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Class – M.Sc.-I Sem.II (Bot)

Subject – Cell Biology

Paper – Bot C-524

Time Allowed : 3 Hours

Maximum Marks : 50

**SECTION-A**

Attempt all questions. Each question carries 1 mark.

1. Write short notes on following :

- (a) Colonial forms
- (b)  $H^+$  ATPase
- (c) Refractory Period
- (d) Signal sequence
- (e) Calmodulin
- (f) Euchramatin
- (g) Pseudogenes
- (h) Peroxisomes

**SECTION-B**

Attempt any 7 questions. Each question carries 3 marks.

2. Give the structural organization & functions of Golgi bodies.
3. How proteins are targetted to nucleus?
4. What do you mean by Unique & repetitive DNA?
5. Write short note on electrical properties of membrane.
6. Briefly describe the phenomenon of bacterial chemotaxis

7. Give a brief account of bacterial two component signaling system.
8. Write brief note on: (a) Ara operon  
(b) Interrupted genes
9. Discuss in brief about active & passive mode of transport across membrane.
10. Explain briefly about mitochondria.
11. Discuss in brief about various unicellular, colonial & multicellular forms present in plant world.

### SECTION-C

**Attempt any 3 questions. Each question carries 7 marks.**

12. Give a detailed account of bacterial quorum sensing in gram +ve & gram -ve bacteria.
13. Explain in detail the role of cyclins & cyclin dependent kinases in regulation of different stages of cell cycle.
14. Discuss the mechanism of intracellular transport in detail.
15. Explain the structure & function of cytoskeleton.
16. Discuss the levels of organization of tissues, organs and organ system in plants.

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