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UNIVERSITY EXAMINATIONS 2023/2024

THIRD YEAR, SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF
SCIENCE IN MEDICAL LAB

HML 3327: GENERAL AND SYSTEMATIC PATHOLOGY

DATE: APRIL 2024

TIME: 2 HOURS

INSTRUCTIONS:

Part I: Short Answer Questions

Part II: Long Answer Questions

Part III: Multiple Choice Questions (MCQs)

PART I SHORT ANSWER

1. List 6 beneficial effects of acute inflammation. (6 Marks)
2. Enumerate 3 examples of metaplasia and their causes. (6 Marks)
3. Name 3 organs commonly affected by amyloidosis. (3 Marks)
4. List 4 characteristics of wounds that heal by second intention. (4 Marks)
5. Name 4 cells that can be found in chronic inflammation. (4 Marks)
6. Illustrate 4 differences between benign and malignant tumours. (8 Marks)
7. Define the following terms. (4 Marks)
 - a) Hyperplasia
 - b) Atrophy
 - c) Steatosis
 - d) Lipofuscin
8. List 5 sexually transmitted diseases. (5 Marks)

PART II (40 MARKS) – Long Answer questions

1. Ali has been stung by a bee on his right ear lobe. The ear lobe is swollen, red, warm to touch and he reports that the area is very painful.
 - a) What type of inflammation is taking place? (1 Mark)
 - b) List and explain the steps in this type of inflammation. (19 Marks)
2. A 67-year-old male presents with deep yellow coloured eyes and confusion. A C.T Scan done shows a problem with the liver.
 - a) List 10 laboratory examinations that can be employed to narrow down the diagnosis (10 Marks)
 - b) List 10 possible causes that could present with the deep yellow eyes. (10 Marks)

PART III (40 MARKS) – Multiple Choice Questions

1. Which of the following hypersensitivity reactions are mediated by sensitized T-helper 1 cells (1 Mark)
 - a) Type I
 - b) Type II
 - c) Type III
 - d) Type IV
 - For each of the following statements, select the most likely matching pathologic finding:
2. Following a cut to the skin in a 43-year-old African man, the healing scar develops a disfiguring nodular appearance.
3. Region composed of proliferating capillaries, fibroblasts, and macrophages following a scraping injury to the knee of a 5-year-old girl.
4. A 59-year-old man with diabetes mellitus develops a dark black to red appearance of the big toe and second toe of his right foot following an episode of minor trauma
5. A 15 year old boy develops a large boil in the groin area. On incision 2ml of pus is drained.
6. A type of necrosis found at the centre of a tuberculous granuloma
 - a) Caseous necrosis
 - b) Callus
 - c) Calcification
 - d) Gangrene
 - e) Leukopenia

- f) Sero-fibrinous inflammation
 - g) Suppurative inflammation
 - h) Keloid
 - i) Granulation tissue
 - j) Fistula
 - k) Eosinophilia
7. The stain used to diagnose amyloid is? (1 mark)
- a. Sudan Black
 - b. Congo-Red
 - c. Periodic acid Schiff
 - d. Giemsa
8. Which of the following is a cytogenetic method used to diagnose genetic disorders? (1 mark)
- a. Pyrosequencing.
 - b. FISH
 - c. Next generation sequencing
 - d. PCR
9. What type of giant cell is present in granulomatous inflammation secondary to a thorn prick? (1 mark)
- a. Touton giant cell
 - b. Langhans giant cell
 - c. Foreign body giant cell
 - d. Reed Sternberg cell
10. The following are examples of Autosomal Recessive disorders Except? (1 mark)
- a. Alkaptonuria
 - b. Sickle cell Disease
 - c. Cystic fibrosis
 - d. Marfan's syndrome
11. The predominant cell type seen in acute inflammation is? (1 mark)
- a. Epitheloid cell
 - b. Neutrophil
 - c. Eosinophil
 - d. Lymphocyte
12. Liquefactive necrosis occurs in? (1 mark)

- a. Heart
 - b. Spleen
 - c. Intestine
 - d. Brain
13. Which occurs first in fracture healing? (1 mark)
- a. Neutrophil invasion
 - b. Procallus formation
 - c. Woven bone ossification
 - d. Lamellar bone ossification
14. Which of the following processes explain the appearance of calcium deposition in Tuberculous lymph node? (1 Mark)
- a. Dystrophic calcification
 - b. Apoptosis
 - c. Hypercalcemia
 - d. Metastatic calcification
15. Hepatocytes are an example of: (1 mark)
- a. Permanent cells
 - b. Stable cells
 - c. Labile cells
 - d. Mesenchymal cells
16. Hypertensive enlargement of the heart, is a form of? (1 mark)
- a. Hypoplasia
 - b. Hyperplasia
 - c. Hypertrophy
 - d. Steatosis.
17. The diagnostic feature of a granuloma is the presence of? (1 mark)
- a. Giant cells
 - b. Lymphocytes
 - c. Epitheloid cells
 - d. Fibrosis
18. Which of the following does not promote fracture healing? (1 mark)
- a. Steroid therapy
 - b. Adequate blood supply
 - c. Immobilization

d. Adequate Vitamin C

19. What type of shock is associated with severe burns? (1 mark)

- a. Septic shock
- b. Cardiogenic shock
- c. Hypovolemic shock
- d. Neurogenic shock

20. The following are true about arterial thrombi, EXCEPT? (1 mark)

- a. Lead to ischemia and infarction
- b. Grow in the direction of blood flow.
- c. Are usually due to endothelial injury
- d. Can be precipitated by arteriosclerosis



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