MANIPAL UNIVERSITY

MD (PATHOLOGY) DEGREE EXAMINATION – OCTOBER 2017

SUBJECT: PAPER I: GENERAL PATHOLOGY, PATHOPHYSIOLOGY, IMMUNOPATHOLOGY AND CYTOPATHOLOGY

Tuesday, October 03, 2017

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Essay:**

1. Discuss the mechanisms of autoimmunity and classify the autoimmune endocrine disorders.

(15 marks)

2. Discuss the molecular basis of tumor development & progression.

(15 marks)

3. **Write Short notes on:**

3A. List the lysosomal storage diseases and discuss the features of Gauchers disease
3B. Mechanism of angiogenesis in wound healing
3C. CSF cytology in neoplastic meningitis
3D. Cytology samples in the diagnosis of pulmonary lesions
3E. Quality assurance in cytology
3F. Morphological & biochemical changes in apoptosis
3G. Pathogenesis of septic shock
3H. Polarising microscopy
3I. Vitamin D deficiency
3J. Morphological consequences of radiation injury

(7 marks × 10 = 70 marks)

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MANIPAL UNIVERSITY

MD (PATHOLOGY) DEGREE EXAMINATION – OCTOBER 2017

SUBJECT: PAPER II: SYSTEMIC PATHOLOGY

Wednesday, October 04, 2017

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

✍ **Answer ALL the questions.**

✍ **Long Essay:**

1. Classify breast tumors. Discuss the risk factors of breast cancer. Add a note on its prognostic and predictive factors.

(15 marks)

2. Discuss the recent advances in the etiopathogenesis and pathology of inflammatory bowel disease.

(15 marks)

3. **Write short notes on:**

3A. Recent advances in the pathology of endometrial hyperplasia
3B. Renal changes in diabetes mellitus
3C. Vegetations of the heart
3D. Leukocytoclastic vasculitis
3E. Mimics of adenocarcinoma prostrate on needle biopsy
3F. Morphology of chordoma
3G. Pathology of paraosteal osteosarcoma
3H. Nodular regenerative hyperplasia of the liver
3I. Wegener's granulomatosis
3J. Pathology of malignant peripheral nerve sheath tumors

(7 marks × 10 = 70 marks)

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MANIPAL UNIVERSITY

MD (PATHOLOGY) DEGREE EXAMINATION – OCTOBER 2017

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

Thursday, October 05, 2017

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Essay:**

1. Discuss laboratory diagnosis of Haemolytic anaemias.

(15 marks)

2. Classify and discuss laboratory diagnosis of Myelodysplastic syndrome.

(15 marks)

3. **Short Answers questions:**

3A. Indications for components in blood transfusion
3B. Technique and implications of Erythrocyte sedimentation rate
3C. Cerebrospinal fluid analysis in microbial infections
3D. Problems in blood grouping
3E. Flow cytometry in the diagnosis of acute leukemias
3F. Clinical significance of Philadelphia chromosome
3G. Hyposplenism and associated conditions
3H. Clinical importance of fetal haemoglobins
3I. Diagnostic implications of JAK2 mutation
3J. Laboratory diagnosis of Niemann-Pick disease

(7 marks × 10 = 70 marks)

MANIPAL UNIVERSITY

MD (PATHOLOGY) DEGREE EXAMINATION – OCTOBER 2017

SUBJECT: PAPER IV: RECENT ADVANCES AND APPLIED ASPECTS

Friday, October 06, 2017

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Essay:**

1. Discuss the role of immunohistochemistry and cytogenetics in differentiating malignant small round cell tumors.

(15 marks)

2. Discuss the principle, technique and clinical applications of flow cytometry.

(15 marks)

3. **Write short notes on:**

3A. Classification and morphology of neuroendocrine tumors of the lung.

3B. Pathogenesis and morphology of primary biliary cirrhosis.

3C. BRAF mutation

3D. Pathogenesis of acute pancreatitis

3E. Telepathology

3F. Recent advances in colorectal carcinogenesis.

3G. Role of immunohistochemistry in differentating atypical small acinar patterns in prostatic biopies.

3H. IgG4 related sialadenitis

3I. Bethesda system for reporting thyroid cytology.

3J. Discuss the basic principles of organ transplantation.

(7 marks × 10 = 70 marks)