

Total No. of Questions : 09

Subject Code : BSBT-301

Time : 3 Hrs.

Max. Marks : 60

1. **SECTION-A is COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

Q.1 Define :

- i) Monolayer culture
- ii) Organ culture
- iii) Super-ovulation
- iv) *In vitro* Fertilization
- v) Secondary culture
- vi) Role of CO₂ Incubator
- vii) Plating efficiency
- viii) Split ratio
- ix) Hybridoma
- x) Contact Inhibition

SECTION-B

- Q.2 Differentiate between Primary and Secondary culture.
- Q.3 Write a note on Hybrid antibodies.
- Q.4 List Advantages and Limitations of Sub culturing.
- Q.5 Write a note on Scale up of Cell culture.
- Q.6 Discuss Recombinant protein production from cell culture.

SECTION-C

- Q.7 Write about the technique and applications of *In vitro* fertilization and Embryo transfer technology.
- Q.8 Discuss Hybridoma technology for monoclonal antibody production.
- Q.9 Elaborate on bioethical considerations and guidelines for cell culture research.