PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS) *1 AST U£L^*
BSc DEGREE EXAMINATION MAY 2017
(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 (10x2 = 20)

1 What is scale up fermentor?
2 Comment on agitator.
3 Define lag phase.
4 What is cell mass Concentration? •
5 Comment on crystallization. *
6 List out the importance of product recovery/
7 Bring out the applications of penicillin.
8 Enlist the microorganism involved in lactic acid fermentation.
9 What do you mean by SCP?
10 Comment on gibberellin.

SECTION - B (25 Marks)
Answer ALL Questions
ALL Questions Carry EQUAL Marks (5 x 5 = 25)

11 a Explain the basic design of fermentor.
OR
b Describe the parts and functions of tower fermentor.

12 a Analyse the cellular growth kinetics.
OR
b Discuss the substrate utilization and product formation of kinetics.

13 a What do you mean by filtration? Explain the types of filtration.
OR
b Discuss the ion-exchange chromatography & its applications.

14 a Explain the methods involved in citric acid productions in fermentation process.
OR
b Describe the applications of amylases and proteases.

15 a Write a brief account on mushroom production.
OR
b Explain the steps involved in the production of gibberellins.

SECTION - C (30 Marks)
Answer any THREE Questions
ALL Questions Carry EQUAL Marks (3 x 10 = 30)

16 Explain the preservation and maintenance of microorganisms.

17 Describe the batch, fed batch and continuous process.

18 Discuss the methods of cell disruption for separation of intracellular products. '

19 Analyse the fermentation production of penicillin and its applications.

20 Critically analyse the cheese production and its applications.