

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION MAY 2019
(Fourth Semester)

Branch - **MICROBIOLOGY**

SOIL AND AGRICULTURAL 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 Allochthonous.
- 2 Geosmin.
- 3 Define Neutralism with example.
- 4 Competition.
- 5 Denitrification.
- 6 Define Biogeochemical cycles.
- 7 Nodulation.
- 8 What is Biofertilizer?
- 9 Give two examples of protozoans insecticide.
- 10 Define Bio pesticides.

SECTION - B (25 Marks!)

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

- 11 a Explain the environmental influences the soil transformation.
OR
b Discuss about the bacterial action in soil fertility.
- 12 a Write about positive interaction of mutualism.
OR
b Explain in brief account microbial association of predation and parasitism.
- 13 a Draw a neat sketch on phosphorous cycle and explain in brief.
OR
b Write about sulphur cycle with neat diagram.
- 14 a Explain the mass production of Rhizobium and its applications.
OR
b Describe about non-symbiotic nitrogen fixers.
- 15 a What are the advantages and disadvantages of microbial insecticides?
OR
b Write a brief note on viral biopesticides.

SECTION - C (30 Marks)

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

- 16 Discuss in detailed about distribution of soil microorganisms.
- 17 Explain the negative interaction of Amensalism with suitable examples.
- 18 Give a detailed account on Nitrogen cycle with neat diagram.
- 19 Write a detailed note on Blue green algae as biofertilizer.
- 20 Discuss the symbiotic association between microbes and insects.