

**Avinashilingam Institute for Home Science and Higher Education for Women
(Deemed to be University) Coimbatore-641043.**

**Master's Degree Examination- November 2018
III Semester**

**Class : II PG
Major : Food Science and Nutrition**

**Time: 3 hours
Max. Marks: 60**

17MFNC15 Biomolecules and Intermediary Metabolism

Part A

10 x 1/2 = 5

Choose the correct answer

- Glycerol enters glycolysis via
 - Glucose 6 phosphate
 - Fructose 6 phosphate
 - dihydroxy acetone phosphate
 - Pyruvate
- An example of reducing disaccharide is
 - Maltose
 - Isomaltose
 - Lactose
 - Sucrose
- In PUFA, double bonds generally occur after every ----- carbon atom
 - Two
 - Three
 - four
 - six
- The following cannot use ketone bodies as a source of energy
 - liver
 - kidney
 - muscles
 - brain
- The following can result in protein denaturation
 - heat
 - UV rays
 - urea
 - All the above
- is an essential amino acid
 - alanine
 - Tyrosine
 - histidine
 - Leucine
- The first purine nucleotide synthesised denovo is -----
 - AMP
 - GMP
 - IMP
 - None of the above
- Increased uric acid synthesis occurs in the following except
 - ADA deficiency
 - HPRTase deficiency
 - increased activity of PRPP Synthetase
 - Glucose 6 phosphate deficiency
- K_m is ----- enzyme concentration
 - directly proportional to
 - inversely proportional to
 - half of
 - independent of
- In myocardial infraction, the marker to rise earliest in serum is -----
 - CPK-MM
 - LDH-1
 - CPK-MB
 - ALT

Part B

5 x 4 = 20.

Answer ALL questions

Each answer should not exceed 200 words or one page

- 11.a. Give the structure of Heparin and hyaluronic acid
(Or)
- 11.b. Write the biological importance of HMP shunt
- 12.a. Explain the structure of gangliosides and give its importance
(Or)
- 12.b. Write short notes on rancidity of fats
- 13.a. Explain the structure of Hemoglobin
(Or)
- 13.b. What is denaturation? Give the characteristics of a denatured protein
- 14.a. Give the difference between RNA and DNA
(Or)
- 14.b. Illustrate the structure of tRNA
- 15.a. Write the IUB classification of enzyme
(Or)
- 15.b. Bring the role of SGOT and SGPT

Part C

5 x 7 = 35

Answer ALL questions

Each answer should not exceed 600 words or three pages

- 16.a. Discuss about the energy production in glycolysis and Citric acid cycle
(Or)
- 16.b. Explain the uronic acid pathway
- 17.a. Illustrate the biosynthesis of triacyl glycerol
(Or)
- 17.b. Explain biosynthesis of palmitic acid
- 18.a. Discuss how tyrosine is metabolized and mention the biologically important compounds formed from it
(Or)
- 18.b. Elaborate on urea formation
- 19.a. Write about the degradation of purine nucleotides
(Or)
- 19.b. Explain the De Novo synthesis of pyrimidine nucleotides
- 20.a. Describe the factors affecting enzyme action
(Or)
- 20.b. Discuss about competitive, non-competitive and uncompetitive inhibition