



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 –November 2019
III Semester

Class : II UG

Time: 3 hours

Major : Chemistry/Food Science and Nutrition

Max. Marks :100

18BCHI04- DSE-III Biochemistry Theory
18BFNI04-DSE-Chemistry and Metabolism of Biomolecules Theory

Part A

Choose the correct answer

10 x 1 = 10

- Which of the following are major sites for glycogen storage?
a) Adipose tissue b) Bones c) Muscles d) Kidney and Liver
- Glycolysis occurs at ____
a) Cytosol b) Mitochondria c) ER d) Ribosomes
- ____ transports cholesterol from liver to tissue.
a) LDS b) HDL c) VLDL d) LDH
- Plant sterol is ____
a) Cholesterol b) ergosterol c) lactosterol d) manosterol
- Globular and fibrous proteins are classified based on ____
a) Shape b) molecular weight c) density d) molarity
- ____ amino acid contains indole ring.
a) Alanine b) Tyrosine c) Tryptophan d) Serine
- ____ contains an imidazole ring
a) Leucine b) pyrimidine c) ergosterol d) Purines
- Purines and pyrimidines are made up of ____ rings.
a) Heterocyclic b) dimer c) hexagonal d) polysomal
- Enzyme mediated transfer of one molecule to another are ____
a) Transferase b) oxidase c) lipase d) peptidase
- Enzyme which is not a protein _____.
a) DNase b) Abzyme c) EcoR1 d) Ribozyme

Part B

5 x 6 = 30

Answer ALL questions

Each answer should not exceed 400 words or two pages

- 11.a. Give the classification of carbohydrates
(or)
- 11.b. Explain the pathway of Glycolysis
- 12.a. Differentiate saturated and unsaturated fatty acids.
(or)
- 12.b. What are essential fatty acids and Mention their functions?
- 13.a. Sketch 3 Sulfur containing amino acids.
(or)
- 13.b. Outline the Classification of proteins.
- 14.a. Validate the difference between purines and pyrimidine nucleotides.
(or)
- 14.b. Trace the functions of pyrimidines.
- 15.a. Summarize the clinical significance of ALT and AST.
(or)
- 15.b. Assess the influence of substrate concentration in enzyme activity.

Part C

5 x 12 = 60

Answer ALL questions

Each answer should not exceed 800 words or four pages

- 16.a. Explain about the reactions of TCA cycle.
(or)
- 16.b. Report the structure and functions of polysaccharides.
- 17.a. Interpret beta oxidation of fatty acids
(or)
- 17.b. Express the functions of sterols with structure and occurrence.
- 18.a. Summarize the characteristics of amino acids.
(or)
- 18.b. Explain the classification of immunoglobulins.
- 19.a. Describe the function of DNA with structure
(or)
- 19.b. Discuss the metabolism of pyrimidines
- 20.a. Enumerate the classification of enzymes.
(or)
- 20.b. Report on effect of temperature and pH on enzyme action
