**Reg. No. \_\_\_\_\_­­­­­­­­­­­\_\_\_\_\_\_\_\_**

|  |  |
| --- | --- |
|  | **Karunya Logo.png.png** |

**End Semester Examination – Nov / Dec – 2019**

|  |  |
| --- | --- |
| **Code : 17BT2036**  **Subject Name : ANIMAL BIOTECHNOLOGY AND CELL**  **CULTURE TECHNIQUES** | **Duration : 3 Hrs.**  **Max. Marks : 100** |

**ANSWER ALL QUESTIONS (5 X 20 = 100 MARKS)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Q.No.** | **Sub Div.** | **Questions** | **Course Outcome** | | **Marks** |
| 1. | a. | Hybridoma Technology is a major biological innovation – Comment on the significance of the tool. | CO1 | | 12 |
| b. | What are the applications of Monoclonal Antibodies? | CO1 | | 8 |
| **(OR)** | | | | | |
| 2. |  | Write descriptive notes on the following:   1. Nutrient Medium 2. Bioreactor 3. Established Cell Lines 4. Biotechnology | CO1 | | 20 |
|  |  |  |  | |  |
| 3. | a. | Explain the different methods of Scaling Up animal cell cultures for large scale production of vaccines and cell products. | CO2 | | 15 |
| b. | List the parameters governing in-vitro culture of cells. | CO2 | | 5 |
| **(OR)** | | | | | |
| 4. |  | What are the types of cell cultures? Explain any FIVE applications. | CO2 | | 5+15(5x3) |
|  |  |  |  | |  |
| 5. | a. | Classify the methods of gene transfer and give an illustrated account of the process. | CO5 | | 15 |
| b. | Comment on the ethical issues of transgenesis. | CO5 | | 5 |
| **(OR)** | | | | | |
| 6. | a. | Enumerate any FIFTEEN applications of Transgenic Technology. | | CO5 | 15 |
| b. | Is transgenesis a boon or bane to mankind? Discuss. | | CO5 | 5 |
|  |  |  | |  |  |
| 7. | a. | How is Assisted Reproductive Technology (ART) a solution for infertility in man? Describe the process and significance. | | CO4 | 15 |
| b. | Write a short note on MOET. | | CO4 | 5 |
| **(OR)** | | | | | |
| 8. |  | Present an overview of animal breeding – the historical perspective, scope and success. | CO4 | | 20 |
|  |  | **Compulsory:** |  | |  |
| 9. | a. | Tissue Engineering is an emerging multidisciplinary field that combines principles and technologies of life science, material and engineering sciences to find solutions for victims of accidents and organ failures - Justify the statement. | CO3 | | 14 |
| b. | Write a note on skin graft and nerve implant. | CO3 | | 6 |