Register Number:

DATE: **17** **-4-2018 (1 PM)**

**ST. JOSEPH’S COLLEGE (AUTONOMOUS), BANGALORE-27**

**END SEMESTER EXAM: APRIL 2018**

**B.Sc. BIOTECHNOLOGY- VI SEM**

**BT 6115: INDUSTRIAL AND ANIMAL BIOTECHNOLOGY**

**Time: 2.5 Hrs Max Marks: 70**

**Note The question paper has three parts and one printed page**

1. **Answer any Ten of the following 10x2=20**
2. What is solid state fermentation?
3. Name the strains used to obtain SCO’s?
4. State two examples of enzymes in the market obtained from a human source.
5. What is a chemostat?
6. Name any two strains used in cheese production.
7. What is Oxygen transfer?
8. Why is calcium phosphate used as a transfection agent?
9. Name any two viral strains used in viral transfection.
10. Define cryopreservation.
11. Name two important media components of a chemically defined medium.
12. Name any two animal models to study cancer.
13. You have two cell lines – HeLa and 3T3L1. Which cell line can be passaged for

 an indefinite time and why?

1. **Answer any Five of the following 5x6=30**
2. Explain the use of chromatography in DSP.
3. Discuss the stages in industrial production of beer.
4. What are uses of amylase enzymes?
5. Explain the process of industrial production of vitamins.
6. Explain the three different types of animal culture.
7. How are transgenic mice produced?
8. Discuss selection markers.
9. **Answer the following 2x10=20**
10. a. Discuss the methods used for strain selection and improvement?

**OR**

b. Explain the industrial set up and stages in the production of Citric acid.

1. a. What are gene constructs? (2). Explain the construct as to how a mammalian gene can reach expression in a transgenic animal. (8)

 **OR**

b. Describe any four transfection techniques in detail. (10)

BT-6115-A-18