



DGG-003-012207

Seat No. _____

M. Sc. (Sem. II) (CBCS) Examination

May/June – 2015

BC.CBC - 4 : Biology

(Membrane Biochemistry & Genetics)

Faculty Code : 003

Subject Code : 012207

Time : 2½ Hours]

[Total Marks : 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures on the right indicate full marks.

Q-1. Answer briefly any seven of the following questions 14

- A. Short note on G₀ phase of mitosis
- B. Short note on Organogenesis
- C. Compare Eukaryotic and prokaryotic cells
- D. Explain- microtubule array can find the center of cell
- E. What are the functions of Peroxisomes and Glyoxisomes?
- F. Describe the maturation promoting factor
- G. What is central vacuole and write down its function
- H. Explain the law of segregation
- I. Define and explain with figure: Exocytosis and Endocytosis
- J. What is crossing over? When does it occur in eukaryotes?

Q-2. Answer any two of the following questions 14

- A. Explain the microtubule organization
- B. Explain in detail rough endoplasmic reticulum and smooth endoplasmic reticulum
- C. Explain the Law of independent assortment with suitable example

Q-3. A. Explain in detail the cell cycle checkpoint 7

B. Explain the fluid mosaic model of cell membrane and membrane proteins 7

OR

C. How apoptosis pathway is regulated? 7

D. Write a note on site specific recombination 7

Q-4. Answer the following questions 14

A. Explain in detail the Meiosis

B. Detail about difference between plan and animal cells

Q-5. Answer the following questions (Any two) 14

A. Microtubule function and microtubule polymerization

B. Write a note on codominance with suitable examples

C. Write down molecular mechanism of prophase and metaphase for cell cycle

D. Discuss in detail: Epithelial and Muscle Tissue