



Avinashilingam Institute for Home Science and Higher Education for Women
(Deemed to be University under Category 'A' by MHRD, Estd. u/s 3 of UGC Act 1956)
Re-accredited with A⁺⁺ Grade by NAAC. Recognised by UGC Under Section 12B
Coimbatore - 641 043, Tamil Nadu, India
Continuous Internal Assessment – I February, 2025
II Semester

Class: I PG
Major: Zoology

Time : 2 Hrs
Maximum Marks: 60

23MZOC07 BIOCHEMISTRY

Course Outcomes:

1. Impart knowledge on the biochemical concepts of bioenergetics
2. Gain perception on the basic structure and functions of biomolecules
3. Ability to grasp insight on metabolic pathway and able to relate with well being
4. Understand fundamental concepts on enzymes and their importance in biological reactions
5. Acquire information on the principles and practical experience of a wide range of biochemical techniques.

Part A

6x1=6

Choose the correct answers

1. Gibbs free energy is positive at a given temperature for which reaction?
(a) Endergonic (b) Exergonic (c) Redox (d) Enthalpy CO1K2
2. Phosphorylation of which energy molecule yields ATP?
(a) AMP (b) ADP (c) NAD (d) UTP CO2 K1
3. Storage polysaccharide of plant is
(a) glycogen (b) starch (c) cellulose (d) inulin CO3 K2
4. The enzymes of HMP shunt are present in
(a) cytosol (b) mitochondrial matrix (c) ribosomes (d) endoplasmic reticulum CO2 K1
5. Which one among the following is an imino acid?
(a) Proline (b) Valine (c) Glycine (d) Cysteine CO3 K2
6. Which of the following essential amino acids is not synthesized by the body?
(a) Arginine (b) Glutamine (c) Histidine (d) Cysteine CO3 K2

Part- B

3x6=18

Answer all the questions

Each answer should not exceed 400 words or two pages

- 7 a. Compare and contrast on enthalpy and entropy CO1 K1
OR
- 7 b. Give an account on mitochondrial transport systems CO1 K1
- 8 a. Explain the structure of monosaccharides CO2 K1
OR
- 8 b. Outline the classification of lipids CO2 K1
- 9 a. Explain the properties of amino acids CO3 K1
OR
- 9 b. Give an account on urea cycle CO3 K1

Part C

Answer ALL questions

(3x12 = 36 Marks)

(Each answer should not exceed 800 words or four pages)

- 10 a. Express the components and structural organization of electron transport chain CO1 K1
OR
- 10 b. Recapitulate in detail the laws of thermodynamics CO1 K1
- 11 a. Elaborate on the glycolysis cycle and calculate its energetics CO2 K1
OR
- 11 b. Illustrate the steps involved in biosynthesis of fatty acids CO2 K2
- 12 a. Discuss in detail the classification of amino acids CO3 K1
OR
- 12 b. Report on the inborn errors of metabolism CO3 K1

No. of Copies : 7

Name of the staff: Dr. M. Poonkothai