

31/5/24



School of Biological Sciences
Doon University
Dehradun, Uttarakhand
Question Paper: End-Semester Examination
Session: Jan – Jun 2024

B.Sc. Biological Sciences (Fourth Semester)

Course: Cell Biology-II

Course Code: BSC252

Total Marks: 30

Maximum Time: 2:00 Hrs

PART I Give answers to any six questions:

(Marks: $1 \times 6 = 6$)

1. What are the characteristics of LASER light?
2. Define hydrophobic signaling with example.
3. What is the principle of flow cytometry?
4. Give two examples of RTKs mediated cell signaling.
5. Why do we use immersion oil for higher magnification in light microscopy?
6. Draw a flowchart diagram for G-protein regulation.
7. Name two Oncogenes.

PART II Give answers to any four questions:

(Marks: $3 \times 4 = 12$)

8. Write a short note on the regulation of cell cycle.
9. How do bacteriophages help in cleaning the Ganga river water?
10. What is cancer? Explain the various factors that cause cancer.
11. Explain the instrumentation and working of Fluorescence microscope with diagram.
12. Differentiate between Scanning Electron Microscope (SEM) and Transmission Electron Microscope (TEM)

PART III Give answers to any two questions:

(Marks: $6 \times 2 = 12$)

13. Explain GPCR mediated cell signaling with well labeled diagram.
14. Elaborate the different phases of mitotic cell division in plants.
15. Explain the instrumentation and working of Fluorescence-activated cell sorting (FACS) with diagram.

