



DPA – 520 (Biotech)

M.Sc. (Previous) Biotechnology Degree Examination, July/August 2011

Directorate of Distance Education

Paper – II : CELL AND MOLECULAR BIOLOGY

Time : 3 Hours

Max. Marks : 75/85

Instructions : 1) Answer *all* questions.

2) Illustrate *wherever* necessary.

3) Students who have attended **25 Marks IA** Scheme will have to answer for total of **75 Marks**.

4) Students who have attended **15 Marks IA** Scheme will have to answer for total of **85 Marks**.

5) Section **B** is **compulsory** for **85 Marks** Scheme.

SECTION – A

1. Write briefly on : **(4×3=12)**
 - a) Cell theory
 - b) Nonsense codon
 - c) tRNA
 - d) Peroxisome.
2. Write short notes on **any THREE** of the following : **(3×5=15)**
 - a) Structure of T4 phage
 - b) Centromere
 - c) Z-DNA
 - d) Polyadenylation.
3. Write detailed notes on **any TWO** of the following : **(2×9=18)**
 - a) Tryptophan operon
 - b) Cell cycle
 - c) Photoreactivation.

P.T.O.



4. Describe the mechanism of DNA replication. **15**

OR

Write a contemporary account on the anaphasic movement of chromosomes during cell division.

5. Explain the structure and functions of chloroplast. **15**

OR

Write an essay on genetic code.

SECTION – B
(Compulsory question for 85 marks scheme only)

Answer **any ONE** of the following :

6. Explain the process of transcription in prokaryotes. **10**

OR

Write an account on the functions of mitochondria.
