



NC-02010305

Seat No. _____

M. Pharm. (Sem. I) (CBCS) Examination

January - 2017

Fundamentals of Biotechnology

Time : 3 Hours]

[Total Marks : 80

- Instructions :**
- (1) Answer and tie up both the sections separately.
 - (2) Figure to the right indicates marks.
 - (3) Answer the three (03) questions from each section.
 - (4) Question One (01) and question Five (05) are compulsory.
 - (5) Draw neat and clean diagrams as required.

SECTION - I

- 1 Write notes on following : (any seven) **7×2=14**
- A. Cyanobacteria
 - B. Mushrooms
 - C. Central dogma
 - D. Bacterial flagella
 - E. Virus capsid
 - F. Poly A tailing
 - G. Single Nucleotide Polymorphism
 - H. In Vitro Fertilization
 - I. Genome
 - J. Proteome.
- 2 Answer the following questions :
- A. Describe in detail structure and reproduction of a Bacterial cell ? **7**
 - B. Describe methods of isolation, cultivation and maintenance of pure cultures. **6**

- 3 Answer the following questions :
- A. Write a detail note on industrially important microorganisms with examples. 7
 - B. What do you mean by Transcription? Describe the method in detail. 6

- 4 Answer the following questions :
- A. What do you mean by post transcriptional modification ? Describe in detail about RNA splicing. 7
 - B. Write a note on structure of nucleus and chromosome. 6

SECTION - II

- 5 Answer any two out of three : 7×2=14
- A. Difference between eukaryotic and prokaryotic genome.
 - B. Write a note on cytoskeleton and cell movement.
 - C. Write a note on mitochondria and cell membrane.

- 6 Answer the following questions :
- A. Describe in detail about Programmed Cell Death. 7
 - B. Explain cell cycle and mechanism of cell division in detail. 6

- 7 Answer the following questions :
- A. Write a note on genome sequencing. 7
 - B. Write a note on genome structure and its function. 6

- 8 Answer the following questions :
- A. What do you understand by Phylogenetics ? Explain with example. 7
 - B. What is secondary metabolism? Write down its applications. 6