**Exam. Code : 107405**
**Subject Code : 1856**

**B.Sc. Biotechnology 5th Semester**

**ANIMAL TISSUE CULTURE**

**Paper—BT-3**

Time Allowed—3 Hours] [Maximum Marks—40

**Note :—** All the questions in Section A are compulsory (maximum length half page). Attempt any **FIVE** questions from Section B (maximum length **2** pages) and **TWO** questions from Section C (maximum length **5** pages)

## SECTION—A

**(Marks : 1 × 8 = 8)**

1. What are continuous cell cultures ?
2. Mention all the constituents in serum. What is its source ?
3. How liquid waste from ATC should be discarded ?
4. Mention chemical composition of complete media for ATC.
5. Which are the major contaminants in ATC lab ?
6. Is it advisable to culture multiple cell lines simultaneously in ATC lab ? Give reasons.
7. Briefly describe one method of isolation of cells.
8. How $CO_2$ incubator is sterilized ?




## SECTION—B

**(Marks : 4× 5 = 20)**

1. Mention the procedure for cryopreservation of cells. How cells are retrieved from frozen state ?
2. Define media. What is the role of yeast extract and agar in the media ?
3. Write a note on conditioned media and its applications.
4. How different contaminants are removed from ATC lab ?
5. Mention the advantages and disadvantages of serum free culture media.
6. What do you understand by radiation sterilization ? Give mechanism.
7. Differentiate between primary and established cell cultures.
8. Describe briefly the P3 facility and its applications.

## SECTION—C

**(Marks : 6 × 2 = 12)**

1. Describe the P1 and P2 facility and their applications.
2. With well labeled diagrams give a layout of ATC lab. Mention the role of each equipment used in ATC lab.
3. Write a detailed note on different types of cell culture media used in ATC and their physiochemical properties.
4. Describe the method for establishing and maintaining primary cell culture. What is the utility of primary cell culture ?