Reg. No.										

MANIPAL ACADEMY OF HIGHER EDUCATION

MD (PATHOLOGY) DEGREE EXAMINATION – JANUARY 2025

PAPER I

(REGULAR & REPEATER)

Tuesday, January 14, 2025

Time: 14:00 – 17:00 Hrs. Max. Marks: 100

- **Answer all the questions:**
- **Illustrate your answers with diagrams wherever necessary**
- **Long Essays:**

1. Discuss the role of arachidonic acid metabolites in inflammation.

(15 marks)

2. Describe the mechanisms of type IV hypersensitivity reactions, with prototypical examples.

(15 marks)

3. **Write short notes on**:

3A. Genomic imprinting

3B. Cellular aging and telomere

3C. Describe the stages of shock

3D. Immunocytochemistry in tumor diagnosis

3E. Application of Frozen section in histopathology.

3F. Describe the sequential steps in metastatic cascade

3G. Antithrombotic properties of normal endothelium

3H. The Bethesda system for reporting cervical cytology

3I. Role of angiogenesis in tissue repair

3J. Endogenous pigments

(7 marks × 10 = 70 marks)

Reg. No.										

MANIPAL ACADEMY OF HIGHER EDUCATION

MD (PATHOLOGY) DEGREE EXAMINATION – JANUARY 2025

PAPER II

(REGULAR & REPEATER)

Wednesday, January 15, 2025

Time: 14:00 – 17:00 Hrs. Max. Marks: 100

- **Answer ALL questions.**
- **Illustrate your answers with diagrams wherever necessary**
- **Long Essays:**

1. Discuss the approach to follicular-patterned lesions of thyroid.

(15 marks)

2. Describe the role of small intestinal biopsies in assessment of malabsorption syndromes.

(15 marks)

3. **Write short notes on:**

3A. Ocular surface squamous neoplasia

3B. Skin biopsy in leprosy

3C. Autoimmune pancreatitis

3D. Granulomatosis with polyangiitis

3E. Giant cell-rich tumors of bone

3F. Discuss the predictive factors in carcinoma breast

3G. Hereditary leiomyomatosis and renal cell carcinoma

3H. Ductal adenocarcinoma of prostate

3I. Molecular classification of endometrial carcinoma.

3J. Anaplastic large cell lymphoma

(7 marks × 10 = 70 marks)

Reg. No.										

MANIPAL ACADEMY OF HIGHER EDUCATION

MD (PATHOLOGY) DEGREE EXAMINATION – JANUARY 2025

PAPER III

(REGULAR & REPEATER)

Thursday, January 16, 2025

Time: 14:00 – 17:00 Hrs. Max. Marks: 100

- **Answer ALL questions.**
- **Illustrate your answers with diagrams wherever necessary**

- **Long Essays:**

1. Describe molecular pathogenesis, laboratory diagnosis and clinical features of Multiple myeloma. Add a note on plasma cell leukemia.

(15 marks)

2. Discuss quality assurance in blood banking.

(15 marks)

3. **Write short notes on:**

3A. Automation in urine examination
3B. Role of hepcidin in iron metabolism
3C. Lab diagnosis of Hairy cell leukemia
3D. Polycythemia vera
3E. International Normalised Ratio
3F. Role of HPLC in hemolytic anemias
3G. Evaluation of thrombocytopenia
3H. Biomedical waste management
3I. Minimal residual disease
3J. LJ chart

(7 marks × 10 = 70 marks)

Reg. No.										

MANIPAL ACADEMY OF HIGHER EDUCATION

MD (PATHOLOGY) DEGREE EXAMINATION – JANUARY 2025

PAPER IV

(REGULAR & REPEATER)

Friday, January 17, 2025

Time: 14:00 – 17:00 Hrs. Max. Marks: 100

- **Answer ALL questions.**
- **Illustrate your answers with diagrams wherever necessary**

- **Long Essays:**

1. Describe the approach to the diagnosis of small round blue cell tumors in pediatric patients. (15 marks)

2. Discuss the autopsy findings in COVID-19 related deaths. (15 marks)

3. **Write short notes on:**

3A. Eosinophilic diseases of the gastrointestinal tract
3B. Diagnostic challenges of epithelioid soft tissue tumors
3C. Updates in molecular biology of gliomas
3D. Interpretation of cribriform pattern in prostatic pathology
3E. Utility of flow cytometry in the diagnosis of Lymphomas
3F. Applications for next generation sequencing in cancer care
3G. Laboratory diagnosis of Tuberculosis
3H. Updates in Paris system for urine cytology reporting
3I. Applications of digital pathology
3J. Molecular diagnostics in non-small cell lung carcinoma

(7 marks × 10 = 70 marks)