

M.B.B.S. SECOND PROFESSIONAL EXAMINATION, DECEMBER-2022

PATHOLOGY

PAPER - SECOND

[Time allotted: Three hours]

SET - A

[Max Marks: 100]

Q. 1. Multiple choice questions (Darken the single best response in OMR sheet. Time allotted 20 minutes) (20 x 1 = 20)

1. Aschoff nodules are seen in:
 - a. MI
 - b. MS
 - c. RHD
 - d. SABC
2. Which of the following does **not** constitute a glioma?
 - a. Oligodendroglioma
 - b. Astrocytoma
 - c. Medulloblastoma
 - d. Ependymoma
3. Hypercalcemia is associated with which malignancy of lung?
 - a. Squamous cell carcinoma
 - b. Small cell carcinoma
 - c. Adenocarcinoma
 - d. Carcinoid
4. Which of these is a premalignant condition of skin?
 - a. Psoriasis
 - b. Bowen's disease
 - c. Lichen planus
 - d. Bullous pemphigoid
5. Which condition shows sequestrum?
 - a. Osteomyelitis
 - b. Osteogenic sarcoma
 - c. Osteoblastoma
 - d. Rheumatoid arthritis
6. Which tumor rapidly undergoes necrosis?
 - a. Ductal carcinoma
 - b. Lobular carcinoma
 - c. Choriocarcinoma
 - d. Dysgerminoma
7. Kaposi sarcoma is a tumor of:
 - a. Fibrous tissue
 - b. Nerves
 - c. Blood vessels
 - d. Smooth muscles
8. Which cell is **not** seen in lymph node cytology?
 - a. Lymphocyte
 - b. Promyelocyte
 - c. Immunoblast
 - d. Histiocyte
9. Which is the commonest indication for giving cryoprecipitate?
 - a. Severe anaemia
 - b. Malignancy
 - c. Jaundice
 - d. Bleeding disorder
10. Which of these doesn't increase the risk of Hepatocellular carcinoma?
 - a. HCV
 - b. HAV
 - c. HBV
 - d. Aflatoxin
11. EGFR mutation analysis is commonly done in which tumors?
 - a. Liver
 - b. Ovary
 - c. Lung
 - d. Endometrium
12. ER, PR receptors are seen in cancer of:
 - a. Lung
 - b. Liver
 - c. Bone
 - d. Breast
13. Subcutaneous nodules are seen in:
 - a. MI
 - b. Angina
 - c. RHD
 - d. Atherosclerosis
14. Permanent abnormal dilation of blood vessels is called:
 - a. Embolism
 - b. Aneurysm
 - c. Vasculitis
 - d. Fatty streak
15. Colposcopy guided biopsy is done in:
 - a. Bone
 - b. Breast
 - c. Cervix
 - d. Oral cavity
16. Non-small cell and small cell are types of:
 - a. Lung cancers
 - b. Ovarian cancers
 - c. Bladder cancers
 - d. Throat cancers
17. Tumor marker elevated in prostate cancer?
 - a. hCG
 - b. AFP
 - c. Alkaline phosphatase
 - d. PSA
18. Centriacinar & panacinar are types of:
 - a. Bronchitis
 - b. Emphysema
 - c. Pneumonia
 - d. Bronchiectasis
19. Which sample is **not** needed in investigating transfusion reaction?
 - a. Blood of patient
 - b. CSF of pt.
 - c. Urine of pt.
 - d. Blood in blood bag
20. Which condition doesn't induce granuloma formation?
 - a. Crohn's disease
 - b. Sarcoidosis
 - c. Leprosy-LL
 - d. Schistosomiasis

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Note: Attempt all questions.
Draw suitable diagrams (wherever necessary)

- Q. 2. Give reasons:** (5 x 2 = 10)
- Massive proteinuria is seen in nephrotic syndrome.
 - The size of uterus is more than the expected period of gestation in H. mole.
 - Metaphysis is the most common site of osteomyelitis.
 - H.pylori is associated with gastritis.
 - Prostate gland enlarges in old age.
- Q. 3. Problem based question:** (1+4+2+3 = 10)
- A 38 y/F presented with palpable lower abdominal mass and ascites. Her mother died of cancer breast 10 years ago.
- What is your diagnosis?
 - Discuss classification of this disease.
 - What are the risk factors of this disease?
 - Discuss routes of spread of this disease.
- Q. 4. Write briefly on:** (4 x 6 = 24)
- Basal cell carcinoma
 - Hodgkin Lymphoma
 - Phyllodes tumor
 - A patient collapsed while venesection in phlebotomy area. As a health care worker, how will you manage the situation?
- Q. 5. (i) Discuss types, complications and lab diagnosis of jaundice.** (3+2+5=10)
- (ii) Discuss morphology & pathophysiology of atherosclerosis and its role in heart diseases.** (3+5+2=10)
- Q. 6. Answer as indicated:** (4 x 4 = 16)
- Write differences between CSF findings in various types of meningitis
 - Asbestosis
 - Hypersplenism
 - Diabetic nephropathy

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Q. 1. Multiple choice questions (Darken the single best response in OMR sheet. Time allotted 20 minutes) (20 x 1=20)

1. A patient has long-standing severe hemolytic anemia characterized by hypochromic cells. Electrophoresis studies demonstrate a near complete absence of beta chains. Several years later the patient develops cardiac failure. Intracardiac deposition of which of the following would be most likely to contribute to the cardiac failure?
 - a. Iron
 - b. Amyloid
 - c. Calcium
 - d. Magnesium
2. Target cells are formed due to:
 - a. Increase in surface area due to lipid gain
 - b. Decrease in surface area due to lipid loss
 - c. Weakening of skeletal protein
 - d. All of the above
3. Which is **true** regarding apoptosis?
 - a. Caspases are the ultimate effectors of apoptosis
 - b. FAS and TNF-R have an extracellular death domain
 - c. BCL-2 is a proapoptotic protein
 - d. Entry of cytochrome c into mitochondria is a critical step
4. A 48-year-old female presents with lytic bone lesion in her lumbar spine. Biopsy shows sheets of plasma cells. Urine analysis shows presence of Bence Jones proteins. What is the probable diagnosis?
 - a. Leukaemia
 - b. Lymphoma
 - c. Multiple myeloma
 - d. Osteosarcoma
5. Which one of these statements is **not** true regarding cell adhesion molecules?
 - a. Chemokines are a major family
 - b. They include the immunoglobulin superfamily
 - c. They are important in the spread and localization of tumor cells
 - d. Integrins can bind cells to extracellular matrix
6. The presence of the Philadelphia chromosome is associated with a more favorable prognosis in patients with which of the following diseases?
 - a. Acute lymphoblastic leukemia
 - b. Acute myelogenous leukemia
 - c. Chronic lymphocytic leukemia
 - d. Chronic myelogenous leukemia
7. Pappenheimer bodies contain:
 - a. Iron
 - b. DNA
 - c. RNA
 - d. Ribosomal protein
8. All are granulomatous disease **except**:
 - a. Tuberculosis
 - b. Leprosy
 - c. Sarcoidosis
 - d. Ulcerative colitis
9. Which is the first stage of iron deficiency?
 - a. Negative iron balance
 - b. Decreased iron stores
 - c. Decrease MCV
 - d. Decrease in Hemoglobin
10. What is detected by indirect Coomb's test?
 - a. Antibodies on RBC surface
 - b. Antigens on RBC surface
 - c. Antibodies in plasma
 - d. Antibodies in serum
11. Which of the following is **not** a cause of eosinophilia?
 - a. Eczema
 - b. Steroid therapy
 - c. Hookworm
 - d. Hodgkin lymphoma
12. Red infarcts are seen in:
 - a. Heart
 - b. Spleen
 - c. Kidney
 - d. Lungs
13. Which of the following is a malignant neoplasm arising from mesenchymal tissue?
 - a. Carcinoma
 - b. Fibroma
 - c. Sarcoma
 - d. Melanoma
14. A warning sign of possible cancer would be any of the following **except**:
 - a. Persistent, unusual bleeding
 - b. A change in bowel habits
 - c. Sudden development of fever, nausea, & diarrhea
 - d. A change in shape, color, or surface of a skin lesion
15. Acidic urine will **not** be suitable for studying:
 - a. Ca. Oxalate crystals
 - b. Amorphous phosphate crystals
 - c. Urinary proteins
 - d. All of the above
16. Which of the following types of amyloid affection produces the most serious effects?
 - a. Amyloid sago spleen
 - b. Hepatic amyloidosis
 - c. Renal amyloidosis
 - d. Amyloid diffuse spleen
17. Atopy is an inherited tendency to spontaneously develop immediate (type I) allergies to certain environmental antigens:
 - a. True
 - b. False
18. One of the following doesn't influence the site of metastasis?
 - a. Anatomical location of the primary tumor.
 - b. Size of the tumor
 - c. Complimentary adhesion molecule between tumor cells and target organs
 - d. Chemoattractants liberated by target organs.
19. Tumor markers are used to:
 - a. Confirm diagnosis
 - b. Determine the response to treatment
 - c. Detect early relapse
 - d. All of them are correct
20. One of the following is **not** affected in cancer development?
 - a. DNA repair gene
 - b. Activation of growth promoting oncogenes
 - c. Activation of tumor suppressor genes
 - d. Genes that regulate apoptosis

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PAPER- FIRST**

Note: Attempt all questions.
Draw suitable diagrams (wherever necessary)

- Q. 2. Give reasons:** (5 x 2 = 10)
- A dry tap is obtained on bone marrow aspiration at times
 - Wound healing is delayed in diabetic patients
 - Smoking is injurious to health
 - The body immune system does not attack its own cells
 - Leukaemoid reaction is seen in severe infections
- Q. 3. Problem based question:** (5 x 2 = 10)
- A 22-year-old construction worker sticks himself with a sharp, rusty nail. Within 24 hours, the wound has enlarged to become a 1-cm sore that drains thick, purulent material.
- This skin wound illustrates which morphologic type of necrosis?
 - What are other forms of necrosis?
 - What is gangrene?
 - Give two differences between necrosis and Apoptosis.
 - Define exudate and transudate?
- Q. 4. Write short notes on:** (4 x 6 = 24)
- Septic shock
 - Tumor markers
 - Klinefelter syndrome
 - Discuss role of a Doctor in a Team
- Q. 5. (i)** List the causes of Megaloblastic anemia. Discuss pathogenesis and morphology including bone marrow picture of megaloblastic anemia? (2+3+5=10)
- (ii)** Define edema. Tabulate the pathophysiological categories of edema and write in detail about each category with suitable examples and illustrations. (2+8=10)
- Q. 6. Write briefly on:** (4 x 4 = 16)
- Type I hypersensitivity reaction
 - Lab diagnosis of cancer
 - Mechanism of autoimmunity
 - Dystrophic and metastatic calcification