

B A, BSC, BCOM DEGREE END SEMESTER EXAMINATION – MARCH 2026**UGP (HONS.) SEMESTER – 4: – DISCIPLINE SPECIFIC COURSE****COURSE: 24UZOODSC206: BIOLOGICAL CHEMISTRY***(For Regular 2024 Admission)*

Time: 1.5 Hours

Max. Marks: 50

PART A***One Word / One Sentence Questions***

1. Which RNA carries amino acids to the ribosome? (CO3)
2. A buildup of which steroid lipid in arterial walls is linked to cardiovascular disease? (CO3)
3. Arthropod exoskeletons are primarily composed of which structural polysaccharide? (CO1)
4. Highly reactive molecules that possess unpaired electrons and damage cells are called what? (CO2)
5. The conversion of fats into soap and glycerol occurs through which chemical reaction? (CO3)
6. Identify the term used for the cyclic representation of sugars. (CO1)
7. Name the site of the enzyme to which the substrate binds. (CO2)
8. The inactive form of an enzyme is called as... (CO2)
9. What is the end product of beta oxidation? (CO4)
10. Give an example of isoenzyme. (CO2)
11. An enzyme inhibition in which an inhibitor resembles substrate. (CO2)
12. Decarboxylation of amino acids lead to the formation of (CO4)

(1 × 10 = 10)**PART B*****Answer any five questions***

13. Define saponification and identify the products formed in this reaction. (CO3)
14. Compare and contrast essential and non-essential amino acids. (CO3)
15. Differentiate enantiomers and epimers. (CO3)
16. Describe feedback inhibition in enzymes. (CO2)
17. Brief on carnitine shuttle. (CO4)
18. Why is the Krebs cycle also called the TCA cycle? (CO4)
19. Briefly explain the effect of temperature on the action of enzymes. (CO2)

(3 × 5 = 15)

PART C

Answer any three questions

20. Describe the physiological functions of phospholipids and sphingolipids. (CO3)
21. Explain the structural differences between DNA A, B and Z forms. (CO3)
22. Briefly explain the ETC and its significance. (CO4)
23. Illustrate the mechanism of enzyme action with the help of two models. (CO2)
- (5 x 3 = 15)**

PART D

Answer any one question

24. Summarize the biological functions of the four levels of protein organization using specific examples. (CO3)
25. Explain the process of glycolysis with the help of a flow chart. Also add a brief note on the fate of pyruvate in aerobic and anaerobic conditions. (CO4)
- (10 x 1 = 10)**