

MANIPAL UNIVERSITY**MD (PATHOLOGY) DEGREE EXAMINATION – OCTOBER 2015****SUBJECT: PAPER I: GENERAL PATHOLOGY, PATHOPHYSIOLOGY,
IMMUNOPATHOLOGY AND CYTOPATHOLOGY**

Tuesday, October 06, 2015

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Essays:**

1. Discuss the role of free radicals in health and disease. (15 marks)
2. Discuss the immunopathology of transplant rejection. (15 marks)

3. **Write short notes on:**

- 3A. Toll – like receptors
- 3B. Angiogenesis
- 3C. Cytology of Follicular neoplasms of the thyroid
- 3D. miRNA and carcinogenesis
- 3E. A typical glandular cells in cervical cytology
- 3F. Mechanism of autoimmune disease
- 3G. Technique of Liquid based cytology
- 3H. Role of Cyclins in disease
- 3I. Vitamin D deficiency
- 3J. Cytomegalovirus infection

(7 marks × 10 = 70 marks)



MANIPAL UNIVERSITY

MD (PATHOLOGY) DEGREE EXAMINATION – OCTOBER 2015

SUBJECT: PAPER II: SYSTEMIC PATHOLOGY

Wednesday, October 07, 2015

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Essays:**

1. Discuss the pathogenesis and pathology of renal lesions in Diabetes mellitus. (15 marks)

2. Discuss myofibroblastic proliferations mimicking soft tissue sarcomas. (15 marks)

3. **Write short notes on:**

3A. Complex sclerosing lesions of breast

3B. PECOMA

3C. Hereditary basis of colorectal carcinoma

3D. Differential diagnosis of clear cell tumors of salivary gland

3E. Pathology of NASH

3F. Morphology of Alzheimer disease

3G. Cystic diseases of pancreas

3H. Intermediate trophoblastic tumors

3I. Polyarteritis nodosa

3J. Role of IHC in evaluation of problematic prostatic biopsies

(7 marks × 10 = 70 marks)



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MD (PATHOLOGY) DEGREE EXAMINATION – OCTOBER 2015

SUBJECT: PAPER III: HAEMATOLOGY, TRANSFUSION MEDICINE (BLOOD BANKING) AND LABORATORY MEDICINE

Thursday, October 08, 2015

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Essays:**

1. Discuss Quality control and Assurance in the hematology laboratory. (15 marks)

2. Discuss the principles of Flow cytometry and its application in the diagnosis of acute leukemia. (15 marks)

3. **Write short notes on:**

- 3A. Irradiation of blood products
- 3B. Laboratory diagnosis of myeloma
- 3C. Congenital dyserythropoietic anemia
- 3D. Polycythemia vera
- 3E. Amniotic fluid analysis
- 3F. Blood component therapy
- 3G. Evaluation of thrombocytopenia
- 3H. Applications of FISH
- 3I. Urine analysis in chronic kidney disease
- 3J. Laboratory diagnosis of Sickle cell anemia

(7 marks × 10 = 70 marks)



MANIPAL UNIVERSITY

MD (PATHOLOGY) DEGREE EXAMINATION – OCTOBER 2015

SUBJECT: PAPER IV: RECENT ADVANCES AND APPLIED ASPECTS

Friday, October 09, 2015

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Essays:**

1. Discuss the role of HER2-neu as a biomarker in various cancers. (15 marks)
2. Discuss the medicolegal aspects of histopathology practice. (15 marks)

3. **Write short notes on:**

- 3A. WHO / ISUP classification of tumors of urinary tract (2004)
- 3B. Pathology of Non-alcoholic steatohepatitis
- 3C. BRAF mutation
- 3D. Cancer stem cell
- 3E. Heat shock proteins
- 3F. Applications of RT- PCR
- 3G. Morphology of Merkel cell carcinoma
- 3H. MIB-1 labelling
- 3I. Serrated colorectal polyps
- 3J. Biosafety in the laboratory

(7 marks × 10 = 70 marks)

