II-MBBS

(This paper consists of 03 pages)

01221A1+01221A2

Second M.B.B.S. (Supp) Exam. (New Scheme)

May-2025

PATHOLOGY

Paper-1

Time: Three Hours

Maximum Marks: 100

Attempt all questions in both sections

(Use separate answer book for each section)

Section-A

Q.1 Fill in the blanks [6x1=06]

a. Tissue composed of macrophages, capillaries and fibroblasts is called _____

b. Thalassemia gives protection against _____

c. Starry sky appearance in lymph node is seen in _____

d. Major fibril protein in primary amyloidosis is _____

e. Packed RBC's (PRBC's) are stored at _____

f. Diagnostic feature of granuloma is presence of _____

Q.2 Answer the followings (Multiple choice questions) [4x1=04]

i. A pathologist notes cloudy swelling, hydropic change in kidney and fatty change in the liver of a patient with a history of alcohol abuse. These morphological changes are all examples of

A. Early neoplastic change
B. Hyaline change
C. myxoid change
D. Reversible cell injury

ii. Most probable diagnosis in a 25-year-old lady on treatment for rheumatoid arthritis with lab investigations as follows: Hb- 9gm/dl; MCV- 55ff; Serum Iron-30 microgram/dl; Serum Ferritin- 200ng/mL, TIBC-298 microgram/dl is

A. Iron deficiency anemia
B. Thalassemia Major
C. Anemia of chronic disorder
D. Megaloblastic anemia

iii. A 43-year-old man has complained of mild burning (substernal) pain following meals for the past 3 years. Upper GI endoscopy is performed and biopsies are taken of any erythematous area of the lower esophageal mucosa 3 cm above the gastroesophageal junction. There is no mass- lesion, no ulceration, and no hemorrhage noted. The biopsies show the presence of columnar epithelium with goblet cells Which of the following mucosal alterations is most likely represented by these findings?

A. Ischaemia
B. Metaplasia
C. Dysplasia
D. Hyperplasia

iv. Chromosomal translocation seen in CML:

A. t(9:22)
B. t(8;14)
C. t (2;8)
D. t (15;17)

Q.3 [15]

A 24-year-old female presented to the emergency room with complaints of fever, excessive bruising, and bleeding from her gums for the past two weeks. She also reported feeling unusually fatigued and noticed small red spots on her skin. On examination, she was febrile with pale skin, notable ecchymosis, and gingival bleeding. Laboratory results revealed a WBC count of 19,000/µl, hemoglobin of 8.2 g/dl, and platelet count of 30,000/µl. The WBC differential showed 19% lymphocytes, 8% monocytes, and 73% atypical cells. The peripheral blood smear indicated the presence of atypical hypergranular cells with creased/folded nuclei and multiple cytoplasmic needle-like inclusions. Coagulation studies were significant for a prolonged prothrombin time (PT) of 19.5 sec, low fibrinogen of 62 mg/dL, and prolonged partial thromboplastin time (PTT) of 57.4 sec. D-dimer was 10,880 ng/ml. (normal <500 ng/mL).

a. Based on the history and lab findings, what is your diagnosis? [2]
b. What genetic abnormality is typically associated with this condition [2]
c. What are needle like inclusions in the

atypical cells [2]

d. Identify the coagulation abnormality based on the above parameters [3]

e. Explain the pathophysiological mechanism of coagulation disorder of this patient [4]

f. Enumerate the two morphological variants of this condition [2]

Q.4 Write short notes on (Any five): [5x2=10]

a. Leukemoid reaction

b. Down's syndrome

c. Opportunistic lung infection in AIDS

d. Ghons' complex

e. Paraneoplastic syndrome

Q.5 Explain briefly (Any three): [3x5=15]

a. Laboratory diagnosis of hemolytic anemia

b. Amyloid stains

c. Mechanism of Apoptosis

d. Pathological calcification

Section-B

Q.6 [20]

Define thrombosis, write in detail about the pathogenesis, causes, morphology and fate of thrombus

Q.7 Write short notes on (Any five): [5x2=10]

a. Gaucher's disease
b. Mechanism of cellular aging
c. Enumerate examples of granulomatous inflammation
d. Phases of CML
e. Reticulocyte
f. Importance of blood grouping

Q.8 Explain briefly (Any four): [4x5=20]

a. Type I hypersensitivity reaction
b. Mechanism of metastasis
c. Immune thrombocytopenic purpura
d. Mention the need of collaborative work in health care and state the hurdles in the same.
e. Pathophysiology of B thalassemia major

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