

CBCS SCHEME

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18NT35

Third Semester B.E. Degree Examination, Aug./Sept.2020 Fundamentals of Bioscience

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Differentiate between Prokaryotic cell and Eukaryotic cell. (05 Marks)
b. Explain any 2 in detail : i) Nucleus ii) Mitochondria iii) Endoplasmic Reticulum. (10 Marks)
c. Discuss in brief the 'Cell Locomotion'. (05 Marks)

OR

- 2 a. With a neat diagram, explain plant cell and all its organelle. (10 Marks)
b. Explain any 2 in detail : i) Cell Metabolism ii) Golgi bodies iii) Lysosomes. (10 Marks)

Module-2

- 3 a. Enumerate Fluid mosaic model in detail. (10 Marks)
b. Write short notes on : i) Active transport ii) Passive transport. (10 Marks)

OR

- 4 a. Discuss the working of Na^+ / K^+ pump. (08 Marks)
b. Focus on the function of Blood brain barrier. (06 Marks)
c. Explain how Micelle's are formed with necessary diagram. (06 Marks)

Module-3

- 5 a. Analyze sex linked inheritance with suitable example. (10 Marks)
b. Explain Protein synthesis in detail. (10 Marks)

OR

- 6 a. Discuss how recombinant DNA technology works. (10 Marks)
b. Focus the working of restriction endonuclease. (10 Marks)

Module-4

- 7 a. With a neat diagram, explain in detail the antibody structure. (10 Marks)
b. Describe 'Innate immunity' and its types. (10 Marks)

OR

- 8 a. Project the process of T – cell activation. (10 Marks)
b. Discuss 'Adaptive immunity' and its types. (10 Marks)

Module-5

- 9 a. Elaborate the working and function of protein motor. (10 Marks)
b. Explain why heart is known as a biological pump. (10 Marks)

OR

- 10 a. Explain ATP syntheses and its function. (10 Marks)
b. Why kidney is said to be the filtration unit of human body? (10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.