SS/MBBS-II/PATHO-I/03-24

2024

(March)

PATHOLOGY

Paper-I

Full Marks: 100

Time: 3 hours

The figures in the margin indicate full marks for the questions

Answer all questions

1. Define apoptosis. What are the morphologic features of apoptosis? Enumerate the difference between apoptosis and necrosis. 2+3+3=8

2. A 60-year-old female recently operated for abdominal hernia, attends the OPD with severe abdominal pain and reappearance of the swelling after an episode of severe coughing. Her vitals we re normal. 1+3+4=8

(a) What is your probable diagnosis?

(b) Describe the stages of wound healing.

(c) Differentiate between healing by first intention and healing by second intention.

3. Write short notes on the following: **5×8=40**

(a) Cellular events of inflammation

(b) Mechanism of cell injury

(c) Hazards of blood transfusion

(d) Intracellular accumulations

(e) Classify Hodgkin's lymphoma.

(f) “Tp53 : Guardian of the genome.” Elaborate.

(g) Describe the diagnostic role of cytology and its application in clinical care.

(h) Describe the role of justice as a guiding principle in patient care.

4. Answer in short: **2×9=18**

(a) Special stains to demonstrate amyloid

(b) Tigered effect

(c) Four indications of bone marrow aspiration

(d) Define metaplasia and dysplasia.

(e) Paradoxical emboli

(f) Name two stains used to diagnose myeloid neoplasm.

(g) Define granuloma.

(h) Disorder caused by air pollution

(i) H. pylori associated tumour

5. Define anaemia. Write the aetiopathogenic classification of anaemia. Enumerate the investigations in a case of megaloblastic anaemia. 2+3+3=8

6. A 54 year-old female presented in the OPD with backache and weakness. Radiological studies revealed bony lytic lesions over the vertebrae. Laboratory studies showed increased M protein in serum, elevated creatinine and calcium level. 1+4+3=8

(a) What is your probable diagnosis?

(b) Describe the pathogenesis of the condition.

(c) Describe the peripheral blood and bone marrow picture.

7. Choose the correct answer: **1×10=10**

(i) Reticulocyte count is decreased in

- (a) iron-deficiency anaemia
- (b) aplastic anaemia
- (c) megaloblastic anaemia
- (d) haemolytic anaemia

(ii) Bernard-Soulier syndrome is a defect in

- (a) platelet aggregation
- (b) platelet adhesion
- (c) platelet release reaction
- (d) platelet morphology

(iii) Diabetic foot is an example of

- (a) gas gangrene
- (b) dry gangrene
- (c) wet gangrene
- (d) necrotizing inflammation

(iv) Cerebral plaques in Alzheimer's disease consist of

- (a) ATTR protein
- (b) $A\beta_2\mu$ protein
- (c) $A\beta$ protein
- (d) prion protein

(v) Haemophilia is

- (a) X-linked recessive

- (b) autosomal dominant
- (c) autosomal recessive
- (d) X-linked dominant

(vi) Bitot's spot is found in deficiency of

(a) vitamin D

(b) vitamin K

(c) vitamin A

(d) vitamin E

(vii) Formation of granuloma is

(a) type I hypersensitivity reaction

(b) type II hypersensitivity reaction

(c) type III hypersensitivity reaction

(d) type IV hypersensitivity reaction

(viii) Hepar lobatum is seen in

(a) primary syphilis

(b) secondary syphilis

(c) tertiary syphilis

(d) congenital syphilis

(ix) In iron-deficiency anaemia, TIBC is

(a) low

(b) normal

(c) high

(d) borderline

x) Pappenheimer bodies represent

(a) DNA

(b) RNA

(c) non-haem iron

(d) mitochondria

*****