

**MASTER OF SCIENCE (BIOINFORMATICS) (CBCS-2019 COURSE)**  
**M. Sc. (Bioinformatics) Sem-I : WINTER :- 2021**  
**SUBJECT: CELL BIOLOGY**

**Day : Tuesday**  
**Date 25-01-2022**

**W-21147-2021**

**Time : 10:00 AM-11:30 AM**  
**Max. Marks: 30**

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Draw neat and well labelled diagrams **WHEREVER** necessary.
- 3) Write answers to both the sections in the **SAME** answer book.

**SECTION-I**

**Q.1** Attempt **ANY FIVE** of the following **(05)**

- a) Name any two organelles of plant cell
- b) What is antiport?
- c) Write any two functions of thrombocytes
- d) Define active transport
- e) Define exocytosis
- f) What is difference between desmosomes of hemidesmosomes?
- g) Define phagocytosis

**Q.2** Attempt **ANY TWO** of the following: **(10)**

- a) Describe the structure of Fluid mosaic model and explain how it differs from previous models.
- b) Describe the structure and functions of microtubule
- c) Describe in brief structure and functions of mitochondria.

**SECTION-II**

**Q.3** Attempt **ANY FIVE** of the following: **(05)**

- a) What is role of plasma in blood?
- b) Which cells are responsible for blood clotting?
- c) Elaborate the term- Cdk
- d) Enlist two secondary messengers
- e) Define 'Oogenesis'
- f) Define 'Cell ageing'
- g) Enlist cytoskeletal elements

**Q.4** Attempt **ANY TWO** of the following: **(10)**

- a) Explain difference between spermatogenesis and oogenesis
- b) Define apoptosis. Explain morphological changes occurring in apoptic cell
- c) Describe in brief cell signaling molecules

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