

**PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION DECEMBER 2019
(Fifth Semester)
Branch- BOTANY**

MICROBIAL BIOTECHNOLOGY

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks)

Answer **ALL** questions

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

- 1 Enlist the importance of cryopreservation.
- 2 Name any two centres for germplasm collection.
- 3 Comment on baffles.
- 4 What is the necessity of agitator in the fermentor?
- 5 Name any two industrially important micro organism involved in the production of Lactic acid.
- 6 What is the role of precursor in the culture medium? Name the precursor for penicillin production.
- 7 Comment on sedimentation.
- 8 Enlist the organisms used in biogas production.
- 9 Trace the industrial applications of proteases.
- 10 Name the organisms involved in industrial production of amylase.

SECTION - B (25 Marks)

Answer **ALL** Questions

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

- 11 a Describe the preservation technique of microbial culture in dehydrate form.
OR
b Examine the screening process in detail.
- 12 a Expound the classification of sterilization in fermentation process.
OR
b Bring out the structure and configuration of CSTR.
- 13 a Discuss in detail the manufacture of citric acid.
OR
b Briefly describe the industrial production of Penicillin-G.
- 14 a 'A Biogas unit produces clean fuel, good manure and improve sanitation' - Justify
OR
b Describe the biological methods of sewage treatment.
- 15 a How is cellulose produce industrially? Mention its uses.
OR
b Enumerate the production technology of protease.

SECTION - C (30 Marks)

Answer any **THREE** Questions

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

- 16 Analyse the account of genetic improvement of strains and their significance.
- 17 Comprehend the various considerations for formulation of fermentation media.
- 18 Narrate the various steps involved in ethanol production and your suggestion to improve the yield.
- 19 Describe the procedure of mushroom cultivation.