



BRAINWARE UNIVERSITY

Term End Examination 2023-2024

Programme – B.Tech.(CSE)-AIML-2022/B.Tech.(CSE)-DS-2022/B.Tech.(RA)-2022/B.Tech.
(CSE)-AIML-2023/B.Tech.(CSE)-DS-2023/B.Tech.(RA)-2023/B.Tech.(CSE)-2023

Course Name – Biology for Engineers

Course Code - BSCM203/BSCD203/BSCR203/BSCG203
(Semester II)

Full Marks : 30

Time : 1:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 5=5

1. Choose the correct alternative from the following :

- (i) Which of the following statements is true about chromosomes?
- a) It is present within the nucleus
 - b) It carries genes and helps in inheritance
 - c) It is composed of DNA in the form of Chromatin and protein
 - d) all of these
- (ii) Carbohydrates are also known as_____
- a) Hydrates of carbon
 - b) Carbonates
 - c) Glycolipids
 - d) Polysaccharides
- (iii) The full form of ATP is
- a) Adenosine tetraphosphate
 - b) Adenine Triphosphate
 - c) Adenosine triphosphate
 - d) Tetraphosphate
- (iv) Example of bioinformatics databases are
- a) Ensembl
 - b) GenBank
 - c) PubMed
 - d) All of these
- (v) Example of primary databases are
- a) GenBank
 - b) Trace Archive
 - c) Sequence Read Archive
 - d) All of these

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Explain how biosensors are used in clinical diagnostics for rapid and accurate disease detection. (3)
3. Define nucleotides with examples. (3)
4. Describe the role of hormones in coordinating physiological processes in plants. (3)

5. Explain how gap junctions facilitate cell-cell communication. (3)
6. Explain any three unique properties of water (3)

OR

Write the function of two macronutrients in plants (3)

Group-C

(Long Answer Type Questions)

5 x 2=10

7. Explain the difference between innate and adaptive immunity. (5)
8. Explain the principle and instrumentation of Piezoelectric biosensors. (5)

OR

Explain the principle and instrumentation of Electrochemical biosensors. (5)
