



MBL-003-001214

Seat No. _____

B. Sc. (Sem. II) (CBCS) Examination

March / April - 2018

BC-201 : Biomolecules

(Old Course)

Faculty Code : 003

Subject Code : 001214

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

- Instructions :** (1) Numbers written on right indicate marks.
(2) Please write answers in correct order.
(3) Draw diagrams wherever necessary.

SECTION - I

1 Objective type questions : **20**

- (1) Define Isomers
- (2) In lactose, the linkage is _____.
- (3) Examples of Epimers.
- (4) The only carbohydrates which is not having any chiral carbon atom is _____
- (5) Give example of essential fatty acid.
- (6) Specific gravity of lipid is _____
- (7) Rancidity of lipids of lipid rich food stuff is due to _____
- (8) The most common type of secondary protein structure is _____?
- (9) Myoglobin is globular protein. True/False
- (10) Give example of acidic amino acid.
- (11) The repeating units of proteins are _____
- (12) Adjacent nucleotides are joined by _____

- (13) The sugar in RNA is _____ , the sugar in DNA is _____
- (14) RNA is synthesized from DNA by process of.
- (15) Arrangement of nucleotides in DNA can be seen by_____
- (16) Vitamin A is also called _____
- (17) Vitamin Niacin deficiency caused pellagra. True/False.
- (18) Define porphyrin.
- (19) Bile does not contain enzyme. True/False
- (20) Fat storing cells of vertebrates are called _____

SECTION - II

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|----------|---|----------|
| 2 | <p>(a) Answer in short : (any 3 from 6)</p> <ol style="list-style-type: none"> (1) What is reducing sugar? Give its example. (2) What is biological importance of monosaccharide. (3) Explain properties of phospholipid. (4) Explain nomenclature of triacylglycerols. (5) Write physical properties of aminoacid. (6) What is optical isomer? | 6 |
| 2 | <p>(b) Answer the following : (Any 3 from 6)</p> <ol style="list-style-type: none"> (1) Explain in detail oligosaccharides. (2) Discuss mutarotation with example. (3) Write a brief note on functions of fibrous protein. (4) Write a brief note on types of RNA. (5) Explain: Detection of porphyrinspectro-photometrically. (6) Write in detail about physical and chemical properties of triacylglycerol. | 9 |

(c) Answer the following : (Any 2 from 5) **10**

- (1) Write a note on structural classification of amino acids.
- (2) Explain: Properties and function of steroid.
- (3) Describe about reactions of sugar due to aldehyde and keto group.
- (4) Prove DNA as a genetic material.
- (5) Explain: Classification of porphyrin.

3 (a) Answer the following : (any 3 from 6) **6**

- (1) What is denaturation and renaturation?
- (2) How porphyrin is detected by fluorescence.?
- (3) What is physiological significance of bile pigment?
- (4) Draw well labelled diagram of DNA double helical structure.
- (5) Define: Salting in and salting out
- (6) What is essential amino acid? Give its example.

(b) Answer the following : (any 3 from 6) **9**

- (1) Explain: Secondary structure of protein.
- (2) Write a brief note on glycerophospholipid.
- (3) Describe central dogma of molecular biology.
- (4) Explain: Tertiary structure of protein.
- (5) Write a short note on importance of metalloporphyrin.
- (6) What is nucleic acid? Describe double helical structure of DNA.

(c) Answer the following : (any 2 from 5)

10

- (1) Explain in detail polysaccharide.
- (2) Write a short note on deficiency symptoms of different vitamins.
- (3) Describe basic structure of nucleic acid.
- (4) Explain: Classification of lipid.
- (5) Write a note on Edman degradation method for protein sequencing.
