

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

**CLASS: B. PHARM.
BRANCH: PHARMACY**

**SEMESTER: II
SESSION: SP/2025**

SUBJECT: BP204T PATHOPHYSIOLOGY

TIME: 3.00 Hours

FULL MARK: 75

INSTRUCTIONS:

1. The missing data, if any, may be assumed suitably.
2. Before attempting the question paper, be sure that you have got the correct question paper.
3. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
4. This question paper consists of (03) three parts. Read the part wise instructions before attempting the questions.

PART-I

Objective types questions (Instruction: Answer all questions)

- Q1. Put appropriate examples, short diagrams, and flowcharts if necessary. (10 x 2 = 20 Marks)
- A. Define pathophysiology.
 - B. How does ischemia affect mitochondrial function?
 - C. Define inflammation and its signs.
 - D. What is diabetes mellitus?
 - E. Do corticosteroids cause stomach ulcers?
 - F. How can cardiac pathophysiology affect brain function?
 - G. What is epilepsy?
 - H. What is the difference between AIDS and HIV?
 - I. Are there any roles of blood cells in inflammation?
 - J. What are the intrinsic and extrinsic factors for respiratory disorders?

PART-II

Short Answers

(Instruction: Answer seven out of nine questions)

(7 x 5 = 35 Marks)

- Q2. Elaborate on the role of Na⁺/K⁺-ATPase in cell swelling with appropriate diagrams.
- Q3. List major lifestyle diseases and possible management to reduce them.
- Q4. Elaborate on metabolic acidosis and alkalosis.
- Q5. What are electrolyte imbalances and their consequence in human pathophysiology?
- Q6. Write a descriptive note on stomach ulcers with the necessary diagrams.
- Q7. How do cell adaptations affect the structure and function of cells?
- Q8. Elaborate on the sexually transmitted diseases.
- Q9. Elaborate on diabetes.
- Q10. What are homeostasis and feedback systems?

PART-III

Long Answers

(Instruction: Answer two out of three questions)

(2 x 10 = 20 marks)

- Q11. Describe the role of ischemia and hypoxia in various pathophysiology with diagrams and charts.
- Q12. Describe conduction, contraction, and circulation pathways and their relations with cardiac arrhythmias.
- Q13. Elaborate on cell injuries and compare cellular changes in pathophysiological and physiological conditions.