

23-0009-AS

TEST BOOKLET

MEDICAL SCIENCE

PAPER – II

Time Allowed: 3 hours

Maximum Marks: 300

INSTRUCTIONS TO CANDIDATES

Read the instructions carefully before answering the questions: -

1. This Test Booklet consists of 16(sixteen) pages and has 75 (seventy-five) items (questions).
2. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS BOOKLET **DOES NOT** HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET.
3. Please note that it is the candidate's responsibility to fill in the Roll Number and other required details carefully and without any omission or discrepancy at the appropriate places in the OMR Answer Sheet and the Separate Answer Booklet. Any omission/discrepancy will render the OMR Answer Sheet and the Separate Answer Booklet liable for rejection.
4. Do not write anything else on the OMR Answer Sheet except the required information. Before you proceed to mark in the OMR Answer Sheet, please ensure that you have filled in the required particulars as per given instructions.
5. Use only **Black Ball Point Pen** to fill the OMR Answer Sheet.
6. This Test Booklet is divided into 4 (four) parts - Part - I, Part - II, Part - III and Part - IV.
7. All three parts are Compulsory.
8. Part-I consists of Multiple Choice-based Questions. The answers to these questions have to be marked in the OMR Answer Sheet provided to you.
9. Part-II, Part-III and Part-IV consist of Conventional Essay-type Questions. The answers to these questions have to be written in the separate Answer Booklet provided to you.
10. In Part-I, each item (question) comprises of 04 (four) responses (answers). You are required to select the response which you want to mark on the OMR Answer 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.
11. After you have completed filling in all your responses on the OMR Answer Sheet and the Answer Booklet(s) and the examination has concluded, you should hand over to the Invigilator *only the OMR Answer Sheet and the Answer Booklet(s)*. You are permitted to take the Test Booklet with you.
12. **Penalty for wrong answers in Multiple Choice-based Questions:**
THERE WILL BE PENALTY FOR WRONG ANSWERS MARKED BY A CANDIDATE.
 - (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, one-third of the marks assigned to the 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 to the 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.

PART - I
(Multiple Choice-based Questions)

Instructions for Questions 1 to 50:

- *Choose the correct answers for the following questions.*
- *Each question carries 3 marks.* **[3x50=150]**

1. Varus deformity is measured as the distance between the -
 - A) Feet
 - B) Medial malleoli
 - C) Knees
 - D) Toes
2. What is the abbreviation used to describe the treatment of an exercise injury?
 - A) RICP
 - B) RICE
 - C) RICH
 - D) RICK
3. The most common opportunistic infection in AIDS is?
 - A) Cryptococcosis
 - B) Tuberculosis
 - C) Candidiasis
 - D) Aspergillosis
4. Folic acid deficiency occurs in which of the following?
 - A) Aspirin
 - B) Phenytoin
 - C) Chloramphenicol
 - D) Cyclosporine
5. Name of a bacterial disease with oral manifestations is –
 - A) Measles
 - B) Chicken pox
 - C) Beriberi
 - D) Diphtheria
6. A condition of increased blood pressure within the arteries of the lungs –
 - A) Pulmonary embolism (PE)
 - B) Pulmonary hypertension (PH)
 - C) Pulmonary edema
 - D) None of these
7. Which of the following statements about Hypoxemia is correct?
 - A) abnormally low level of Oxygen in the blood
 - B) abnormally low level Red blood cells in the blood
 - C) abnormally low level White blood cells in the blood
 - D) abnormally low level Platelets in the blood

8. Water hammer pulse is commonly associated with -
 A) Aortic Stenosis
 B) Aortic Regurgitation
 C) AS with AR
 D) Mitral Regurgitation
9. Wide QRS complex is typically seen in -
 1) Bundle branch block
 2) Sick sinus syndrome
 3) Mobitz type 1 block
 4) Mobitz type 2 block
- Codes:**
 A) Only 1
 B) 1, 2 and 3
 C) Only 2
 D) 3 and 4
10. Investigation of choice for detection and characterization of interstitial lung disease -
 A) MRI
 B) Chest X-ray
 C) HRCT
 D) Ventilation perfusion scan
11. Multi-drug resistance TB is defined as resistance to -
 A) INH and Pyrazinamide
 B) INH and Rifampicin
 C) Rifampicin and Pyrazinamide
 D) All 1st line drugs
12. All of the following show low glucose in pleural fluid *except* -
 A) Empyema
 B) Malignant effusion
 C) Rheumatoid arthritis
 D) Dressler's syndrome
13. All of the following are indications of emergent dialysis *except* -
 A) Uraemic encephalopathy
 B) Persistent hyperkalemia
 C) Refractory volume overload
 D) Azotaemia
14. A prenatal test that takes fluid from around your baby in the uterus is termed as
 A) Urinalysis
 B) Amniocentesis
 C) Bart's test
 D) Chorionic villus sampling

15. Which of the following is/are nutritional diseases?
- A) Pellagra
 - B) Xerophthalmia
 - C) Osteomalacia
 - D) All of the above
16. Which of the following should be given to prevent the adverse effects of long-term gonadotropin-releasing hormone (GnRH) agonist use in the treatment of uterine fibroids?
- A) Danazol
 - B) Raloxifene
 - C) Tranexamic acid
 - D) Supplemental estrogen
17. Which of the following statement(s) about Barret oesophagus is/are *not* correct?
- 1) It is a premalignant condition
 - 2) Lower part of esophagus squamous epithelium is replaced by columnar epithelium
 - 3) It results due to GERD
 - 4) Lower part of esophagus columnar epithelium is replaced by squamous epithelium
- Codes:**
- A) 1 and 2
 - B) 2 and 3
 - C) Only 2
 - D) Only 4
18. Which of these is a marker for bone formation?
- A) serum nucleotidase
 - B) urinary calcium
 - C) osteocalcin
 - D) tartrate-resistant acid phosphate
19. Which of these is tested by using the "Lift off test"?
- A) Subscapularis
 - B) Teres Minor
 - C) Infraspinatus
 - D) Supraspinatus
20. The effect(s) of having Thiamine deficiency is/are:
- A) Muscle weakness
 - B) Central nervous system and Cardiovascular problems
 - C) Heart disease and beriberi disease
 - D) All of these

21. Ankylosing spondylitis is associated with -
A) HLA-B8
B) HLA-B27
C) HLA-DR3
D) HLA-DW4
22. Causes of hypercalcemia include all of the following *except* -
A) Multiple myeloma
B) Lytic skeletal metastasis
C) Total parental nutrition
D) Acute pancreatitis
23. Subacute combined degeneration of cord is caused due to deficiency of -
A) Vit B1
B) Vit B5
C) Vit B6
D) Vit B12
24. What is *not* present in Parkinsonism?
A) Tremors at rest
B) Past pointing
C) Akinesia
D) Rigidity
25. The drug of choice for trigeminal neuralgia is -
A) Chlorpromazine
B) Carbamazepine
C) Gabapentin
D) Fluoxetine
26. Which of the following is the investigation of choice for multiple sclerosis?
A) MRI
B) MDCT
C) Ultrasound
D) CT myelogram
27. Anti ds DNA is highly specific for -
A) Systemic sclerosis
B) SLE
C) Polymyositis
D) Rheumatoid arthritis

28. A 35-year-old woman sustained a traumatic blow to her left breast. Initially, there was a 3-cm contusion that resolved within 4 weeks, but she then felt a firm lump that persisted below the site of the bruise 2 month later. What is the most likely diagnosis for this lump?
- A) Fibroadenoma
 - B) Fat necrosis
 - C) Sclerosing adenosis
 - D) Ductal carcinoma in situ
29. When a baby is born with Cyanotic Congenital Heart Disease, the baby's skin has a _____ tint called cyanosis.
- A) Bluish
 - B) Pinkish
 - C) Reddish
 - D) Yellowish
30. The surface tension in intestinal lumen between fat droplets and aqueous medium is decreased by -
- A) Bile Salts
 - B) Bile acids
 - C) Conc. H_2SO_4
 - D) Acetic acid
31. Which among the options given below is the preventive dose of aspirin?
- A) 100mg
 - B) 50mg
 - C) 75mg
 - D) 150mg
32. A neonate is a term used for new born till day -
- A) 20
 - B) 25
 - C) 27
 - D) 28
33. Which of the following is *correct* about multiple myeloma?
- A) It is a tumour of RBCs
 - B) It is a tumour of Platelets
 - C) It is a tumour of Plasma cells
 - D) It is a tumour of Basophils
34. Type of down syndrome that occurs when a segment of the 21st chromosome detaches itself to another chromosome is called -
- A) Displacement
 - B) Transportation
 - C) Translocation
 - D) Relocation

35. Hemophilia is due to deficiency of -
A) Factor VI
B) Factor VIII
C) Factor XI
D) Factor XII
36. What is usually the incubation period for Japanese Encephalitis?
A) 3 - 7 days
B) 4 - 10 days
C) 5 - 15 days
D) 7 - 21 days
37. Which of the following is a complement defect disorder?
A) PNH
B) Sjogren syndrome
C) SDH
D) Mumps
38. All of following are treatment for MI *except* -
A) PTCA
B) CABG
C) Nitroglycerine
D) Azithromycin
39. The most common cause of mitral stenosis is -
A) Calcification
B) Rheumatic fever
C) Congenital
D) None of the above
40. In which week of fever does Widal test becomes positive?
A) 1st
B) 3rd
C) 2nd
D) 4th
41. Among the given below viruses, which one carries the greatest risk of needle stick transmission?
A) HIV
B) HCV
C) CMV
D) HPV
42. What is full form of PEP?
A) Pre-exposure prophylaxis
B) Patient exposure prophylaxis
C) Pain exposure prophylaxis
D) Post exposure prophylaxis

43. All of following are drugs used in asthma *except* –
- A) Long acting beta agonist
 - B) Inhaled corticosteroid
 - C) Theophylline
 - D) Aspirin
44. Complications of diabetes are all *except* -
- A) Retinopathy
 - B) Nephropathy
 - C) Hepatomegaly
 - D) Neuropathy
45. H. Pylori can cause which of the following malignancy?
- A) Stomach cancer
 - B) Colon cancer
 - C) Liver cancer
 - D) Gall bladder cancer
46. Signs of liver cirrhosis are all *except* -
- A) Spider naevi
 - B) Esophageal varices
 - C) Ascites
 - D) Raised JVP
47. Causes for enlarged kidney are all *except* -
- A) Diabetes
 - B) Amyloidosis
 - C) CKD
 - D) Polycystic kidney disease
48. All are anti-tubercular drugs *except* -
- A) Isoniazid
 - B) Clarithromycin
 - C) Rifampicin
 - D) Ethambutol
49. Fluid accumulation in the tissue and air spaces of the lungs
- A) Pulmonary embolism (PE)
 - B) Pulmonary hypertension (PH)
 - C) Pulmonary edema
 - D) None of these
50. Investigation of choice to diagnose rheumatoid arthritis is -
- A) CBC
 - B) RFT
 - C) RA Factor
 - D) LFT

PART - II
(Short Answer-type Questions)

Instructions for Questions 51 to 63:

- ***Write the answers in short for any 10 (TEN) out of the thirteen questions.***
- ***Each question carries 5 marks.*** ***[5x10=50]***

51. Write a short note on management of Acid Peptic Ulcer disease.
52. Bring out the differences between nephritic and nephrotic syndrome.
53. Write short note on COVID Pneumonia. Do all patients with COVID-19 get pneumonia?
54. Write a surgical note on tuberculous peritonitis.
55. Define carcinoid tumor and suggest its treatments.
56. Briefly describe hydrops fetalis. Cite its most common example.
57. Enumerate the features of congenital rubella syndrome.
58. Write a note on the components of active management of third stage of labour.
59. Write a note on vitamin A prophylaxis clearly bringing out the current scenario of National Vitamin A Prophylaxis Programme in India.
60. State the different etiological causes for iron deficiency anemia.
61. What are the five signs of varicocoele and what is the cure for varicocoele?
62. Write a note on osteoarthritis suggesting two treatments for it.
63. Define septic abortion briefly. How is it different from missed abortion?

PART - III
(Long Answer-type Questions)

Instructions for Questions 64 to 71:

- **Answer any 5 (FIVE) out of the eight questions.**
- **Each question carries 10 marks.** **[10x5=50]**

64. Discuss the ten advantages of breastfeeding. WHO has called upon all facilities providing maternity and newborn services worldwide to implement the Ten Steps of Successful Breast feeding. What are they?
65. What is cyanosis? What are its different types? Discuss in detail.
66. Write the differences between penetrating and perforating injuries.
67. Discuss the three types of acute renal failure. Suggest the clinical course for each of them.
68. Discuss the symptoms, causes and management of pleural effusion.
69. Write a note on hemophilia and pathogenesis of joint problems.
70. Define degenerative disc disease stating the four stages of it and the management of each stage.
71. What is *lateral epicondylitis* and *medial epicondylitis*? What is the difference between them? Suggest the treatment options for both of them.

PART - IV
(Essay-type Questions)

Instructions for Questions 72 to 75:

- *Answer any 2 (TWO) out of the four questions.*
- *Each question carries 25 marks.*

[25x2=50]

72. Mrs. Reena, a 35-year-old female has been having pain in her toes when she gets up during the night and first thing in the morning. She is a wife and mother of a seven-month-old daughter. Her mother recently passed away and she has been experiencing tension headaches. She has been having difficulty walking, sometimes needing to crawl due to the pain in toes when she gets up during the night to go to the bathroom and the first couple of hours in the morning. She has also noticed pain in her fingers in the morning when she tries to open baby food jars.

Physical examination:

Temperature 98.6° F, pulse 76, respirations 16, blood pressure 114/68

Swelling and tenderness to palpation of the proximal interphalangeal (PIP) joint of the bilateral second and third digits of hands, metacarpophalangeal (MCP) joint of bilateral thumbs, and the metatarsophalangeal (MTP) joint of bilateral great toes

Diagnostic Studies:

Rheumatoid factor (RF) positive

X-rays of bilateral hands and feet reveal soft tissue swelling; without any evidence of bone or cartilage destruction or joint deformities

Bone density T-score of +1

Diagnoses - Stage I rheumatoid arthritis.

- A. Explain the pathophysiology of rheumatoid arthritis and the classification criteria that Mrs. Reena demonstrates that determined this diagnosis.
- B. How could the recent childbirth and death of her mother be related to rheumatoid arthritis?
- C. Discuss the treatment and interprofessional care involved in managing a patient with rheumatoid arthritis?
- D. Mrs. Reena has been prescribed Methotrexate. What instructions should you give regarding this medication?

73. Discuss the three Millennium Development Goals related to health. Critically analyze how far each of these goals have been achieved in India.
74. Mr. Ram, a 30-year-old male has been admitted in the medical ward with complaints of fever, nausea, abdominal and joint pain. On running the required tests, he is diagnosed with viral hepatitis.
- A. Describe the etiopathogenesis, clinical features and diagnosis of viral hepatitis.
 - B. Enumerate the risk factors of viral hepatitis and suggest the plan of care for Mr. Ram.
75. Discuss in detail about the highly active anti-retroviral therapy for HIV infection. Discuss the National Guidelines for HIV care and treatment in India.