**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 are impellers?
3. What is the importance of the size of baffles?
4. What are the materials used to construct a fermentor vessel?
5. Name any four strains of yeast used in brewing.
6. How is the temperature controlled in industrial reactors?
7. What is head space volume?
8. Explain the role of serum in animal cell culture.
9. State a vector used for an animal transgenic construct.
10. You have an 80% confluent cell plate and 100% confluent cell plate. Which plate will you choose for further passage and why?

10. What is the importance of promoters in transgene expression?

11. Define passage number.

12. Give one example each of natural and synthetic media.

1. **Answer any Five of the following 5x6=30**
2. Explain bubble driven reactors.
3. Discuss the industrial production of citric acid.
4. Distinguish between bulk and fine enzymes?
5. Explain the production of Xanthan gum.
6. Differentiate between microinjection and electroporation.
7. Define the following: a) Tissue Explants b) Adherence

 c) DMEM d) Transient Transformation

1. Explain the three different types of cell culture in detail.
2. **Answer the following 2x10=20**
3. a. Discuss the methods used for downstream processing?

**OR**

b. Explain the procedure and the industrial set up for production of cheese.

1. a. Explain in detail the individual steps of performing animal cell culture. (7) Describe any two types of contaminants of animal cell culture (3)

 **OR**

b. Explain the different stages of Pre-clinical and Post-clinical trial of a drug.