



**2023/TDC (CBCS)/EVEN/SEM/
ZOOHCC-403T/259**

TDC (CBCS) Even Semester Exam., 2023

ZOOLOGY

(Honours)

(4th Semester)

Course No. : ZOOHCC-403T

(Biochemistry of Metabolic Process)

Full Marks : 50

Pass Marks : 20

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

SECTION—A

Answer any ten of the following questions : $2 \times 10 = 20$

- 1. What is anabolism? Give example.**
- 2. Mention the difference between catabolism and anabolism.**



<http://www.elearninginfo.in>

(2)

3. What is coupled reaction?
4. Write a short note on gluconeogenesis.
5. Mention the biological importance of glycolysis.
6. What is pentose phosphate pathway?
7. What is ketogenesis?
8. Write the significance of β -oxidation of fatty acid.
9. Mention the enzymes that are involved in the formation of ketone bodies.
10. What is transamination?
11. What is deamination?
12. Write a short note on urea cycle.
13. What is a redox reaction?
14. What are uncouplers?
15. Write a note on ATP-synthase.

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(Continued)

(3)

SECTION—B

Answer any *five* of the following questions : 6×5=30

16. Mention the steps of catabolism. Add a note on the intermediary metabolism.
17. What are shuttle systems? Write the types of shuttle system present in mitochondrial membrane.
18. Describe the process of glycolysis with suitable illustration.
19. Discuss the pentose phosphate pathway of carbohydrate metabolism and its significance.
20. Describe the process of β -oxidation of palmitic acid with proper illustration.
21. Describe the process of ketogenesis.
22. Describe the metabolic fate of C-skeleton of amino acids converted to pyruvate.
23. Describe the mechanism of removal of amino group from amino acid through transamination.

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(Turn Over)



24. Describe the mechanism of oxidative phosphorylation with suitable illustration.
25. Write about inhibitors and uncouplers of electron transport system.
