



MAU-003-038103

Seat No. _____

**B. Voc. (Medical Laboratory & Molecular
Diagnostic Technology) (Sem. I) (CBCS) Examination**

October / November – 2016

**MLMDT - 1.3 : Basics of Biochemistry,
Instruments & Reagents**

Faculty Code : 003

Subject Code : 038103

Time : 2½ Hours]

[Total Marks : 70

- Instructions :** (1) All questions are compulsory.
(2) Figures on right indicate marks.

1 Answer the following : **20**

- (1) Write any one example of aldo and keto sugar.
- (2) The general formula of monosaccharide is _____.
- (3) Carbohydrates are Polyhydroxy aldehydes and ketones.
True / False ?
- (4) _____ bond is found in protein.
- (5) Give two examples of negatively charged amino acids.
- (6) Hemoglobin is an example of chromoprotein. True / False ?
- (7) Write two examples of unsaturated fatty acids.
- (8) Write the short hand form of palmitic acid.
- (9) Chylomicrons is an example of lipoprotein. True/ False ?
- (10) Give two examples of non reducing sugar.
- (11) To grow bacteria at optimum temperature _____
instrument is used.
- (12) Define molarity.
- (13) Give example of steroid lipid.
- (14) Define pH.
- (15) Molar equivalence between purines and pyrimidines in
DNA was given by _____.

- (16) Bond between two adjacent nucleotides in DNA molecule is _____.
- (17) The most abundant form of RNA in cell is _____.
- (18) What are isoenzymes?
- (19) Give two names of enzymes.
- (20) Write two equipments helpful in sterilization

2 (a) Answer in brief : (any 3) **3×2=6**

- (1) Write difference between homopolysaccharide and heteropolysaccharide.
- (2) What are Polar amino acids? Give examples.
- (3) Give two common names of saturated fatty acids
- (4) Define enzyme. What do you mean by catalytic site of an enzyme ?
- (5) How will you make one molar solution of any compound?
- (6) Write principle of colorimeter.

(b) Answer in brief : (any 3) **3×3=9**

- (1) State the functions of carbohydrates.
- (2) What is α -helix structure of protein?
- (3) Write the comparison of different DNA.
- (4) What are allosteric enzymes ?
- (5) Write a note on triglyceride.
- (6) Write difference between autoclave and hot air oven.

(c) Answer in detail : (any 2) **2×5=10**

- (1) Describe Watson and Crick model of DNA.
- (2) Discuss transamination reactions.
- (3) Discuss beta oxidation of fatty acid.
- (4) Describe microscope.
- (5) Discuss enzyme classification.

- 3** (a) Answer in brief : (any 3) **3×2=6**
- (1) Define reducing sugars with examples.
 - (2) Draw the structures of two positively charged amino acids.
 - (3) Enlist the different types of RNA.
 - (4) Write the functions of lipids.
 - (5) Explain Isoelectric pH and Zwitterion
 - (6) Enlist different types of microscopes.
- (b) Answer in brief : (any 3) **3×3=9**
- (1) Draw the structure of t-RNA.
 - (2) Write a brief note on ribozyme.
 - (3) Define : Cofactor, Coenzyme, prosthetic group.
 - (4) What is the working principle of pH meter ?
 - (5) Write the structure and importance of cholesterol molecule.
 - (6) Write the functions of nucleic acids.
- (c) Answer in detail : (any 2) **2×5=10**
- (1) Write a note on enzyme inhibition.
 - (2) Explain urea cycle.
 - (3) Write a note on flame photometer.
 - (4) Discuss phospholipids
 - (5) Briefly explain classification of carbohydrates with any example.
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