

Time: 2 Hours

Marks:40

Question 1 is Compulsory

Attempt any 4 Questions from the remaining

- |   |   |  |   |
|---|---|--|---|
| 1 | a | Draw laboratory design and layout of large Tissue culture laboratory                 | 2 |
|   | b | Enlist Different advantages and Disadvantages of serum in Media                      | 2 |
|   | c | Write short note on Air lift fermenter with diagram                                  | 2 |
|   | d | Define stem cell culture and write it's types  | 2 |
| 2 | a | what are the requirements for Tissue Culture laboratory                              | 3 |
|   | b | Write in detail about Common Cell culture Media                                      | 3 |
|   | c | Which are different types of Cell lines and write their characteristics              | 2 |
| 3 | a | Write a note on Disaster Management  | 3 |
|   | b | Write a note on Mechanical Disaggregation  | 3 |
|   | c | Enlist the key barriers to large scale Mammalian cell culture                        | 2 |
| 4 | a | Write a note on organ cultures   | 3 |
|   | b | Define Cryopreservation and write in brief about cryoprotective agents.              | 3 |
|   | c | Enlist Different prospects of Stem cell research in medicine                         | 2 |
| 5 | a | Which are different Microbial Contaminants in cell culture and how they are detected | 3 |
|   | b | Write in brief Insulin Production using Cell culture                                 | 3 |
|   | c | Write a short note on Disaggregation by Collagenase                                  | 2 |
| 6 | a | Which are the Basic components and their roles in different cell culture media       | 3 |
|   | b | Write in brief H5N1 Vaccine Production   | 3 |
|   | c | Write a note on cell banks with examples   | 2 |

\*\*\*\*\*