

**Avinashilingam Institute for Home Science and Higher Education for Women
Coimbatore – 641 043**

**Master's Degree Examination – November 2017
III Semester**

Class : II PG
Major : Food Science and Nutrition

Time: 3 hours
Max. Marks: 60

12MFNC15 Biomolecules and Intermediary Metabolism

Part A

10 x 1/2 = 5

Choose the correct answer

- Which of the following is not a reducing sugar?
a. Glucose b. Sucrose c. Maltose d. Lactose
- Aldose sugar is converted to ketose sugar by
a. Oxidoreductase b. Decarboxylase c. Aldolase d. Isomerase
- Ceramide contains this sugar.
a. Ribose b. Fructose c. Galactose d. Sucrose
- Triglyceride synthesis is increased by
a. Growth hormone b. Glucagon c. Cortisol d. Insulin
- Oxidative deamination occurs in
a. Cytoplasm of all cells b. Mitochondria of all cells
c. Cytoplasm of hepatocytes d. Mitochondria of hepatocytes
- Amino acid producing ammonia in kidneys is
a. Glutamine b. Alanine c. Methionine d. Glycine
- The base not present in DNA is
a. Adenine b. Guanine c. Uracil d. Thymine
- A nucleotide is composed of
a. Nitrogenous base and pentose monosaccharide
b. Nitrogenous base, pentose monosaccharide and a phosphate group
c. Nitrogenous base and a phosphate group d. Nitrogenous base and a sulphate group
- Coenzymes are ----- organic compounds.
a. Lipoprotein b. Proteinaceous c. Nonproteinaceous d. None of the above.
- Substances that inhibit enzyme by other than binding to active site is
a. Competitive inhibitor b. Non competitive inhibitor
c. Reversible inhibitor d. None of the above.

Part B

5 x 4 = 20

Answer ALL questions

Each answer should not exceed 200 words or one page

11.a. Write on gluconeogenesis.

(Or)

11.b. Explain HMP shunt.

12.a. Classify lipids.

(Or)

12.b. Write on phospholipids.

13.a. Explain the primary structure of proteins.

(Or)

13.b. Classify proteins.

14.a. Explain the structure of DNA.

(Or)

14.b. Differentiate between DNA and RNA.

15.a. Explain isoenzymes?

(Or)

15.b. What are coenzymes. Explain.

Part C

5 x 7 = 35

Answer ALL questions

Each answer should not exceed 600 words or three pages

16.a. Explain TCA cycle.

(Or)

16.b. Explain Electron transport chain.

17.a. Explain the process of beta oxidation.

(Or)

17.b. Explain the synthesis of palmitic acid.

18.a. Write on transamination.

(Or)

18.b. Discuss urea cycle.

19.a. Describe various types of RNA and their functions.

(Or)

19.b. Explain the biosynthesis and breakdown of pyrimidine nucleotides.

20.a. Classify enzymes with examples.

(Or)

20.b. Explain the factors affecting enzyme activity.
