

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI  
(END SEMESTER EXAMINATION)

CLASS: B.PHARM  
BRANCH: PHARMACY

SEMESTER : II  
SESSION : SP/18

SUBJECT: BP2007 PATHOPHYSIOLOGY

TIME: 3 HOURS

FULL MARKS: 60

INSTRUCTIONS:

1. The question paper contains 7 questions each of 12 marks and total 84 marks.
  2. Candidates may attempt any 5 questions maximum of 60 marks.
  3. The missing data, if any, may be assumed suitably.
  4. Before attempting the question paper, be sure that you have got the correct question paper.
  5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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- Q.1(a) Define Etiology, Pathogenesis & Pathophysiology. [2]  
Q.1(b) Explain Cell injury & its etiology in detail. [4]  
Q.1(c) Illustrate the different cellular responses to cell injury? Explain the sequential events in the pathogenesis of reversible & irreversible cell injury caused by hypoxia/ischemia. [6]
- Q.2(a) Outline the mechanisms of generation of free radicals by reduction of oxygen. [2]  
Q.2(b) Illustrate diagrammatically the ultrastructural changes during cell injury due to hypoxia-ischemia. [4]  
Q.2(c) Define Apoptosis & Necrosis. Illustrate the changes during apoptosis & necrosis (preferentially with the help of diagram). [6]
- Q.3(a) Define cell adaptation. Write the different types of cellular adaptation. [2]  
Q.3(b) Explain in detail about the different types of cell adaptation with examples. [4]  
Q.3(c) Summarize in detail about the Homeostasis. Analyze the process of homeostasis explaining the mechanism involved in edema by sodium & water retention. [6]
- Q.4(a) Define inflammation. What are the common signs of inflammation? [2]  
Q.4(b) List the different types of inflammation? Write a detail note on Acute inflammation (AI) with a key focus on pathogenesis of increased vascular permeability. [4]  
Q.4(c) Summarize the mediators of inflammation? Illustrate the Arachidonic acid metabolites via cyclooxygenase pathway. [6]
- Q.5(a) Define Heart Failure. What are the different types of heart failure? [2]  
Q.5(b) Describe the evolution of right heart failure & left heart failure. [4]  
Q.5(c) Summarize a detail note on Chronic Obstructive Pulmonary diseases & bronchial asthma. [6]
- Q.6(a) Define Neoplasia, Neoplasm & cancer. [2]  
Q.6(b) Differentiate between different types of Tumor. Analyze the nomenclature of different cancer with suitable examples of each. [4]  
Q.6(c) Summarize the classification of tumors with the tissue of origin and what are the common types of cancer? Illustrate cell-cycle diagrammatically and write the pathogenesis of cancer focusing on common traits of cancer cells. [6]
- Q.7(a) Define Alzheimer's disease & Parkinson's disease. [2]  
Q.7(b) Classify Diabetes Mellitus? Schematically represent the mechanisms involved in pathogenesis of different types of Diabetes Mellitus. [4]  
Q.7(c) Explain the pathophysiology focusing on different hypothesis for Alzheimer's disease. Also, write the pathophysiology involved in Parkinson's disease. [6]

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