

2018

2nd Semester

NUTRITION

PAPER—C3T

(Honours)

Full Marks : 40

Time : 2 Hours

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Group-A

1. Answer any *five* questions of the following : 5×2
- (a) What is the difference between adsorption and absorption?
- (b) Differentiate between leading and lagging strands with diagram.

- (c) State the sources and fate of pyruvate.
- (d) Explain with example the term coenzyme and isozyme.
- (e) What is glycemic index?
- (f) What is the difference between active transport and facilitated transport?
- (g) What is enthalpy? Cite the relation between enthalpy and entropy of a system.
- (h) Define buffer with one example.

Group-B

Answer any *four* questions of the following. 4×5

2. Define viscosity. State the factors controlling viscosity of a fluid. What is colloid? 1+3+1
3. What do you understand by enzyme specificity? Derive the Michaelis-Menten equation. 1+4
4. Write the steps of glycolysis. What is the rate-limiting step of this process? Ammonia is toxic to animals — why? 3+1+1

5. Why is replication of DNA semiconservative? Prove the semi-conservative nature of DNA replication with the help of a suitable experiment. What is translation?

1+3+1

6. State the first and second laws of thermodynamics. Discuss the application of these laws in the biological system.

2+3

7. Describe the reaction sequences of urea cycle. Write the physiological importance of β -oxidation of fatty acids. What do you mean by Ketosis?

3+1+1

Group-C

Answer any *one* question of the following. 1×10

8. (a) Discuss the physiological importance of colloids.
(b) Define and classify enzyme inhibition with suitable example.
(c) Discuss the molecular, kinetic approach of diffusion in the light of Fick's law.
(d) Briefly write the biophysical nature of surface tension.

3+(1+2)+3+1

9. (a) Classify and state the functions of lipoprotein.
- (b) What do you understand by genetic code?
- (c) Illustrate the elementary knowledge of protein biosynthesis.
- (d) What is fatty liver? (1+2)+1+4+2
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