



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

Bachelor's Degree Examination –August 2020

VI Semester

Class : III UG

Major : Botany

Time : 2 Hours

Max. Marks : 50

15BBOC21 Plant Biochemistry

Part A

10 x 1 = 10

Choose the Correct Answer

- Peptide bond is a
 - Covalent bond
 - Ionic bond
 - Metallic bond
 - Hydrogen bond
- Which of the following pairs are isotopes?
 - Oxygen and Ozone
 - Ice and steam
 - Nitric oxide and nitrogen dioxide
 - Hydrogen and Deuterium
- Multiple forms of enzymes with the same catalytic activity but with different structures are called
 - Prosthetic group
 - Apoenzymes
 - Isoenzymes
 - Holoenzymes
- Enzymes act by
 - Increasing the free energy of the system
 - Lowering the activation energy for a reaction
 - Increasing the activation energy for a reaction
 - Decreasing the free energy of the system
- Which of the following macro-molecule can be most structurally diverse among living world?
 - Carbohydrates
 - Proteins
 - Nucleic acid
 - Lipids
- General chemical formula of carbohydrate is
 - $(CH_2O)_n$
 - $(CH_2O)_{2n}$
 - $(CHO)_n$
 - $C_nH_{2n}O$
- Which of the following peptides is not synthesized on ribosomes?
 - Cyclosporin
 - Somatotropin
 - Oxytocin
 - Vasopressin
- The most probable amino acid occurring at bends and turns of a polypeptide chain is
 - proline
 - glycine
 - glutamic acid
 - galin
- All are plant derived alkaloids except
 - Quinine
 - Nicotine
 - Menthol
 - Codeine
- Which of the following is not the class of secondary metabolite?
 - Terpenes
 - Amino acids
 - Phenolics
 - Alkaloids

Part B

3 x 6 = 18

Answer any Three questions

Each answer should not exceed 400 words or two pages

11. What are acids and bases?
12. Differentiate solution and colloids.
13. Briefly write about classification of enzymes.
14. Comment on Isozymes.
15. Write the structure of starch, cellulose and phospholipid.
16. Comment on fat deficiencies.
17. What are essential and non – essential amino acids?
18. Differentiate simple and conjugate proteins.
19. Write brief account on types of alkaloids.
20. Comment on secondary metabolites.

Part C

2 x 11 = 22

Answer any Two questions

Each answer should not exceed 800 words or four pages

21. Describe in detail the various types of bonds found in biological system.
22. Give an account on Isotopes and Isomerism.
23. Explain the Lock and Key model of enzyme action.
24. Give an account on Coenzymes and their action.
25. Explain in detail the classification of carbohydrates.
26. Explain the β -oxidation of fatty acids.
- 27 Give an account on the classification of amino acids.
28. Describe in detail the structure of proteins.
29. Describe the biosynthesis of alkaloids.
30. Give an account on flavonoids.
