

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)  
BSc DEGREE EXAMINATION DECEMBER 2019  
(Sixth Semester)

Branch - BIOTECHNOLOGY

**CORE ELECTIVE**  
**INDUSTRIAL AND 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 Define bioprocess technology.
- 2 Name any two industrially important microorganisms.
- 3 Define fed batch culture.
- 4 What is meant by stationary phase?
- 5 Define filtration.
- 6 Define Chromatography.
- 7 Primary metabolites.
- 8 Fermentation.
- 9 Biotransformation.
- 10 Interferons.

**SECTION - B (25 Marks!)**

Answer ALL Questions

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

- 11 a Explain the role and importance of antifoaming agents.  
OR  
b Write short notes on air lift fermentor..
- 12 a Compare and contrast batch culture and continuous culture with example.  
OR  
b Illustrate the importance of solid state fermentation.
- 13 a List and discuss the agents used for precipitation.  
OR  
b Write short notes on plate and frame fillers.
- 14 a What critical limiting factors are used in penicillin fermentation?  
OR  
b Explain how acetic acid are synthesized?
- 15 a Relate the importance of microorganism in cheese production.  
OR  
b Write short notes on the process involved in baking industry.

**SECTION - C (30 Marks)**

Answer any THREE Questions

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

- 16 Discuss the importance of strain improvement in fermentation industry.
- 17 Write short notes about i) Fed batch culture ii) Substrate used in fermentation.
- 18 Explain the all disruption methods with example.
- 19 Elaborate the process involved in synthesis of glutamine acid and add a note on its recovery technique.