Time: 3 hours  
Max. Marks: 100

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

1. Discuss the classification and morphology of leprosy. What are the various reactions encountered in leprosy.  

2. Write short notes on:  
   a. Polarising microscopy in diagnostic pathology  
   b. Role of prostaglandins in acute inflammation  

3. What is Epithelial Mesenchymal Transition (EMT)? What are its molecular pathways and significance in malignancy? 

4. Write short notes on:  
   b. Plasticity of stem cells and its clinical significance.  

5. Define innate and adaptive immunity. Describe the cellular and molecular mechanisms of innate immunity. 

6. Describe the various mechanisms of recognition and rejection of allografts. Describe in brief the morphology, immunocytochemistry and electron microscopy of chronic antibody mediated kidney transplant rejection. 

7. Give the various causes with examples of genetic predisposition to cancer. What is the interaction between genetic and non genetic factors? 

8. Write short notes on:  
   a. Gene microarray technology  
   b. Tissue microarrays  

9. Describe the genetic abnormalities, pathophysiology and clinical correlation of cystic fibrosis (mucoviscidosis). 

10. Enlist the various lysosomal disorders along with their specific defects. Describe the clinical features and pathology of different types of Niemann-Pick disease. 

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POSSESSION / USE OF CELL PHONES OR ANY SUCH ELECTRONIC GADGETS IS NOT PERMITTED INSIDE THE EXAMINATION HALL.