

PATHOLOGY

PAPER- I

Time : 3 hours

PATHO/D/11/32/I

Max. Marks : 100

**Attempt all questions in order.
Each question carries 10 marks.**

1. Classify glomerular diseases. Discuss the immune and non-immune pathogenesis of glomerulonephritis. (4+6)
2. a. Classify vasculitis. (5)
b. Describe the pathology of small vessel vasculitis. (5)
3. a. Mention the common site of origin of osteogenic sarcoma. (2)
b. Describe the different histological subtypes of osteogenic sarcoma. (8)
4. a. Define cirrhosis. (2)
b. Enumerate the causes of cirrhosis. (4)
c. Describe the method of evaluation of core biopsy of liver in cirrhosis. (4)
5. a. Write down the pathogenesis of celiac disease. (4)
b. Describe the pathological features of this disease. (6)
6. a. Classify interstitial pneumonias. (5)
b. Describe the pathology of usual interstitial pneumonia. (5)
7. a. Enumerate the different histological subtypes of breast carcinoma. (3)
b. Discuss the prognostic factors of breast carcinoma. (7)
8. Describe the immunophenotypic and cytogenetic changes of peripheral B cell neoplasms. (10)
9. Describe the cutaneous manifestations and chromosomal aberrations in familial cancer syndromes. (10)
10. Describe the pathogenesis and pathology of Grave's disease. (5+5)

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PAPER- II

Time : 3 hours
Max. Marks : 100

PATHO/D/11/32/II

**Attempt all questions in order.
Each question carries 10 marks.**

1. a. Enumerate the causes of disseminated intravascular coagulation (DIC). (4)
b. Discuss the laboratory diagnosis of DIC. (6)
2. Describe the hematological manifestation of HIV infection. (10)
3. Discuss the role of genetic counseling and prenatal diagnosis in inherited bleeding disorders. (10)
4. a. Discuss the pathogenesis of anemia of chronic diseases. (6)
b. Describe the differentiating features of anemia of chronic diseases from Iron deficiency anemia. (4)
5. Discuss the etiopathogenesis and laboratory diagnosis of bone marrow failure syndromes in children. (10)
6. Describe the diagnostic criteria and laboratory investigations in a case of anti-phospholipid antibody syndrome. (4+6)
7. a. Describe the pathogenesis of hereditary spherocytosis (HS). (4)
b. Discuss the laboratory investigations in a case of HS. (6)
8. Write the diagnostic criteria for multiple myeloma and describe the recent advances in its etiopathogenesis. (10)
9. a. Enlist the various blood components. (6)
b. Enumerate their indications for clinical usage. (4)
10. Discuss the classification, pathogenesis and prognostic factors of myelodysplastic syndromes. (4+3+3)

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PAPER- III

Time : 3 hours
Max. Marks : 100

PATHO/D/11/32/III

Attempt all questions in order.
Each question carries 10 marks.

1. Describe the pathology, pathogenesis and laboratory diagnosis of dengue hemorrhagic fever. (3+3+4)
2. Discuss the glandular lesions of cervix detected by PAP smear. (10)
3. a. Enumerate the various laboratory tests to detect viral infection. (6)
b. Describe the different laboratory tests to detect HIV infection. (4)
4. Discuss the role of morphology and ancillary techniques in interpretation of urine cytology. (10)
5. Discuss the role of cyto-morphology and ancillary techniques in differential diagnosis of small round cell tumour. (10)
6. Describe the cytology and laboratory investigations of a case of autoimmune thyroiditis. (4+6)
7. Describe the pathophysiology and laboratory diagnosis of chronic renal failure (CRF). (10)
8. What are the methods of cell block preparations and write its utility in cytological diagnosis? (10)
9. Describe in detail the laboratory investigation in a patient suffering from diabetes mellitus. (10)
10. a. What is the principle of chromatography? (3)
b. Describe High Performance Liquid Chromatography and its applications. (7)

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PAPER- IV

Time : 3 hours

PATHO/D/11/32/IV

Max. Marks : 100

**Attempt all questions in order.
Each question carries 10 marks.**

1. Describe the pathogenesis and pathology of graft versus host disease. (10)
2. a. Enumerate the various mediators of inflammation. (5)
b. Give their principal sources and action. (5)
3. a. Describe the mechanisms involved in phagocytosis. (6)
b. Discuss the various leucocyte function defects. (4)
4. a. Write the etiopathogenesis of Systemic Lupus Erythematosus (SLE). (6)
b. Describe the morphology of Lupus nephritis. (4)
5. Discuss the mechanisms of cell injury in chronic alcoholism. (10)
6. Discuss the regulation of energy balance in obesity. (10)
7. Discuss the sequence of events occurring in healing of fracture bone. (10)
8. a. What are the different subtypes of stem cells? (3)
b. Enumerate the role of stem cells in various therapeutic modalities. (7)
9. a. Enumerate various tumor suppressor genes. (4)
b. Describe their important mechanisms of action. (6)
10. a. Describe the principle of fluorescence in-situ hybridization (FISH). (5)
b. Enumerate the various applications of FISH. (5)
