

Total No. = 03 pages**Q.P. Code: MBN201****M.B.B.S. 2nd Prof.**

(New Scheme w.e.f. 2019 admission onwards)

BF/2023/06

Pathology – A

M.M. : 100

Time : 3 Hours(First 30 Min. for MCQs)

- Note: 1. **Use OMR Sheet to answer Multiple Choice Questions(MCQs).**
2. Attempt all questions. Illustrate your answers with suitable diagrams
3. **NO SUPPLEMENTARY SHEET SHALL BE ALLOWED/PROVIDED**
4. **The student must write Q.P. Code in the space provided on OMR Sheet and the Title page of the Answer Book.**

Q.1 MCQs (Attempt on OMR sheet)

[1x20]

1. A 2 year old male presented with pancytopenia and reticulocyte count-0.5 %. Bone marrow biopsy showed a cellular marrow with 28 % blasts showing MPO positivity. The diagnosis is:
 - a. ALL
 - b. CML - myeloid blast phase
 - c. AML
 - d. MDS
2. A two year old child presented with an abdominal mass,bruising around the eyes and bone pains. Laboratory investigations showed elevated urine levels of vanillylmandelic acid [VMA] and homovanillic acid [HVA]. After resection of tumour which histological feature aids in making the diagnosis of this case?
 - a. The presence of ganglion cells
 - b. Lack of mitotic figures
 - c. Psammoma bodies
 - d. Homer -Wright pseudorosettes
3. The division in development of erythroid series occurs upto
 - a. Basophilic Normoblast
 - b. Polychromatophilic Normoblast
 - c. Orthochromatic Normoblast
 - d. Pronormoblast
4. A 34 year old lady was recently diagnosed with SARS-CoV-2 virus (COVID-19) infection. A month later she developed headache and facial swelling on one side with black lesions over the nasal bridge. What is the likely diagnosis?
 - a. Sinonasal undifferentiated carcinoma
 - b. Mucormycosis
 - c. Aspergillosis
 - d. Candidiasis
5. A 45 year old female presented with massive splenomegaly. Hemogram revealed Hb-10 g/dl,TLC-639000/cu.mm,Platelet count – 450000/ Cu mm. The NAP score was 3. (Control-102).The most probable diagnosis is:
 - a. CML
 - b. AML
 - c. Meningococcal sepsis
 - d. Splenic lymphoma
6. A 20 year old male presented with generalized edema, sweating &tachycardia after a bee sting.
 - a. IgG mediated hypersensitivity
 - b. IgE mediated hypersensitivity
 - c. IgA mediated hypersensitivity
 - d. IgM mediated Hypersensitivity
7. A 78 year old man who lives alone and has hemorrhagic areas around hair follicles, with fragmented hair and splinter hemorrhages are present in nail beds.PT & aPTT were normal. This presentation is most likely due to
 - a. Vitamin K deficiency
 - b. Vitamin C deficiency
 - c. Vitamin B12 deficiency
 - d. Vitamin A deficiency
8. Marfan's syndrome is inherited in which pattern
 - a. Autosomal Dominant
 - b. Autosomal Recessive
 - c. X-linked Dominant
 - d. X-linked Recessive
9. A 3 year old child presented with pallor, jaundice & hepatosplenomegaly. CBC showed Hb 4.5 g/dl, MCV 56fl, MCH 18 pg and RDW 29%. Hb HPLC revealed Hb F 76%, Hb A2 4.8% and Hb A0 3%. The most likely diagnosis is-
 - a. Beta Thalassemia major
 - b. Alpha Thalassemia major
 - c. Pyruvate kinase deficiency
 - d. Unstable Hb Disease

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10. The ideal anticoagulant for Platelet count is
- K2 EDTA
 - Heparin
 - Trisodium citrate
 - Double oxalate
11. On one of the rural health visits you undertake as part of your training, you see a female child, one and a half year of age living in impoverished conditions with a sibling of 3 months. She had swelling of face, ascites and flaky- paint skin lesions.
- Kwashiorkor
 - Marasmus
 - Rickets
 - Scurvy
12. A 65 yr old female was operated for fracture neck femur. On third day she developed sudden onset dyspnoea, petechial rashes, restlessness and delirium. CBC revealed thrombocytopenia and anaemia. The likely diagnosis is-
- Deep vein thrombosis
 - Sepsis
 - Fat embolism
 - ITP
13. A 43 yr old male had long history of Bronchiectasis. Now he has presented with deranged renal function with proteinuria. Renal biopsy showed pink acellular material in mesangium, peritubular area & in arterioles. This substance stain with Congo Red & gives yellow-green birefringence in polarised light. The diagnosis is-
- Diabetes Mellitus
 - SLE
 - Mesangioproliferative Glomerulonephritis
 - Amyloidosis
14. In infectious mononucleosis the atypical lymphocytes seen in peripheral blood are mainly-
- B lymphocytes
 - CD4+ve T Lymphocytes
 - CD8 +ve T lymphocytes
 - Large granular T Lymphocytes
15. A child presented with jaw swelling. The biopsy showed "starry sky" appearance with diffuse infiltrate of intermediate sized lymphoid cells & high mitotic index. What is the likely diagnosis & associated cytogenetic abnormality?
- Follicular Lymphoma; t(11:14)
 - Burkitt lymphoma; t (8:22)
 - DLBCL; t(14:18)
 - Lymphocyte depleted Hodgkin lymphoma;t (9:22)
16. A 56 yr old male presented with long history of reflux oesophagitis. The endoscopic biopsy from lower part of oesophagus showed columnar lining with many goblet cells. This is an example of-
- Hyperplasia
 - Aplasia
 - Metaplasia
 - Choristoma
17. A patient with HIV infection presented with pneumonia. The sputum showed spherical, oval, cup-shaped, thick-walled cyst, 6 μ m to 8 μ m in diameter. The possible diagnosis and organism are-
- Pneumocystis carinii , a fungus
 - Pneumocystis carinii , a protozoa
 - Pneumocystis jirovecii , a fungus
 - Pneumocystis jirovecii , a protozoa
18. Wet gangrene is characterized by:
- Clear demarcation between affected and non-affected area
 - Superadded putrefaction
 - Shrivelled appearance of the involved organ
 - Slow gradual occlusion of blood supply is causative
19. Psammoma bodies are an example of
- Apoptosis
 - Dystrophic calcification
 - Metastatic calcification
 - Necroptosis
20. A 26 year old female presented with recurrent pregnancy losses. Lab investigations revealed PT- 12.0 sec ,APTT-65.0 sec which is not corrected by mixing with normal plasma. The most likely diagnosis is:
- Hemophilia A
 - Von-Willebrand disease
 - Henoch-Schonlein purpura
 - Antiphospholipid syndrome

- Q.2 A 8 month old child was brought with history of failure to thrive, irritability, abdominal distention and yellow sclera. Abdominal examination revealed palpable liver and spleen. Laboratory investigations reveal Hb: 6.0g/dl; TLC:5800/ cumm; Platelet count 1,90,000/cumm;MCV:66fl; MCH 25pg. Interpret and clinical features and lab investigations and give differential diagnosis. How will you further investigate this patient and explain the likely findings in each of the condition considered. [5+7]
- Q.3 **Write short notes on:** [5x4]
- Write difference between benign and malignant tumor
 - Bombay blood group
 - Clinical features and laboratory diagnosis of Hemophilia A
 - Type II hypersensitivity reaction
- Q.4 **Explain why:** [3x5]
- Severity of erythroblastosis fetalis increases with each succeeding pregnancy
 - Role of philadelphia chromosome in chronic myeloid leukemia
 - Patients with Filaria present with massive non pitting edema of the legs
 - Explain occurrence of gum bleeding in acute promyelocytic leukemia
 - Patients with multiple myeloma have raised erythrocyte sedimentation rate
- Q.5 **Write short notes on(applied aspects):** [6x3]
- Mode of spread of tumors with examples
 - Aetiopathogenesis and clinical features of fat embolism
 - Describe classification and morphology of Hodgkin lymphoma
- Q.6 **Write short answer:** [5x3]
- Clinical features and morphology of skin in lepromatous leprosy
 - Effect of indoor air pollution
 - Explain concept of patient autonomy and role of doctor in ensuring it
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