

CBCS Scheme

USN

--	--	--	--	--	--	--	--	--	--

15BT35

Third Semester B.E. Degree Examination, Dec.2016/Jan.2017 Cell Biology and Genetics

Time: 3 hrs.

Max. Marks: 80

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

Module-1

- 1 a. Give a comparative account of prokaryotic and eukaryotic cells. (08 Marks)
b. Write an account on plasma membrane. (08 Marks)

OR

- 2 a. Describe the structure of a plant cell, with a diagram. (06 Marks)
b. Define Cytoskeleton. Explain the structure and function of any two types of cytoskeleton fibres. (10 Marks)

Module-2

- 3 a. Explain Meiosis and add a note on its significance. (10 Marks)
b. Write a short note on Endoplasmic reticulum. (06 Marks)

OR

- 4 a. Explain in detail cell locomotion. (10 Marks)
b. Write a brief note on Apoptosis and Ageing. (06 Marks)

Module-3

- 5 a. Describe the law of segregation and law of independent assortment. (10 Marks)
b. Write a note on Supplementary genes. (06 Marks)

OR

- 6 a. Write an account on identification of genetic material by Hershey and Chase method. (10 Marks)
b. Write a short note on Multiple alleles. (06 Marks)

Module-4

- 7 a. Describe the structural organization of nucleosome. (08 Marks)
b. Explain the Lamp – brush chromosome. (08 Marks)

OR

- 8 Write short notes on :
a. Gene frequency.
b. Speciation and evolution.
c. Mutation.
d. Pedigree analysis. (16 Marks)

Module-5

- 9 a. Write an account on sex – determination in animals. (10 Marks)
b. Write a brief note on Hemoglobinopathies. (06 Marks)

OR

- 10 a. Explain the non-disjunction as a proof of chromosomal theory of inheritance. (08 Marks)
b. Write short notes on : i) Linkage maps ii) Interference & Coincidence. (08 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.