Seat No. : _____

DE-106

December-2021

B.Sc., Sem.-III

201 : Microbiology
(Microbial Physiology)

Time : 2 Hours] **[Max. Marks : 50**

Instructions : (1) **All** Questions in **Section – I** carry equal marks.

(2) Attempt any **Three** questions in **Section – I**.

(3) Question – **9** in **Section – II** is **Compulsory**.

Section – I

1.	(A)	Write a short note on classification of carbohydrates with examples.	**7**
	(B)	Enlist various types of lipids and write their significance.	**7**
2.	(A)	Write an account of chemical structure and significance of DNA.	**7**
	(B)	Describe biological significance of proteins.	**7**
3.	(A)	Discuss in brief various factors affecting enzyme activity.	**7**
	(B)	Write a short note on general properties of enzymes.	**7**
4.	(A)	Explain mechanism of enzyme action.	**7**
	(B)	Write an account of inhibition of enzyme activity.	**7**
5.	(A)	Write a short note on requirements of molecular oxygen.	**7**
	(B)	Briefly explain entry of nutrients by active transport mechanism.	**7**
6.	(A)	Discuss the role of energy rich compounds in metabolism.	**7**
	(B)	Explain in brief structure and functions of NADH.	**7**

7. (A) What is growth? Write a short note on normal growth curve of bacteria. **7**

(B) Briefly explain the methods of obtaining continuous culture. **7**

8. (A) Write a note on measurement of microbial growth on the basis of cell numbers. **7**

(B) General mode of action of chemotherapeutic agents. **7**

SECTION – II

9. Answer in short : (Any **eight**) **8**

(1) Name any two broad-spectrum antibiotics.

(2) Define : Extracellular enzymes.

(3) Name the enzyme which can degrade starch.

(4) Write full form of NAD.

(5) What is a coenzyme ?

(6) Name any two examples of aromatic amino acids.

(7) Active cell division process is observed in which phase of normal growth curve of bacteria ?

(8) Write the name of scientist who discovered Penicillin.

(9) Define : Microaerophilic bacteria.

(10) Enlist the methods of reproduction in bacteria.

(11) Write two examples of carbohydrate polymers.

(12) Write the chemical components present in a deoxyribonucleotide.

(13) Write the full form of IUB.

(14) Define : Active site.

(15) What are precursor metabolites ?

(16) Name any two monosaccharides.