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MANIPAL ACADEMY OF HIGHER EDUCATION
MD (PATHOLOGY) DEGREE EXAMINATION – OCTOBER 2021

PAPER I

Monday, October 11, 2021

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer all the questions:**

✍ **Long Essays:**

1. Describe the sequence of events occurring in a dying cell.

(15 marks)

2. Describe the functions of leukocytes in inflammation and discuss the clinical conditions associated with leukocyte dysfunction.

(15 marks)

3. **Write short notes on:**

3A. Role of extracellular matrix in cell growth

3B. Types of collagen and their significance

3C. Fracture callus

3D. Pathophysiology of irreversible shock

3E. Gene therapy

3F. Significance of antineutrophil cytoplasmic antibodies

3G. Factors influencing transplant rejection

3H. HPV and genital cancer

3I. Liquid based cytology

3J. Obesity associated diseases

(7 marks × 10 = 70 marks)



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MANIPAL ACADEMY OF HIGHER EDUCATION
MD (PATHOLOGY) DEGREE EXAMINATION – OCTOBER 2021

PAPER II

Tuesday, October 12, 2021

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer all the questions:**

✍ **Long Essays:**

1. Discuss the diagnostic approach and pitfalls in the diagnosis of small blue round cell tumors.
(15 marks)

2. Discuss the role of immunofluorescence in bullous lesions of the skin.
(15 marks)

3. **Write short notes on:**

- 3A. Prostatic intraepithelial neoplasia
- 3B. STUMP
- 3C. Anterior mediastinal tumors
- 3D. Autoantibodies in SLE
- 3E. Histioid leprosy
- 3F. Primary carcinomas of the salivary gland
- 3G. Marginal zone lymphoma
- 3H. Gastrointestinal stromal tumors
- 3I. Asbestos related neoplasia
- 3J. ANCA associated glomerulonephritis

(7 marks × 10 = 70 marks)



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PAPER III

Wednesday, October 13, 2021

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ Answer all the questions:

✍ Long Essays:

1. Classify von Willebrand disease. Discuss the diagnostic approach to inherited platelet function disorders.

(15 marks)

2. Discuss the various quantitative and qualitative disorders of globin chain of hemoglobin. Add a note on laboratory diagnosis of thalassemia syndromes.

(15 marks)

3. **Write short notes on:**

3A. Prognostic markers in ALL

3B. Autologous blood transfusion

3C. Tests for hemoglobinuria

3D. Fanconi anemia

3E. Role of flowcytometry in CLPDs

3F. Hematologic changes following splenectomy

3G. Laboratory tests in diagnosis of Lupus anticoagulant

3H. Factors influencing ESR

3I. Platelet transfusion

3J. Haematopoietic growth factors

(7 marks × 10 = 70 marks)



MANIPAL ACADEMY OF HIGHER EDUCATION
MD (PATHOLOGY) DEGREE EXAMINATION – OCTOBER 2021

PAPER IV

Friday, October 15, 2021

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

☞ **Answer all the questions:**

☞ **Long Essays:**

1. Discuss the role of ancillary techniques in the differential diagnoses of small round cell tumors of mediastinum.

(15 marks)

2. Discuss the major molecular subtypes of breast carcinoma. What is the role of IHC in tailoring therapeutic strategies?

(15 marks)

3. **Write short notes on:**

3A. Telepathology

3B. Role of frozen section in endocrine pathology of head & neck.

3C. Regenerative & neoplastic hepatocellular nodules

3D. Serrated lesions of colon & rectum

3E. Pathology of Barrett esophagus

3F. Tissue microarrays

3G. Atypical teratoid/rhabdoid tumor

3H. Targeted therapy

3I. Translocation renal cell tumors

3J. ISH in tumor diagnosis

(7 marks × 10 = 70 marks)

