopsy
 - C) Antegrade pyelography
 - D) CT scan of the kidney

28. A 63-year-old woman presents in the emergency with a 3-day history of worsening abdominal pain and mild flank pain. Examination reveals pain in the suprapubic region, but otherwise the abdomen is soft with no masses. The patient denies any other symptoms, such as dysuria, but mentions she has had difficulty passing urine in the last week and is only able to provide a small urine sample which is odorous and bloody. She has no other medical problems, but admits to being a long-term smoker. An ultrasound scan of renal system is most likely to show:
- A) Bladder dilation
 - B) Ureteral stricture
 - C) Bilateral hydronephrosis
 - D) Renal cancer
29. A 49-year-old man presents with a history of difficulty sleeping. He reports feeling increasingly tired and general weakness which he attributes to his poor sleep pattern. Additionally, the patient has noticed he has gained weight and sweats very easily. On examination, the patient has coarse facial features. The most likely diagnosis is:
- A) Cushing's disease
 - B) Acromegaly
 - C) Hypothyroidism
 - D) Diabetes
30. A 42-year-old woman presents with visual disturbances. She reports having double vision which was intermittent initially but has now become much more frequent. In addition, she becomes breathless very easily and experiences palpitations. On examination, raised, painless lesions are observed on the front of her shins and finger clubbing. The most likely diagnosis is:
- A) De Quervain's thyroiditis
 - B) Thyroid storm
 - C) Pheochromocytoma
 - D) Graves' disease

31. A 50-year-old man is referred to the diabetes clinic after presenting with polyuria and polydipsia. He has a BMI of 30, a blood pressure measurement of 137/88 and a fasting plasma glucose of 7.7 mmol/L. The most appropriate first-line treatment is:
- A) Dietary advice and exercise
 - B) Sulphonylurea
 - C) Thiazolidinediones
 - D) Metformin
32. A 15-year-old girl complains of headaches which started 6 weeks ago. The headaches initially occurred 1-2 times a week but now occur up to five times a week, they are not associated with any neurological problems, visual disturbances, nausea or vomiting. The girl also reports a white discharge from both of her nipples. She has not started menstruating. The most appropriate investigation is:
- A) CT scan of head
 - B) MRI scan of brain
 - C) Thyroid function tests
 - D) Serum prolactin measurement
33. An 18-year-old man presents to clinic worried about his scant pubic hair development. Examination reveals undescended testes and plasma testosterone, luteinizing hormone and follicle stimulating hormone were found to be low. A karyotype test was 46, XY. The patient was otherwise well, but during neurological examination struggled during the olfactory test. The most likely diagnosis is:
- A) Hypogonadotropic hypogonadism
 - B) Klinefelter's disease
 - C) Androgen insensitivity syndrome
 - D) Kallman's syndrome
34. A 45-year-old man is diagnosed with Cushing's disease. He undergoes a bilateral adrenalectomy and recovers well from the operation. One year later, he complains of a constant dull headache, peripheral visual disturbances and increasing pigmentation of the skin creases of both hands. The most likely diagnosis is:
- A) Ectopic ACTH secreting tumour
 - B) Nelson syndrome
 - C) Addison's disease
 - D) Side effects from iatrogenic steroid intake

35. A 19-year-old woman presents with concerns about changes to her facial appearance, in particular her nose and jaw seem quite large, she is also quite sweaty and despite using antiperspirants is finding it difficult to control and is afraid of embarrassment at university. A glucose tolerance test is performed and found to be raised. The most appropriate management would be:
- A) Trans-sphenoidal surgery
 - B) Octreotide
 - C) Bromocriptine
 - D) Pituitary radiotherapy
36. A 45-year-old woman presents to the rheumatology outpatient clinic with a three-month history of stiff hands and wrists. She mentions that the pain is particularly bad first thing in the morning. On examination, the wrists, metacarpophalangeal joints and proximal interphalangeal joints are swollen and warm. A diagnosis of rheumatoid arthritis is suspected. Which of the following investigations is most specific for confirming the diagnosis?
- A) X-rays
 - B) Rheumatoid factor levels
 - C) Anti-citrullinated peptide antibody (anti-CCP) levels
 - D) C-reactive protein
37. A 75-year-old woman presents to accident and emergency complaining of pain in her knees. She mentions that this has been troubling her for several months. Pain is generally worse in the evenings and after walking. On examination, there are palpable bony swellings on the distal interphalangeal joints of the fingers on both hands. In addition, there is reduced range of movement and crepitus in the knees. What is the most likely diagnosis?
- A) Rheumatoid arthritis
 - B) Osteoarthritis
 - C) Reactive arthritis
 - D) Gout

38. A 32-year-old man presents to the emergency with a 1-day history of pain in the right knee. He also mentions that he has had a fever and is feeling generally unwell. On examination, the right knee is swollen, warm and extremely painful to move. What is the most appropriate next step?
- A) X-rays of the right knee
 - B) Aspiration of the joint and blood cultures
 - C) Referral for physiotherapy
 - D) Immobilize the joint
39. A 74-year-old woman presents to the emergency with sudden onset pain and swelling in the left knee. On examination, she is afebrile and the left knee is swollen. There is reduced range of movement in the knee due to swelling and pain. X-ray of the right knee shows chondrocalcinosis. Microscopy of the fluid aspirated from the joint is most likely to show:
- A) Rhomboidal, weakly positively birefringent crystals under polarized light microscopy
 - B) Needle-shaped negatively birefringent crystals under polarized light microscopy
 - C) Atypical mononuclear cells
 - D) Tophi
40. A 70-year-old woman with a history of vertebral crush fractures presents to the osteoporosis outpatient clinic. Which of the following investigations is most useful to assess the extent of her osteoporosis?
- A) Spinal x-rays
 - B) MRI scan
 - C) Vitamin D levels
 - D) DEXA scan

41. A 30-year-old woman presents to the hospital with a 1-week history of progressive shortness of breath and fever. On further questioning, she mentions that her hands have been painful and stiff over the past few months and she has been having recurrent mouth ulcers. Chest x-ray confirms bilateral pleural effusions and blood tests reveal a raised ESR and a normal CRP. What is the most likely diagnosis?
- A) Systemic lupus erythematosus
 - B) Systemic sclerosis
 - C) Sjögren's syndrome
 - D) Behçet's disease
42. A 27-year-old woman presents to the emergency complaining of sudden onset shortness of breath, right-sided pleuritic chest pain and haemoptysis. She has a past medical history of three miscarriages and a deep venous thrombosis in the right leg. CTPA confirms a large pulmonary embolism. A diagnosis of anti-phospholipid syndrome is suspected and a full autoantibody screen is sent. Which of the following auto-antibodies would confirm the diagnosis if detected?
- A) Anti-cardiolipin antibody
 - B) Anti-nuclear antibody
 - C) Anti-mitochondrial antibody
 - D) Anti-histone antibody
43. A 30-year-old man presents to accident and emergency with oral ulcers, genital ulcers and painful legs. On examination, there are aphthous ulcers in the mouth, genital ulceration, erythema nodosum over the shins. He is admitted under the medical team on call and a skin pathology test is positive. What is the most likely diagnosis?
- A) Henoch-Schönlein purpura
 - B) Berger's disease
 - C) Caplan's syndrome
 - D) Behçet's disease

44. A woman with BO positive blood and her partner with AB positive blood have a child together. Which of the following cannot be the child's blood type?
- A) AB positive
 - B) AO positive
 - C) AA positive
 - D) BB negative
45. A 22-year-old woman presents with a 1-day history of a painful right leg which is erythematous on appearance and tender on palpation. She states that she has had this problem many times in the last few years and her family has also suffered from similar problems. Her grandmother died of a pulmonary embolism. The most likely diagnosis is:
- A) Antithrombin deficiency
 - B) Factor V Leiden mutation
 - C) Protein S deficiency
 - D) Protein C deficiency
46. A 43-year-old woman suffers from Crohn's disease. A blood test shows the following results: a) Haemoglobin 10.5 g/dL b) MCV 120 fL c) Platelet count $300 \times 10^9/L$. The most likely diagnosis is:
- A) Vitamin B12 deficiency
 - B) Iron deficiency
 - C) Hypothyroidism
 - D) Folic acid deficiency
47. A 29-year-old woman complains of a 1-week history of weakness and malaise, she has recently become a vegetarian and eats mostly green vegetables and drinks lots of tea during the day. She is afebrile and has a C-reactive protein (CRP) <5 . You suspect an abnormality of the patient's iron stores. What is the most appropriate investigation to determine iron store levels?
- A) Bone marrow biopsy
 - B) Serum ferritin
 - C) Total iron binding capacity
 - D) Serum iron

48. A 65-year-old man presents with a chronic history of headaches and occasional dizziness. He hesitantly mentions that he experiences severe pruritus, especially after hot showers and baths. Blood pressure is 160/85 mmHg. A full blood count (FBC) reveals a haemoglobin of 20 g/dL, MCV of 94 fL, platelet count of $470 \times 10^9/L$ and WBC count of $7.8 \times 10^9/L$. The most likely diagnosis is:
- A) Polycythemia vera
 - B) Idiopathic erythrocytosis
 - C) Essential thrombocythaemia
 - D) Chronic myeloid leukaemia
49. A 27-year-old woman who suffers from rheumatic mitral stenosis develops atrial fibrillation. She is placed on warfarin therapy. What is the most appropriate target international normalized ratio (INR) range?
- A) <1.0
 - B) 1.0-2.0
 - C) 2.0-3.0
 - D) 3.0-4.0
50. A 44-year-old woman presents with recurrent fever, pallor, malaise and shortness of breath. She has noticed a petechial rash on her skin and small bruises on her arms. A blood test reveals a pancytopenia. During examination, you palpate a large spleen. Which investigation would differentiate between hypersplenism and aplastic anaemia?
- A) Reticulocyte test
 - B) Direct Coombs test
 - C) Ham's test
 - D) Osmotic fragility test
51. A 23-year-old man is stabbed in the neck. Once stabilized, his MRI shows a right hemisection of the cord at C6. What is the expected result of this injury?
- A) Paralysed diaphragm
 - B) Absent sensation to temperature in the left hand
 - C) Paralysis of the left hand
 - D) Brisk right biceps reflex

52. A 19-year-old woman collapses at a concert and is witnessed to have a tonic-clonic seizure lasting 2 minutes. When the paramedics arrive and ask her questions, she mumbles but no-one can understand what she is saying. Only when the paramedic applies pressure to her nailbed does she open her eyes and reach out with her other hand to rub her nail and then push him away. What is her Glasgow Coma Scale (GCS)?
- A) 11
 - B) 10
 - C) 9
 - D) 8
53. A 42-year-old woman presents with ataxia. Gadolinium-enhanced MRI reveals multiple subcortical white matter lesions as well as enhancing lesions in the cerebellum and spinal cord. She is diagnosed with MS. Two months later she develops optic neuritis. What feature is associated with a milder disease course?
- A) Her initial presentation of ataxia
 - B) Her female gender
 - C) The interval between the two episodes of two months
 - D) Her MRI scan appearance
54. A 71-year-old right-handed male is brought in by ambulance at 17:50 having suffered a collapse. His wife came home to find him on the floor unable to move his right arm or leg and unable to speak. Her call to the ambulance was logged at 17:30. He has a past medical history of well-controlled hypertension, ischaemic heart disease and atrial fibrillation for which he is on warfarin. He had a hernia repair three months ago and his brother had a 'bleed in the brain' at the age of 67. What is the absolute contraindication to thrombolysis in this male?
- A) Family history of haemorrhagic stroke
 - B) Time of onset
 - C) Current haemorrhagic stroke
 - D) Warfarin treatment

55. A 33-year-old woman attends her six-month follow-up appointment for headache. They are migrainous in nature but whereas she used to have them every few months, over the last three months she has experienced a chronic daily headache which varies in location and can be anywhere from 3-7/10 severity. Her last migraine with aura was two months ago. She takes co-codamol qds and ibuprofen tds. What is the best medical management?
- A) Stop all medication
 - B) Start paracetamol
 - C) Start sumatriptan
 - D) Start propranolol
56. You are asked to perform a lower limb peripheral neurological examination on a 45-year-old diabetic male. The patient has normal tone, 5/5 power, normal plantars and proprioception. However, you notice that the patient does not respond to any sensory stimulus on the medial side of the right lower leg. Which dermatome is affected?
- A) L2
 - B) L3
 - C) L4
 - D) L5
57. A 55-year-old woman complains of double vision. She finds that she is tired all the time and has difficulty climbing stairs. She has difficulty getting items off high shelves at work. Reflexes are absent but elicited after exercise. Shoulder abduction is initially 4-5 but on repeated testing is 4 +/5. What pathology is associated with this female's diagnosis?
- A) Thyrotoxicosis
 - B) Peptic ulcer
 - C) Stroke
 - D) Lung cancer
58. A neurologist is examining a patient. She takes the patient's middle finger and flicks the distal phalanx, her thumb contracts in response. What sign has been elicited?
- A) Chvostek's
 - B) Glabellar
 - C) Hoffman's
 - D) Babinski's

59. A 69-year-old man is taken to his GP by his concerned wife. She complains that he has not been himself for the last year. He has slowly become withdrawn and stopped working on his hobbies. Now she is concerned that he often forgets to brush his teeth. She has noticed he sometimes struggles to find the right word and this has gradually become more noticeable over the last couple of months. She presented today because she was surprised to come home to find him naked and urinating in the living room last week. He has a history of hypertension and is an ex-smoker. The most likely diagnosis is:
- A) Depression
 - B) Frontotemporal dementia
 - C) Alzheimer's disease
 - D) Vascular dementia
60. A 19-year-old man is admitted with a GCS of 12. He was doing push-ups when he complained of a sudden-onset, severe headache and collapsed. What would you expect on his CT?
- A) Midline shift
 - B) Crescent-shaped haematoma
 - C) Blood along the sulci and fissures
 - D) Intraventricular blood
61. A 45-year-old man presents with a 5-day history of progressive tingling and numbness of his hands and feet. He insists that he has never had this problem before and that he was perfectly fine a week ago. Over the last 2 days he has had some difficulty walking but mostly he complains about difficulty rolling up cigarettes. On examination, there is mild symmetrical distal weakness, mild gait ataxia and dysdiadochokinesia. He smokes 30 cigarettes a day and drinks 1-2 bottles of wine. He has a family history of hypertension and his 63-year-old mother has type 2 diabetes, whom over the last year has complained of numbness and burning in her feet. He self-discharges. A week later, his symptoms have peaked. He displays moderate distal weakness and numbness to his knees, after which he turns a corner and his symptoms start to slowly resolve. What is the diagnosis?
- A) Alcoholic neuropathy
 - B) Chronic idiopathic demyelinating polyneuropathy
 - C) Charcot Marie Tooth disease
 - D) GBS

62. A 60-year-old man with metastatic adenocarcinoma of the lung, who has finished two cycles of palliative cisplatin/pemetrexed chemotherapy, presents with a 2-day history of fever and lethargy. On examination, he is pyrexial with a temperature of 38.8°C. What is the most appropriate next step?
- A) Blood cultures
 - B) Urgent full blood count
 - C) Urgent chest x-ray
 - D) Prescribe paracetamol
63. A 50-year-old woman presents to accident and emergency complaining of excessive lethargy. In addition, she mentions that she has been constipated. On examination, there are clinical features of dehydration. Blood tests have revealed a corrected calcium of 3.3 mmol/L. Her chest x-ray shows bilateral streaky shadowing throughout both lung fields. She is given 3 L of saline in 24 hours after admission. The following day her blood tests are repeated and her corrected calcium level is now 3.0 mmol/L. Results of parathyroid hormone levels and thyroid function tests are still awaited. What is the most appropriate management?
- A) Intravenous saline rehydration
 - B) Intravenous saline rehydration and pamidronate
 - C) Calcitonin
 - D) Intravenous saline rehydration plus calcitonin
64. A 22-year-old man with testicular cancer has undergone an inguinal orchidectomy. Histology has confirmed teratoma. A preoperative CT staging scan has shown involvement of the para-aortic lymph nodes. Which of the following treatments is the best post-operative option?
- A) Chemotherapy (bleomycin, etoposide, cisplatin)
 - B) Lymph node dissection
 - C) Radiotherapy to affected lymph nodes
 - D) Chemo-radiotherapy

65. A 62-year-old electrician has presented to accident and emergency with a sudden decline in his exercise tolerance. He mentions that he can only walk 5 yards and that he has had a persistent cough with some haemoptysis over the previous month. A chest x-ray confirms a right-sided pleural effusion, which is then drained. A repeat x-ray shows a round shadow in the right perihilar region. Subsequent bronchoscopy and biopsy confirms small cell carcinoma. Which of the following statements is most true about small cell carcinomas of the lung?
- A) They are sensitive to chemotherapy
 - B) They are more common than non-small cell lung carcinomas
 - C) They are not associated with cigarette smoking
 - D) They most commonly arise from the periphery of the lung
66. A 56-year-old man with gastric cancer presents to his GP complaining of a lump in his belly button. On examination, there is a palpable nodule at his umbilicus. This sign is referred to as:
- A) Sister Mary Joseph nodule
 - B) Krukenberg tumour
 - C) Peutz-Jeghers syndrome
 - D) Paget's disease
67. Which of the following cell types are seen in the epidermis?
- A) Merkel cells
 - B) Melanocytes
 - C) Keratinocytes
 - D) None of the above cells are present in the epidermis
68. A 45-year-old woman with psoriasis has presented with suspicious nail changes. Which one of the following nail changes are associated with psoriasis?
- A) Koilonychia
 - B) Onycholysis
 - C) Beau's lines
 - D) Clubbing

69. A 12-year-old boy who has been suffering from atopic dermatitis for the last ten years presents to you with a 3-day history of severe itching and pus discharge from his left elbow. On examination, you observe lichenification of his left elbow with superimposed excoriations which are weeping a viscous yellow fluid. You take a swab of this discharge. Which one of the following organism growths would you likely expect to be isolated from the swab?
- A) *Corynebacterium spp.*
 - B) *Streptococcus pyogenes*
 - C) *Staphylococcus aureus*
 - D) *Pseudomonas aeruginosa*
70. A 67-year-old woman presents to you with extensive scalp hair loss which has been getting progressively worse over the last year. You also notice thinning of the eyebrows. The patient's past medical history includes hypertension, left-sided pulmonary embolism one year ago and hypercholesterolaemia. You assess the patient's medication list. Which one of the following drugs could be responsible for causing generalized alopecia?
- A) Aspirin
 - B) Warfarin
 - C) Simvastatin
 - D) Ramipril
71. Contact dermatitis is described as what type of reaction?
- A) Type I hypersensitivity
 - B) Type II hypersensitivity
 - C) Type III hypersensitivity
 - D) Type IV hypersensitivity
72. A 24-year-old woman presents to you with a one-month history of intense burning and itch in her buttock area. On examination, you notice patches of small erythematous papulo-vesicular blisters in the patient's buttock area. There is obvious evidence of scratching with some areas of bleeding. The signs are typical of dermatitis herpetiformis. Which one of the following conditions is associated with this dermatological presentation?
- A) Inflammatory bowel disease (IBD)
 - B) Coeliac disease
 - C) Varicella zoster virus
 - D) Herpes simplex virus

73. Which one of the following nutritional deficiencies is the triad of dermatitis, diarrhoea and dementia associated with?
- A) Vitamin C deficiency
 - B) Protein malnutrition
 - C) Nicotinic acid deficiency
 - D) Vitamin B6 deficiency
74. A 56-year-old man presents with two lesions on his neck which have been increasing in size over the last three months. On examination you notice two firm brown-coloured nodular lesions on the anterior aspect of the neck. The nodules give an 'apple-jelly' appearance on diascopy. The patient is systemically well. The most appropriate treatment is:
- A) Oral flucloxacillin
 - B) Oral rifampicin, pyrazinamide, isoniazid and ethambutol
 - C) IV vancomycin
 - D) Oral erythromycin
75. A 63-year-old woman presents to your clinic with a painful wound on her left foot which has not been healing despite regular application of dressings. The patient has a history of peripheral vascular disease. On examination, you observe a 2 × 1 cm well-demarcated ulcer on the left heel of the foot. The ulcer has a 'punched out' appearance and the base appears necrotic. What is the most likely diagnosis?
- A) Arterial ulcer
 - B) Traumatic ulcer
 - C) Venous ulcer
 - D) Neuropathic ulcer
76. A patient on the ward has a nodule-like rash and you are asked by your registrar to define the meaning of a nodule. From the list below, select the most appropriate definition of a nodule.
- A) A well-defined flat area of altered pigmentation
 - B) A raised flat-topped lesion which is usually greater than 2 cm in diameter
 - C) A solid lump greater than 0.5 cm in diameter which may be subcutaneous or intradermal
 - D) A well-defined pus-filled lesion

77. Which one of the following skin changes is not typically seen in patients with diabetes mellitus?
- A) Neuropathic ulcers
 - B) Necrobiosis lipoidica
 - C) Lipohypertrophy
 - D) Livedo reticularis
78. A 54-year-old investment banker presents to accident and emergency with a 5-day history of productive cough of green sputum, fevers and feeling generally unwell. On examination, there is bronchial breathing in the left lower zone. Chest x-ray demonstrates left lower zone consolidation. What is the most likely causative organism?
- A) *Mycoplasma pneumoniae*
 - B) *Klebsiella pneumoniae*
 - C) *Haemophilus influenzae*
 - D) *Streptococcus pneumoniae*
79. A 74-year-old woman patient, who is being treated for chest infection following an elective gastrectomy, develops profuse diarrhoea. A stool sample is collected and microscopy, culture and sensitivity reveal *Clostridium difficile* toxin. What is the most appropriate treatment?
- A) Intravenous co-amoxiclav
 - B) Oral metronidazole
 - C) Isolate the patient and treat conservatively with oral rehydration solution
 - D) Prednisolone
80. A 22-year-old medical student presents to the Genitourinary Medicine clinic with large amounts of yellow-coloured penile discharge and discomfort on urinating. He has just arrived home from his summer holiday in Ibiza. What is the most likely diagnosis?
- A) Chlamydia
 - B) Genital herpes
 - C) Cystitis
 - D) Gonorrhoea

81. A 45-year-old man presents to accident and emergency, having returned from a holiday a week ago. He has subsequently been unwell with nausea and reduced appetite. Over the past 2 days he has become jaundiced. He mentions that his two brothers with whom he went on holiday have also become jaundiced in the last 2 days. On examination, he is afebrile and there is a palpable liver edge. Liver function tests reveal a raised ALT, AST and bilirubin. All other blood tests are normal. What is the most likely diagnosis?
- A) Hepatitis A
 - B) Hepatitis B
 - C) Hepatitis C
 - D) Gilbert's syndrome
82. Which of the following statements is most accurate regarding leishmaniasis?
- A) It is transmitted by the anopheles mosquito
 - B) Leishmaniasis is usually a self-limiting condition
 - C) It is transmitted by the tsetse fly
 - D) The presence of Leishman-Donovan bodies confirms the diagnosis
83. A 45-year-old man who lives in a homeless shelter presents to accident and emergency with an itchy rash. The itching is particularly bad at night. On examination, there is a papular rash between the web spaces of the fingers and toes, the palms of the hands and soles of the feet, the axilla and on the genitalia. What is the most likely diagnosis?
- A) Scabies
 - B) Chicken pox
 - C) Molluscum contagiosum
 - D) Tinea cruris
84. A 28-year-old woman is rushed to accident and emergency in a confused state. Her partner reports seeing the patient vomiting and breathing very rapidly before falling ill, at which point he called the ambulance. Empty aspirin packets were found close to the patient, the partner estimates it has been approximately 45 minutes since the patient may have ingested the pills. The most appropriate first line management would be:
- A) Haemodialysis
 - B) Activated charcoal
 - C) Gastric lavage
 - D) Intravenous fluids and electrolytes

85. A 16-year-old boy presents to accident and emergency in a confused state. He appears pale, sweaty and has a heart rate of 110 bpm and temperature of 37°C. Respiratory examination reveals good air entry and a respiratory rate of 12. He is accompanied by a group of friends who admit they had been drinking alcohol earlier and smoking marijuana. They deny he has any medical problems apart from mild asthma and deny ingesting any other recreational substances. Urine dipstick is negative for any significant findings. His blood glucose is 2.1 mmol/L. The most likely cause of the patient's symptoms is:
- A) Diabetic ketoacidosis
 - B) Ethanol toxicity
 - C) Ecstasy ingestion
 - D) Cannabis toxicity
86. A 54-year-old known hypertensive male presented with a 3-day history of shortness of breath. The patient reported feeling unwell with a sharp pain in the left side of the chest and loss of appetite. His clinical findings included a heart rate of 117 bpm, blood pressure of 97/85 mmHg, temperature 37.2°C and a respiratory rate of 22 bpm. Respiratory examination showed reduced air entry and hyper-resonance on percussion. The most likely diagnosis is:
- A) Tension pneumothorax
 - B) Pneumonia
 - C) Aortic dissection
 - D) Pulmonary embolism
87. A 27-year-old woman visits her GP complaining of a fever. She returned from Amazon jungles almost 2 weeks ago and had felt unwell but attributed this to jet lag. After suffering from a fever she rested for 2 days and on recovering returned to work as an accountant. After another 2 days she now reports waking up at night again with a high fever, feeling drowsy and confused. On presentation she appears unwell, pale and sweaty. The most likely diagnosis is:
- A) *Plasmodium falciparum*
 - B) *Plasmodium vivax*
 - C) *Plasmodium malariae*
 - D) *Plasmodium ovale*

88. A 35-year-old man complains of a three-month history of intermittent excruciating headaches. They are very variable and occur from once a month to three times a week. The headaches are associated with extreme anxiety and sweating. On examination, the patient's blood pressure is 152/95 mmHg and during palpation of the abdomen the patient's skin flushes red. The most likely diagnosis is:
- A) Cluster headache
 - B) Pheochromocytoma
 - C) Subarachnoid haemorrhage
 - D) Temporal arteritis
89. A 17-year-old boy is rushed to accident and emergency after breathing difficulties in a restaurant. The parents report the patient feeling unwell after eating a cake containing nuts. The patient has swollen lips and tongue and an audible wheeze is heard. The most appropriate first-line treatment is:
- A) 0.05 mg intravenous adrenaline
 - B) 100 mg intravenous hydrocortisone
 - C) 20 mg intravenous chlorphenamine
 - D) 0.5 mg intramuscular adrenaline
90. A 45-year-old woman with haematemesis is admitted to accident and emergency in hypovolaemic shock. She undergoes resuscitation including administration of packed red cells. The blood transfusion centre will not release certain blood products unless a 'massive bleeding' protocol is initiated. Which of the following is not a definition of massive bleeding?
- A) Blood loss of half the patient's circulating volume in a 3-hour period
 - B) Ongoing blood loss of 100 mL/min
 - C) Transfusion of 4 units of red cells in 4 hours with continued bleeding
 - D) Transfusion of 10 units of packed red cells in a 24-hour period
91. A 65-year-old man with severe pancreatitis is intubated and ventilated in the intensive care unit. His intra-abdominal pressure is measured using a catheter in his bladder connected to manometry. Which one of the following describes the pressure effect seen in abdominal compartment syndrome?
- A) Bladder pressure of 16-25 mmHg does not require decompression
 - B) Bladder pressure of 26-35 mmHg results in increased cardiac output
 - C) Bladder pressure of > 35 mmHg does not cause anuria
 - D) Bladder pressure of < 15 mmHg normally has clinical signs

92. Which of the following is most likely to shift the oxygen haemoglobin dissociation curve to the left?
- A) Decreased pH
 - B) Extreme altitude
 - C) Increased PaCO₂
 - D) Increased temperature
93. ABO compatibility is advisable for the transfusion of blood products. Which of the following products does not require ABO compatibility?
- A) Cryoprecipitate
 - B) Fresh frozen plasma
 - C) Haemoglobin solution
 - D) Packed red cells
94. An 88-year-old woman with severe chronic obstructive pulmonary disease presents with abdominal distension. A CT shows an obstructing apple core lesion of the sigmoid colon. She is also noted to have bilobar liver metastases. What is the most appropriate first line management?
- A) Caecostomy
 - B) Colonic stenting
 - C) Hartmann's procedure
 - D) Sigmoid colectomy
95. A 22-year-old girl has a suspicious lesion on her right shoulder that requires excision biopsy. Which of the following statements describes the excision margins for malignant skin lesions?
- A) In pT1 melanoma (0-1 mm thickness) an excision margin of 2 cm is recommended
 - B) In pT4 melanoma (> 4 mm thickness) an excision margin of 2 cm is recommended
 - C) With primary basal cell carcinoma lesions < 2 cm in diameter, an excision margin of 0.5-1.0 cm is recommended
 - D) With squamous cell carcinoma lesions under 2 cm, a margin of 1 cm is recommended
96. Which of the following pathogens are not eradicated by alcohol based hand gels?
- A) *Clostridium difficile*
 - B) *Escherichia coli*
 - C) *Klebsiella* species
 - D) Methicillin-resistant *Staphylococcus aureus*

97. A 47-year-old woman presents to the emergency department with generalised weakness, fatigue and light headedness. Her routine blood gases show: pH 7.34, pO₂ 9.4 kPa, pCO₂ 4.4 kPa, HCO₃ 22 mmol/L. Serum biochemistry includes Na⁺ 131 mmol/L, K⁺ 5.1 mmol/L, and plasma glucose 3.4 mmol/L. What is the most likely diagnosis?
- A) Addison's disease
 - B) Chronic renal failure
 - C) Diabetic ketoacidosis
 - D) Exacerbation of chronic obstructive pulmonary disease
98. A controlled study is set up to address whether or not patients having single incision laparoscopic cholecystectomy have similar outcomes to standard laparoscopic cholecystectomy. The primary outcome measure is complication rate, estimated at 5% for the standard procedure. To detect a difference of 2.5%, in either direction, it is decided that 200 patients require to be recruited to both arms of the study, with a power of 80%. Which statement best describes the application of statistical principles?
- A) A significant difference (p-value = 0.05) has a likelihood of being due to chance in 1 in 20
 - B) All patients should be offered either procedure by the clinician
 - C) If early results show inferiority, the trial continues to allow conclusions to be drawn
 - D) If there is low recruitment, there is a risk of a type I error
99. A surgeon would like to know whether patients with thyroid goitres are more or less likely to have been exposed to irradiation during their early years, than those patients without goitres. What is the best study design for this purpose?
- A) Case-control study
 - B) Environmental study
 - C) Longitudinal cohort study
 - D) Randomised trial of exposure
100. A surgeon would like to set up a randomised double-blind controlled trial, examining the efficacy of laparoscopic fundoplication (comparing partial and total wrap). The outcomes are defined and a power calculation performed, and the centre is ready to start recruitment. Which factor is not essential to the validity of the trial?
- A) Adopting a recognised method for patient allocation and stratification
 - B) Blinding the patients
 - C) Ensuring it represents a more general population
 - D) Having randomisation conducted through a remote site

ROUGH WORK

ROUGH WORK

AL

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Booklet Serial No.

213589

Test Booklet Series

TEST BOOKLET
LIBRARIAN WITH A DEGREE IN LIBRARY
SCIENCE CENTRAL LIBRARY

A

Written Test - 2023

(68)

Time Allowed: Two Hours

Maximum Marks: 100

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(68) (A)/2023

[P.T.O.]

SECRET

1. Hybrid library deals with
 - A) Print Collection
 - B) Digital Collection
 - C) Both (A) and (B)
 - D) None of the above

2. Dewey Decimal Classification (DDC) is now looked after by?
 - A) UNESCO
 - B) CILIP
 - C) ALA
 - D) OCLC

3. Which type of books should be weeded in a library?
 - A) Superseded editions
 - B) Thesaurus
 - C) Dictionary
 - D) Encyclopedia

4. The Delivery of Books (Public Libraries) Act, 1954 was not implemented in
 - A) Assam
 - B) Jammu and Kashmir
 - C) Haryana
 - D) Delhi

5. Who invented World Wide Web (WWW)
 - A) Vint Cerf
 - B) Charles Babbage
 - C) Tim Berners-Lee
 - D) Steve Jobs

6. According to Ranganathan, many collections lose its relevance in how many years?
 - A) 20 years
 - B) 30 years
 - C) 40 Years
 - D) 50 years

7. The word Referral service is most relevant to
- A) Database search service
 - B) Inter Library Loan
 - C) Information scouting
 - D) Retrospective searching
8. Which of the following is an Open-Source Software?
- A) E-Granthalaya
 - B) SOUL 2.0
 - C) Koha
 - D) LibSys
9. Shannon and Weaver related to
- A) Psycho-biology of language An introduction to dynamic philosophy
 - B) Information is data of value to decision making
 - C) Mathematical Theory of Information
 - D) Bradford's Law of Information
10. Paul Otlet and Henri La Fontaine related to
- A) Sears List of Subject Heading
 - B) Library of Congress Classification System
 - C) UDC
 - D) Dictionary Catalogue
11. Berne Convention and Universal Copyright Convention was revised in Paris in
- A) 1949
 - B) 1952
 - C) 1971
 - D) 1931
12. Peter A. Phyler related to
- A) Ranganathan formulated his first law of library from his casual hint.
 - B) Library legislation
 - C) Living with book
 - D) Zero Based Budget

13. Koha was developed at
- A) Katipo Communications Ltd, New Zealand
 - B) University of Waikato, New Zealand
 - C) Massachusetts Institute of Technology (MIT) libraries and Hewlett-Packard labs
 - D) Wikimedia Foundation
14. C. W. Hanson
- A) Categorized information need into current approach, everyday approach, and exhaustive approach.
 - B) Divides documentary sources of information into primary and secondary.
 - C) Divides documentary sources of information into primary, secondary and tertiary.
 - D) Classified documentary sources of information into Conventional, Neo Conventional, Non Conventional and meta document.
15. The First and Oldest University Library was established in British India at
- A) University of Delhi
 - B) Calcutta University
 - C) Aligarh Muslim University
 - D) University of Madras
16. RDA related to
- A) Classification
 - B) Cataloguing
 - C) Searching
 - D) Browsing
17. George Kingsely Zipf related to
- A) Psycho-biology of language an introduction to dynamic philosophy
 - B) Mathematical Theory of Information
 - C) Information is data of value to decision making
 - D) Bradfords Law of Information
18. WIPO was established by the WIPO Convention in
- A) 1977
 - B) 1944
 - C) 1954
 - D) 1967

19. Denis Grogan
- A) Categorized information need into current approach, everyday approach, and exhaustive approach.
 - B) Divides documentary sources of information into primary and secondary.
 - C) Divides documentary sources of information into primary, secondary and tertiary.
 - D) Classified documentary sources of information into Conventional, Neo Conventional, Non Conventional and meta document.
20. Which of the following is an Institutional Repository Software Package?
- A) Joomla
 - B) EPrints
 - C) Koha
 - D) Drupal
21. First library act was enacted in Great Britain in
- A. 1847
 - B) 1850
 - C) 1867
 - D) 1840
22. Michael Gorman related to
- A) Application of Ranganathan's Laws to the Web
 - B) The disciple of Melvil Dewey who worked in India
 - C) Our Singular Strengths
 - D) The first librarian of the Imperial Library (now National Library, Kolkata)
23. Dr. Nihar Ranjan Roy related to
- A. Application of Ranganathan's Laws to the Web
 - B) The first professionally qualified university librarian in India
 - C) He for the first time in India, DDC and AACR rule introduced
 - D) The first librarian of the Imperial Library (now National Library, Kolkata)
24. M. C. Yovits related to
- A) Psycho-biology of language An introduction to dynamic philosophy
 - B) Information is data of value to decision making
 - C) Mathematical Theory of Information
 - D) Bradfords Law of Information

25. UNIMARC was developed by
- A) UNESCO
 - B) IFLA
 - C) FID
 - D) Library of Congress
26. Universal Copyright conventions was in
- A) 1949
 - B) 1952
 - C) 1971
 - D) 1931
27. Which of the following is not a Learning Management System (LMS)
- A) Moodle
 - B) Claroline
 - C) Drupal
 - D) ATutor
28. DSpace was developed at
- A) Katipo Communications Ltd, New Zealand
 - B) University of Waikato, New Zealand
 - C) Massachusetts Institute of Technology (MIT) libraries and Hewlett-Packard labs
 - D) Wikimedia Foundation
29. Melvin J. Voigt
- A) Categorized information need into current approach, everyday approach, and exhaustive approach
 - B) Divides documentary sources of information into primary and secondary
 - C) Divides documentary sources of information into primary, secondary and tertiary
 - D) Classified documentary sources of information into Conventional, Neo Conventional, Non Conventional and meta document.
30. GSDL was developed at
- A) Massachusetts Institute of Technology (MIT) libraries and Hewlett-Packard labs
 - B) Katipo Communications Ltd, New Zealand
 - C) University of Waikato, New Zealand
 - D) Wikimedia Foundation

31. Dr. S. R. Ranganathan
- A) Categorized information need into current approach, everyday approach, and exhaustive approach
 - B) Divides documentary sources of information into primary and secondary
 - C) Divides documentary sources of information into primary, secondary and tertiary
 - D) Classified documentary sources of information into Conventional, Neo Conventional, Non Conventional and meta document
32. An Invisible college is a typical example of
- A) Informal channels of communication
 - B) Formal channels of communication
 - C) Both (A) and (B)
 - D) None of the above
33. Who had given the Minimal, Middling and Maximum theories of reference service?
- A) C. M. Winchell
 - B) S. R. Ranganathan
 - C) James I Wyer
 - D) Samuel Rothstein
34. PERT was developed by
- A) The Navy special project office
 - B) Booz Allen Hamelton
 - C) Both (A) and (B)
 - D) None of the above
35. The term hypertext was coined by
- A) Ted Nelson
 - B) Charles Babbage
 - C) Tim Berner Lee
 - D) Tay Vaughan
36. The 12 rules for relational database were given by
- A) Larvy Page
 - B) Linus Tolward
 - C) J. Bill Gates
 - D) Edgar. F. Codd

37. Bibliographic coupling was first advocated by
- A) B. K. Sen
 - B) M. M. Kessler
 - C) S. C. Bradford
 - D) S. R. Ranganathan
38. Million Book Project was initiated by
- A) Pittsburg University
 - B) Carnegie Mellon University
 - C) MIT, USA
 - D) Michigan University
39. The quotation Where is the Wisdom, We Lost in Knowledge ...is by
- A) John Keats
 - B) M. P. Carter
 - C) T. S. Eliot
 - D) Marshall McLuhan
40. Emerald full text Database is published from
- A) USA
 - B) Germany
 - C) France
 - D) U.K.
41. Which national agency in India is assigning the ISBN?
- A) Raja Ram Mohan Roy National Education Resource Centre
 - B) Delhi Public Library
 - C) Federation of Publishers in India
 - D) National Library of India
42. The term Cyberspace was first used by
- A) Andrew Pollock
 - B) William Gibson
 - C) John Postal
 - D) Joe Flower

43. The simple Dublin Core Metadata Element Set (DCMES) consists of
- A) 10 elements
 - B) 15 elements
 - C) 14 elements
 - D) 18 elements
44. Libraries as Gateways to Knowledge is the title of the document of
- A) National Information Policy, 1986
 - B) Information Technology Act, 2000
 - C) National Knowledge Commission on Libraries, 2007
 - D) None of the above
45. Real Time Access refers to
- A) Access in advance
 - B) Access after some time
 - C) Access when searched for
 - D) None of the above
46. Theory X and Theory Y relate to
- A) Planning
 - B) Motivation
 - C) Innovation
 - D) None of the above
47. Bibliographical coupling is related to
- A) Bibliometric studies
 - B) Bibliography compilation
 - C) Modes of subject formation
 - D) Vocabulary control
48. WorldCat is maintained by
- A) Library of Congress
 - B) Online Library Center
 - C) American library Association
 - D) None of the above

49. JSTOR is an online system for archiving and accessing academic journals. It is located in
- A) Germany
 - B) UK
 - C) USA
 - D) Budapest
50. What is Dublin Core?
- A) Content management tool
 - B) E- Library software
 - C) Metadata standard
 - D) Internet Protocol
51. Information is ...
- A) Raw data
 - B) Raw knowledge
 - C) Input data
 - D) Organized data
52. 'Fair use' is a term most relevant to
- A) Intellectual Property Rights
 - B) Books borrowed for home reading
 - C) Copy right
 - D) Use of reference books
53. WIPO stands for
- A) World Information and Patents Organization
 - B) World Intellectual Property Organization
 - C) World International Property Organization
 - D) World Information Protection Organization
54. Handling of Information in the sense of production is called
- A) Information Marketing
 - B) Information Industry
 - C) Information Production
 - D) Information Revolution

55. Informal communication among knowledgeable person is known as
- A) Invisible College
 - B) Information Gatekeeper
 - C) Communication Gatekeeper
 - D) Knowledge Management
56. Who is the propounder of the term information transfer?
- A) Ranganathan
 - B) J. Martin
 - C) Beesman
 - D) Calvin Moores
57. To which country the credit is given to coin the term information society?
- A) USA
 - B) France
 - C) Japan
 - D) India
58. Today information is regarded as which of the following?
- A) Wealth
 - B) Commodity
 - C) Products
 - D) All of the above
59. Which association's tagline is "managing information"?
- A) IFLA
 - B) ASLIB
 - C) ALA
 - D) LC
60. Which association's tagline is "connecting people and information"?
- A) SLA
 - B) IFLA
 - C) ALA
 - D) COMLA

61. Library Technology Report is a publication of
- A) ALA
 - B) IASLIC
 - C) LA
 - D) ILA
62. What is a Patent?
- A) An agreement to the Government
 - B) Document of the library
 - C) An agreement between the inventor and the Government
 - D) An agreement between library and Publisher
63. Who is the author of "Dictionary of anonymous and pseudonymous literature"
- A) S. Halkett and J. Laing
 - B) Robert Proctor
 - C) Ralph De sols
 - D) Hanuman Sastri
64. Cover to cover translation is treated as
- A) Selective dissemination service
 - B) Current awareness services
 - C) On demand services
 - D) Anticipatory services
65. MESH is a
- A) Thesaurus
 - B) Dictionary
 - C) Journal
 - D) Library
66. What are the four entities of FRBR model?
- A) Personality, Matter, Energy, Space
 - B) Work, Expression, Manifestation, Item
 - C) Book, Form, Availability, Type
 - D) Discipline, Entity, Action, Personality

67. Who is the Editor in Chief of 22nd Edition of DDC
- A) Benjamin A. Custer
 - B) John P. Comaromi
 - C) Winton E. Matthews
 - D) John S. Mitchell
68. "POSDCORB" coined by
- A) Peter F. Drucker
 - B) Harold Koontz
 - C) F.W. Taylor
 - D) Luther Gulick
69. When Peter F. Drucker defined M.B.O. (Management by Objectives) ?
- A) 1950
 - B) 1960
 - C) 1954
 - D) 1964
70. Who said the demand and supply theory of books?
- A) Melvil Dewey
 - B) Dr. S. R. Ranganathan
 - C) Mc Colvin
 - D) Sayers
71. "To provide the best books to the maximum readers at the least cost" said by
- A) Dr. S. R. Ranganathan
 - B) P. N. Kaula
 - C) CE. Mayo
 - D) Melvil Dewey
72. Theory X and Theory Y is developed by
- A) Louis Brandeis
 - B) Douglas Mc Gregor
 - C) Abraham Maslo
 - D) Mayo

73. Herzberg's theory deals with
- A) Staffing
 - B) Directing
 - C) Motivation
 - D) Planning
74. Who is the father of Scientific Management?
- A) F.W. Taylor
 - B) Harold Koontz
 - C) Peter F. Drucker
 - D) Luther Gulick
75. CPM (Critical Path Method) is developed by
- A) Dupoint Company
 - B) Aircraft Corporation
 - C) IIM
 - D) IBM
76. How many digits have in the ISSN
- A) 10
 - B) 8
 - C) 13
 - D) 15
77. Mean, Median and Mode are
- A) Measures of deviation
 - B) Ways of sampling
 - C) Measures of control tendency
 - D) None of the above
78. Zero Base Budgeting system was propounded by
- A) Peter F. Drucker
 - B) P.N. Kaula
 - C) E.Mayo
 - D) Peter Phyr

79. When Zero Base Budgeting system was first prepared
- A) 1950
 - B) 1960
 - C) 1970
 - D) 1980
80. TQM is a system of continuous improvement employing participative management and centered on needs of the
- A) Customers
 - B) Staff
 - C) Organization
 - D) Government
81. A budget which mainly covers items of current revenue and expenditure is called _ .
- A) Programme budget
 - B) Welfare economics
 - C) Current budgeting
 - D) Capital budgeting
82. The library budget of a university is passed by the?
- A) Senate
 - B) Executive Council
 - C) Academic Council
 - D) Research Council
83. Who is the pioneer of open access system in British libraries?
- A) Nine E. Brown
 - B) James Duff Brown
 - C) John cotton dana
 - D) S. R. Ranganathan
84. Another term of PERT is
- A) CPM
 - B) POSDCORB
 - C) MBO
 - D) HRM

85. POSDCORB is related to
- A) Library cataloguing
 - B) Library reference service
 - C) Library administration
 - D) Library automation
86. Information Gatekeepers come under _____ sources.
- A) Documentary
 - B) Human
 - C) Institutional
 - D) Neo-conventional
87. _____ categorises documents into three types such as primary, secondary and tertiary.
- A) Grogan
 - B) Skeltor
 - C) Dr. S. R. Ranganathan
 - D) Hanson
88. _____ is a legal document and can be used as a source of industrial information.
- A) Report
 - B) Law Review
 - C) Patent
 - D) Specification
89. PRECIS was developed by Derek Austin for use in the
- A) BNB
 - B) INB
 - C) ISBD
 - D) ISBN
90. Who is regarded as father of bibliography?
- A) Paul Otlet
 - B) Conrad Gesner
 - C) J. C. Brunet
 - D) A. C. Fosket

91. Linear model of communication in knowledge based on Aristotle's model of communication was proposed by
- A) Juger Heberman
 - B) A. J. Wells
 - C) C. E. Shannon and W. Weaver
 - D) G. Gerbner
92. Library Legislation refers to the development of
- A) Academic Libraries
 - B) Special Libraries
 - C) Public Libraries
 - D) None of the above
93. The marketing concepts in Library Service include
- A) Analysis, planning, implementation and control
 - B) Advertising, planning, analysis and control
 - C) Distribution, control, analysis, implementation
 - D) Indexing, planning, control and implementation
94. There are a few basic factors which may be applied to winning the hearts of the readers. They are.
- A) Psychological factor, environmental factor, social factor
 - B) Self-factor, psychological factor, service factor
 - C) Service factor, philosophical factor, self-factor
 - D) Technological factor, service factor, self-factor
95. 'Fair use' is the norm for determining the legality of
- A) Producing the second edition of a book
 - B) Photocopying an entire book
 - C) Making available a book to another library on inter-library loan
 - D) Prescribing a book as a text book.
96. Generally, a reference service of a library in the conventional form is processed through the stages which are
- A) Preparation, service, assimilation
 - B) Indexing, orientation, delivery of the query's reply
 - C) Orientation, user's study, photocopy supplied
 - D) Preparation, orientation, delivery of the query's reply.

97. _____ is a process of helping employees in an organization to acquire new skills and competence on a continuing basis
- A) Total Quality Management
 - B) Management Information System
 - C) Financial Resources Development
 - D) Human Resources Development.
98. On which of the following technologies semantic web is not based?
- A) RDF
 - B) Ontologies
 - C) Cloud seeding
 - D) URI
99. World Wide Web (WWW) was first designed by whom?
- A) Charles Babbage
 - B) F. W. Lancaster
 - C) Ted Nelson
 - D) Tim Berner's Lee
100. The concept of Artificial Intelligence (AI) belongs to _____.
- A) Second Generation Computers
 - B) Third Generation Computers
 - C) Fourth Generation Computers
 - D) Fifth Generation Computers
-

ROUGH WORK

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Booklet Serial No. **212921**

Test Booklet Series

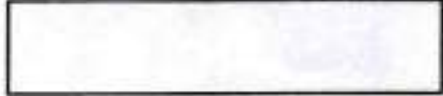
**TEST BOOKLET
DENTISTRY
Written Test - 2023
(60)**

A

Time Allowed: Two Hours

Maximum Marks: 100

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(60) (A)/2023

[P.T.O.]

1. Thickness of enamel at the cusps of premolar
A) 2mm
B) 2.3-2.5mm
C) 2.5-3mm
D) 2-2.3mm
2. Salivary enzymes that control plaque are all EXCEPT
A) Lysozyme
B) Amylase
C) Lactoferrin
D) Lipase
3. Subsurface mineral loss take place at a pH of
A) 5
B) 5.5
C) 4
D) 6.7
4. Polymerization shrinkage stress is more in
A) Class IV
B) Class III
C) Class II
D) Class I
5. Which of the following is not correct about Skirt preparation
A) Increases retention and resistance form
B) Prepared from primary flare to the transitional line angle
C) Prepared entirely in dentin
D) Extension of the facial or lingual proximal margin
6. Wrinkles are seen in the rubber dam when,
A) The hole is too small
B) Off-centered dam
C) Too much distance between the holes
D) Too little distance between the holes
7. Which of the following is indirect dental stain according to Nathoo's classification?
A) N1
B) N2
C) N3
D) Both B and C
8. Which of the following is both hard and soft tissue LASER?
A) Nd:YAG
B) Er:YAG
C) Nd:YAP
D) Diode
9. Heat application time in heat test
A) 5 seconds
B) 10 seconds
C) 12 seconds
D) 15 seconds

19. Which of the following contains EDTA?
A) Qmix
B) Tetraclean
C) MTAD
D) Both (B) and (C)
20. Champagne test is done with
A) NaOCl
B) Methylene blue
C) Saline
D) Chlorhexine
21. The percentage of lateral canals seen in apical 3mm is
A) 98%
B) 97%
C) 93%
D) 94%
22. Anesthesia success of nerve block is defined by 2 consecutive nonresponsive reading to electric pulp test within
A) 5 minutes
B) 10 minutes
C) 15 minutes
D) 20 minutes
23. According to AAE guidelines, which of the following is considered a case of moderate difficulty
A) Uncomplicated crown fracture
B) Complicated crown fracture of mature teeth
C) Complicated crown fracture of immature teeth
D) Horizontal root fracture
24. TGF- β is released from the dentin by the use of
A) EDTA
B) Citric acid
C) NaOCl
D) All of the above
25. Human dentin is composed of
A) 50% organic material by volume
B) 30% organic material by volume
C) 50% organic material by weight
D) 30% organic material by weight
26. Which one of the following statement regarding cluster headache is least likely to be true?
A) Affects midface and circumorbital areas
B) Causes nasal stuffiness and facial flushing.
C) Mostly affects elderly females.
D) May mimic anterior maxillary tooth ache.

35. Frothy sputum is seen in
 A) Organophosphorus poisoning B) Lead poisoning
 C) Bismuth poisoning D) Nickel poisoning
36. Periapical abscess recurrence is?
 A) Herpetiform ulcer B) Minor aphthous ulcer
 C) Major aphthous ulcer D) Recurrent aphthous ulcer
37. Suprabasilar acantholysis with cleft in epithelium is diagnostic feature of
 A) Pemphigus vulgaris B) Mucous membrane pemphigoid
 C) Bullous Pemphigoid D) Cicatricial Pemphigoid
38. Unilateral vesicles along the course of nerve in Orofacial region occurs in
 A) Herpes simplex B) Secondary herpes
 C) Herpangina D) Herpes zoster
39. A systemic granulomatous disease that affects the parotid gland is called
 A) Sialadenosis B) Sialometaplasia
 C) Sarcoidosis D) Sialadenitis
40. Post herpetic neuralgia is presented clinically as
 A) Intermittent pain B) Continuous burning pain
 C) Chronic pain D) Dull pain
41. To locate foreign bodies and lesions in posterior maxilla ,the radiograph of choice is
 A) Periapical radiograph B) Topographic occlusal radiograph
 C) Oblique occlusal radiograph D) All the above
42. The malignant tumour of jaw that shows sun burst appearance in radiograph is
 A) Metastatic carcinoma B) Osteosarcoma
 C) Fibrosarcoma D) Ameloblastic carcinoma

43. Multiple small well defined radiolucency without sclerotic border like punched out defect occurs in
- A) Hyperparathyroidism B) Eosinophilic Granuloma
C) Multiple Myeloma D) Hand Schuller Christian disease
44. The indication for Reverse towne projection of extraoral radiograph is
- A) Evaluate base of the skull
B) Identify position of coronoid
C) Fracture of the condyle and ramus area
D) Locate tumour in the base of the skull
45. The capability of the xray film to reproduce distinct outlines of the object is
- A) Contrast B) Sharpness
C) Density D) Resolution
46. Intensifying screens are coated with
- A) Calcium tungstate B) Silver halide
C) phosphorus D) Barium
47. Stafne's cyst appears as a radiolucency
- A) At the angle of mandible
B) At the body of mandible
C) Below the inferior alveolar canal
D) Above the inferior alveolar canal
48. Multiple odontogenic keratocysts are a feature of?
- A) Gorlin's syndrome B) Treacher collin syndrome
C) Crouzon syndrome D) Gardner's syndrome
49. Subperiosteal erosion of the middle phalanges is considered as the radiographic hallmark for
- A) Hypoparathyroidism B) Hyperparathyroidism
C) Hypothyroidism D) Hyperthyroidism
50. Hair on end effect of cortices of skull appears in
- A) Multiple myeloma B) Sickle cell anaemia
C) Aplastic anaemia D) Thalassemia

51. "What is the recommended course of treatment for a cardiac patient who has undergone valve repair surgery, is currently on warfarin, and has been experiencing pain, clicking, and temporomandibular joint (TMJ) dysfunction symptoms for the past two weeks?"
- Arthrocentesis under antibiotic prophylaxis
 - Arthrocentesis without antibiotic prophylaxis
 - Class IV laser, 5 sessions then MRI if symptomatic
 - Prolotherapy
52. T1 weighted MRI -
- Fat and blood appears hypertensive
 - Fat and blood appears hypotensive
 - Fat appears hypertensive and blood appears hypotensive
 - Fat appears hypotensive and blood appears hypertensive
53. "What is the recommended approach for managing Grade IV OSMF when bands extend from the retromolar region to the angle of the mouth?"
- Fibrous band excision - Coronoideotomy - Temporalis myotomy - Nasolabial flap reconstruction
 - Fibrous band excision - Coronoideotomy - Temporalis myotomy - Buccal fat pad
 - Fibrous band excision - Coronoideotomy - Temporalis myotomy - skin graft reconstruction
 - Fibrous band excision - Coronoideotomy - Buccal fat pad - Temporalis myotomy
54. In Severe class II patient with TMJ Ankylosis, requiring surgical correction of deformity, best sequence is:
- Pre orthodontics - TMJ surgery - Orthognathic surgery - Post op orthodontics
 - Pre orthodontics - Orthognathic surgery - Arthrocentesis - postop orthodontics
 - Pre orthodontics - Orthognathic surgery - TMJ surgery - Post op orthodontics
 - Pre orthodontics - Orthognathic surgery - Post op orthodontics - TMJ surgery
55. The infection from submandibular space to peripharyngeal space spread through
- Lincoln highway
 - Alar fascia
 - Buccopharyngeal fascia
 - Retropharyngeal fascia

56. During facial growth, groove between lateral Nasal process and maxillary process give rise to
- A) Nasolacrimal duct B) Nostrill
C) Remain as groove D) It will fuse
57. During surgery the most common/effective suture for a MRONJ patient will be
- A) Vertical mattress
B) Running continuous in both layer
C) Interrupted
D) Alternate interrupted and mattress in lower layer and continuous in mucosal layer
58. In Rheumatoid arthritis with TMJ ankylosis associated with anterior openbite and decreasing mouth opening management is:
- A) Osteoarthrectomy with interposition
B) Costochondral grafting (CCG)
C) Gap arthroplasty
D) Total joint replacement (TJR)
59. Most common microorganism involved in Total Joint Replacement infection
- A) Staphylococcus Epidermis B) Staphylococcus hominis
C) Streptococcus mutants D) Staphylococcus Aureus
60. During BSSO procedure, when fracture line not reaching till the inferior border:
- A) Revise external oblique Ridge osteotomy
B) Revise buccal osteotomy
C) Revise Medial osteotomy
D) Use Smith spreader
61. Hypertonic saline is not given in :
- A) Type IV shock B) Burns
C) Brain edema D) Bowel syndrome
62. NOT an adjunct to primary survey :
- A) Xray whole spine B) Chest X- RAY
C) FAST D) Pelvis whole spine

63. Patient Haemophilia B needs major surgery, factor replacement should be done at what rate?
- A) 80 to 100 units every 12 hours
 - B) 80 to 100 units every 24 hours
 - C) 80 to 100 units/Kg/6 hours
 - D) 50 units every 12 hours
64. Which of these conditions doesn't require subacute bacterial endocarditis (SABE) prophylaxis
- A) Mitral valve regurgitation
 - B) Mitral stenosis (MS)
 - C) Atrial septal defects (ASDs)
 - D) Coronary artery bypass graft (CABG)
65. Blood supply of deltopectoral island flap
- A) Pectoral branch of thoracoacromian artery
 - B) Pectoral branch of lateral circumflex artery
 - C) Perforator branch of internal mammary artery
 - D) Distal branch of thoracoacromian artery
66. Which of the following is not an auxiliary dental material?
- A) Liners
 - B) Acid etching solutions
 - C) Acrylic resin
 - D) Impression materials
67. Post prosthetic TJR infection with density 1 is best assessed by:
- A) 2-5 neutrophil/ high power field (HPF)
 - B) ESR and CRP
 - C) Synovial PMN's
 - D) Synovial Leukocytes
68. All are true about Enucleation with peripheral ostectomy **EXCEPT**
- A) Involves the use of a rotary instrument to remove bone adjacent to the cystic lining
 - B) Use of methylene blue to aid in identification of appropriate bony margins
 - C) Facilitate a more "radical" surgery than curettage but is less morbid than resection
 - D) Safe procedure around anatomic structures as one does under direct vision
69. Emergency surgical airway in children below ten years is
- A) Percutaneous Cricothyroidotomy
 - B) Retrograde Intubation
 - C) Needle Cricothyroidotomy
 - D) Tracheostomy

78. BERHMAN'S BUMP is a:
- Bony prominence corresponding to the side of lingula and mandibular foramen in the ramus
 - A square form of chin seen in mandibular excess
 - Excessive zygomatic bone prominence in facial hemihypertrophy
 - Prominence of bone below the genial tubercles on the lingual aspect of mandible
79. Antibiotic regimen recommended for the extraction of teeth in irradiated jaw:
- 2gm penicillin V + 500 mg metronidazole orally 1 hour before surgery and 500 mg of both drugs postoperatively for 1 week QID
 - 600 mg clindamycin 1 hour before surgery orally and 300 mg postoperatively for 3 days TID
 - 2gm penicillin V + 500 mg metronidazole orally 1 hour before surgery and 500 mg of both drugs postoperatively for 5 days TID
 - 600 mg clindamycin 1 hour before surgery orally and 300 mg postoperatively for 5 days TID
80. Surgical used as hemostatic agent is:
- Methyl cellulose
 - Oxidized cellulose
 - Commercially prepared thrombin
 - Russel viper venom
81. Given below are features of Pseudo class III malocclusion EXCEPT
- Class I molar and canine relationships at Habitual occlusion and Class II or end to end relationship at centric relation
 - Proclined upper incisor and retroclined lower incisors
 - Forward position of the mandible with normal mandibular length
 - Retroclined upper incisors and normal lower incisors.
82. Which of the following planes in the last to complete growth?
- | | |
|---------------|------------------|
| A) Transverse | B) Vertical |
| C) Horizontal | D) Does not vary |
83. "Parallel elastic" arrangement is carried out for the correction of
- | | |
|-------------------------|------------------------|
| A) Vertical discrepancy | B) Midline discrepancy |
| C) In-out discrepancy | D) Root paralleling |
84. Which of the following is NOT an essential diagnostic aid ?
- | | |
|-----------------|-----------------------------|
| A) Case history | B) Facial photographs |
| C) Study models | D) Cephalometric radiograph |

85. The presence of Amelogenesis imperfect affecting the permanent dentition and gingival enlargement, occurring with nephrocalcinosis, is called as?
- A) Lubinsky Syndrome B) Perrault Syndrome
C) LADD Syndrome D) Raine Syndrome
86. The term "reverse orthodontics" implies
- A) Dental camouflage B) Dental decompensation
C) Relapse D) Retreatment
87. Which of the following is said to be the 7th key of occlusion
- A) Bolton's tooth size ratio B) tight contacts
C) Occlusal plane D) co-incident midline
88. The following are indices used for diagnosis of Obstructive Sleep Apnoea
EXCEPT
- A) ESS B) AHI
C) IOWA D) RDI
89. GTRV is used to assess which one of the following ?
- A) Class II malocclusion
B) Tooth-size arch length discrepancy
C) Class III malocclusion
D) Class 1 malocclusion
90. A patient with CVMI 2-3 with a retrognathic mandible and deep bite can be treated by all of the following EXCEPT
- A) Twinblock B) HActivator
C) EWA appliance D) Eschler appliance
91. Ideal value of N angle ? IZC
- A) 10 degree to occlusal plane
B) 13-26 degree to occlusal plane
C) 10 degree to maxillary plane
D) 13-26 degree to maxillary plane
92. The concept of 'watermelon seed effect' is associated with which of the following?
- A) Surgical extrusion of tooth
B) Settling the occlusion with the use of interarch elastic
C) Directing a resultant force vector through the center of resistance
D) None of the above

93. Classical pattern of extraction in Class II camouflage is
- A) Extraction of upper 1st premolar & lower canines
 - B) Extraction of upper 1st premolars and lower 2nd premolars
 - C) Extraction of all 2nd premolars
 - D) Extraction of upper 2nd premolars and lower 1st premolars
94. 2nd order bends are
- A) Tipping bends
 - B) Torquing bends
 - C) In-out bends
 - D) Up-down bends
95. The M/F ratio is crucial to the establishment of
- A) Centre of rotation
 - B) Centre of resistance
 - C) Anchorage
 - D) All of the above
96. The ideal value of Z angle is
- A) 82-85 degrees
 - B) 70 degrees
 - C) 102-108 degrees
 - D) 75-78 degrees
97. The concept of sequential mandibular anchorage preparation was proposed by
- A) Tweed- Merrifield
 - B) Tweed
 - C) McLaughlin & Benette
 - D) Ricketts
98. The composition of commonly used etchant for bonding to porcelain is
- A) 37% phosphoric acid
 - B) 9.6% hydrofluoric acid
 - C) 9.6% phosphoric acid
 - D) 4.2% hydrofluoric acid
99. A Moment to force ratio of >1 indicates
- A) Root movement
 - B) Uncontrolled tipping
 - C) Intrusion
 - D) Bodily movement
100. The ideal angulation for placement of infrazygomatic bone screw is
- A) 90 degrees to occlusal plane followed by 55-70 degrees downwards towards tooth
 - B) 70 degrees to occlusal plane followed by 55-70 degrees downwards towards tooth
 - C) 45 degrees to occlusal plane followed by 55-70 degrees downwards towards tooth
 - D) 90 degrees to occlusal plane followed by 90 degrees downwards towards tooth

ROUGH WORK