

BSc DEGREE EXAMINATION MAY 2017
(First Semester)

Branch- **BIOTECHNOLOGY**

FUNDAMENTALS OF MICROBIOLOGY

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** marks (10 x 2 = 20)

- 1 Define Magnification power.
- 2 What are primary stains, Give examples?
- 3 Define Capsule layer.
- 4 Define Lysogenic cycle.
- 5 Explain about logarithmic phase of microbial growth.
- 6 What is* continuous culture?
- 7 Explain STD with examples.
- 8 What is epidemic disease, give example? V
- 9 Define Probiotics. * *
- 10 What is bioremediation?

SECTION - B (25 Marks)

Answer **ALL** Questions

ALL Questions Carry **EQUAL** Marks (5 x 5 = 25)

- 11 a Distinguish between scanning. electron microscope and transmission •
electron microscope.
OR
b Give short notes on taxonomic ranks.
- 12 a Draw a neat sketch of peptidoglycan structure and explain its components.
OR
b Explain about the structure of T₄ bacteriophage. ■
- 13 a Explain enrichment culture techniques for isolation of microbes.
OR
b What are the factors which affect the microbial growth?
- 14 a Write short notes on Zoonotic diseases with an example.
OR
b Explain about the antifungal agents.
- 15 a Write about carbon cycle with a neat sketch. *
* OR ^
b Briefly explain about commensalism. ' • • k . ®

SECTION - C (30 Marks)

Answer any **THREE** Questions

ALL Questions Carry **EQUAL** Marks (3 x 10 = 30)

- 16 Explain about the principle, working mechanism and applications of phase contrast microscope.
 - 17 Explain about the structure, genetic map, life cycle and assembly of X phage.
 - 18 Define sterilization and explain its types.
 - 19 Describe the transmission, pathogenicity laboratory diagnosis and treatment of aspergillosis. *
- ^2Q; Explain in detail about positive interactions of microbial association with examples.