

Reg. No.

--	--	--	--	--	--	--	--	--	--



**BSCMBC 152**

**Credit Based II Semester B.Sc. Degree Examination, September 2022  
(2018 – 19 and Earlier Batches)**

**MICROBIOLOGY**

**Microbial Culture Techniques and Basic Biochemistry**

Time : 3 Hours

Max. Marks : 80

***Instructions :*** 1) Answer **both** Part – A and Part – B.  
2) Draw the diagram **wherever** necessary.

PART – A

Discuss **any ten** of the following.

**(10×2=20)**

1. a) Simple media.
- b) Nutrient agar slant.
- c) Mac Conkeys agar.
- d) Phototrophs.
- e) Micronutrients.
- f) Biomass.
- g) Optical activity.
- h) Steroids.
- i) Peptide bond.
- j) Mutarotation.
- k) Triglycerides.
- l) Nucleotide.

P.T.O.



## PART – B

Answer **one** set of questions from **each** Unit.

**Unit – I**

2. a) Write briefly on the preparation of nutrient agar. **(4+4+7)**  
b) Give an account of Lyophilization.  
c) Explain the bacterial colony characteristics in detail.

OR

3. a) Write briefly on fungal media. **(3+5+7)**  
b) Write a note on morphology of bacteria.  
c) Explain any two methods of bacterial pure culture preservation.

**Unit – II**

4. a) Write briefly on the nutritional requirements of bacteria. **(3+5+7)**  
b) Comment on the continuous culture of microbes.  
c) Explain the factors affecting the bacterial growth.

OR

5. a) Differentiate between autotrophs and phototrophs. **(4+4+7)**  
b) Write a note on the measurement of cell number using haemocytometer.  
c) Explain the bacterial growth curve in detail with suitable diagram.

**Unit – III**

6. a) Write a note on steroids. **(4+4+7)**  
b) Write briefly on the properties of water.  
c) Explain the properties of carbohydrates.

OR

7. a) Define acids and bases. **(3+5+7)**  
b) Explain the properties of buffers.  
c) Classify lipids. Write a note on its biological importance.



**Unit – IV**

8. a) Write a note on the functions of proteins. **(4+4+7)**  
b) Explain the structural organization of proteins.  
c) Explain the properties of nucleic acids.

OR

9. a) Write a note on the RNA. **(3+5+7)**  
b) Write a note on nucleoside and nucleotide.  
c) Classify amino acids in detail.
-