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B.Sc./2nd Sem (H)/NUT/24(CBCS)

2024

2nd Semester Examination

NUTRITION (Honours)

Paper : C 3-T

(Nutritional Biophysics and Biochemistry)

[CBCS]

Full Marks : 40

Time : Two Hours

*The figures in the margin indicate full marks.
Candidates are required to give their answers
in their own words as far as practicable.*

Group - A

Answer any **five** questions from the following :

2×5=10

1. Write down any rate limiting step of glycolysis.
2. How much energy is produced after completion of one cycle of TCA?
3. Differentiate glycemic index and glycemic load.
4. Differentiate hypernatremia and hyperkalemia.
5. What is reverse osmosis?

P.T.O.

(2)

6. What do you mean by acid number?
7. Write down two applications of surface tension in food chemistry.
8. Write down the name of start and stop codon.

Group - B

Answer any **four** questions from the following :

5×4=20

9. Write the types and functions of lipoprotein. Define colloid. 4+1
10. Write down the conversion from pyruvic acid to oxalic acid (mention the name of enzymes and cofactors). 5
11. What do you mean by genetic code? What are meant by salting in and salting out? What is carnitine shuttle? 2+1+2
12. Write down the difference between glycogenesis and glycogenolysis. Write down the difference between acids and bases. What is non-essential amino acid? 2+2+1
13. Derive M-M equation. Explain the term K_m . 4+1
14. Write down the transcription procedure of eukaryotes. 5

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Group - C

Answer any **one** question from the following :

10×1=10

15. Write down the steps required to oxidize one molecule of linoleic acid. Write down the synthesis and utilization of ketone bodies. 5+5
16. Write down the irreversible steps of glycolysis. What is electron transport chain? Explain it with energy production. 5+5
