



**BIOCHEMISTRY**

**PAPER – III**

BCHEM/D/14/03/III

Time : 3 hours

Max. Marks : 100

**Important instructions:**

- Attempt all questions in order.
- Each question carries 10 marks.
- Read the question carefully and answer to the point neatly and legibly.
- Do not leave any blank pages between two answers.
- Indicate the question number correctly for the answer in the margin space.
- Answer all the parts of a single question together.
- Start the answer to a question on a fresh page or leave adequate space between two answers.
- Draw table/diagrams/flowcharts wherever appropriate.

1. What is meant by "Hypersensitivity"? Describe the different types of hypersensitivity. 2+8
2. Write a note on detection of polymorphism. 10
3. Name the major histocompatibility complexes. Explain their role in the generation of immune responses. 2+8
4. Discuss polymerase chain reaction under: 2+4+2+2
  - a) Principles
  - b) Procedure
  - c) Advantages
  - d) Disadvantages
5. Name the types of DNA repair mechanisms. Briefly describe each type of DNA repair mechanism. 2+8
6. What are reverse transcriptases? Explain their significance. 4+6
7. How are proteins synthesized in eukaryotes? Name the inhibitors of protein synthesis. 8+2
8. Briefly describe the role of oncogenes and tumor suppressor genes in the etiology of cancer. 5+5
9. Explain the regulation of gene expression in prokaryotes. 10
10. Discuss the mechanism involved in cancer metastasis. 10

\*\*\*\*\*