



NCD-003-014201 Seat No. _____

M. Sc. (BOTANY) (Sem. II) (CBCS) Examination

April / May - 2017

BOT/ZOO/MICRO-207 : Biochemistry

(New Course)

Faculty Code : 003

Subject Code : 014201

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

[Total Marks : 70

Instruction : All questions are compulsory and carry equal marks.

1 Answer any **seven** of the followings : **14**

- (a) Name different types of monosaccharides.
- (b) What are glycans? Describe with suitable examples.
- (c) What is the difference between homo and hetero polysaccharides? Describe with suitable examples.
- (d) What is the difference between cellulose and chitin?
- (e) What is the difference between starch and glycogen?
- (f) What are aliphatic aminoacids? Give examples.
- (g) What is peptide bond?
- (h) What is holoenzyme?
- (i) What is Michaelis-Menten theory?
- (j) What is Fischer's theory? What is Koshland's induced fit theory?

2 Answer any **two** of the following : **14**

- (a) Describe beta -oxidation of fatty acids with odd number of carbon atoms.
- (b) What are triacylglycerols ? Add a note on their properties.
- (c) What are chemical properties of monosaccharides?

- 3** Answer the following : **14**
- (a) Give the outline of Pentose Phosphate pathway and state its importance.
 - (b) Discuss the importance and regulation of Citric acid cycle.

OR

- 3** Explain the following : **14**
- (a) Explain α -helix structure in detail.
 - (b) What is tertiary structure of protein? Explain in detail.
- 4** Answer the followings : **14**
- (a) Discuss briefly the International classification of enzymes with suitable examples.
 - (b) Write a note on enzyme specificity and add a note on factors affecting enzyme activity.
- 5** Write notes on any two: **14**
- (a) ED pathway
 - (b) Glyoxylate cycle.
 - (c) Significance of TCA cycle
 - (d) Homotropic Effects.
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