

Seat No. : _____

MD-115

March-2019

B.Sc., Sem.-III

CC-201 : Microbiology

Time : 2:30 Hours]

[Max. Marks : 70

- Instructions :** (1) Mention correct question number.
(2) Draw figure wherever necessary.

1. (A) Describe in details properties, classification and use of carbohydrates. **14**

OR

- (i) Describe the classification and use of proteins. **7**
(ii) Discuss the biological significance of DNA and RNA. **7**

(B) Answer the following in short : (any 4) **4**

- (1) Give two examples of amino acids.
(2) Enlist two biological functions of lipids.
(3) Give two examples of disaccharides.
(4) What is saponification ?
(5) Give full form of DNA and RNA.
(6) Draw the structure of monosaccharide.

2. (A) Describe the general characters of enzymes and explain the inhibition of enzyme activity. **14**

OR

- (i) Explain the mechanism of enzyme action. **7**
(ii) Discuss the factors affecting enzyme activity. **7**

(B) Answer the following in short : (any 4) **4**

- (1) What are enzymes ?
(2) Give two examples of enzymes.
(3) What is active site ?
(4) What is allosteric site ?
(5) Name the method used for nomenclature of enzymes.
(6) What is the difference between intracellular and extracellular enzymes ?

3. (A) Describe in details the modes of nutritional uptake in microorganisms. **14**
- OR**
- (i) Classify and characterize the bacteria on the basis of temperature and pH. **7**
- (ii) Discuss the role of precursor metabolites and energy rich compounds in cell metabolism. **7**
- (B) Answer the following in short : (any 3) **3**
- (1) Name two primary metabolites.
- (2) What are halophiles ?
- (3) Give two examples of anaerobic bacteria.
- (4) What is reducing power ?
- (5) What is anabolism ?
4. (A) Describe the normal growth curve of bacteria in details. **14**
- OR**
- (i) Explain the mode of action of antibiotic penicillin. **7**
- (ii) Give details of synchronous growth. **7**
- (B) Answer the following in short : (any 3) **3**
- (1) What is chemotherapy ?
- (2) What is generation time of E. coli ?
- (3) Give two examples of sulfonamides.
- (4) Name two methods of continuous growth.
- (5) Enlist the methods of reproduction in bacteria.
-