

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 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 microbiology.
- 2 Define microscopy.
- 3 What is meant by prokaryotes?
- 4 What are Bacteriophages?
- 5 What is a growth curve?
- 6 Define filtration.
- 7 What is a normal microbial flora?
- 8 Define vaccine.
- 9 Define mutualism.
- 10 What is bioremediation?

SECTION - B (25 Marks)

Answer **ALL** Questions

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

- 11 a Write a short notes on the history of microbiology.
OR
b Distinguish between the light microscope and electron microscope.
- 12 a Write short notes on flagella and its functions.
OR
b Give a brief account on the genetic map and life cycle of T4 phage.
- 13 a Give an account on types of antibiotics.
OR
b Give short notes on enrichment culture techniques.
- 14 a Write an account on the polio virus.
OR
b Give a brief account on the symptoms, causative agent & epidemiology of typhoid.
- 15 a Write a short note on negative interactions such as - Ammensalisms
Parasitism.
OR
b Give an account on carbon cycle with a neat sketch.

SECTION - C (30 Marks)

Answer any **THREE** Questions

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

- 16 Write in detail about the principle of and working mechanism electron microscopy & its applications.
- 17 Explain in detail about prokaryotic cell structure and its organization.
- 18 Write in detail about sterilization techniques.
- 19 Describe the transmission, pathogenicity, Laboratory diagnosis & treatment of tuberculosis.
- 20 Write in detail account on domestic sewage treatment.