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

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**End Semester Examination – Nov/Dec – 2018**

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| **Code : 14BT2040**  **Sub. Name : ANIMAL BIOTECHNOLOGY AND CELL CULTURE TECHNIQUES** | **Duration : 3 Hrs.**  **Max. Marks : 100** |

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

|  |  |  |  |  |
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| **Q.No.** | **Sub Div.** | **Questions** | **Course Outcome** | **Marks** |
| 1 |  | The success of in-vitro culture of tissues is a significant breakthrough in Science and Technology – Justify highlighting the historical background of the technology, types and composition of nutrient medium and any FOUR major applications. | CO1 | 2  6  4+4+4 |
| **(OR)** | | | | |
| 2 |  | Give an illustrated account of the methods of ‘Scaling Up’ Monolayer and Suspension culture. | CO1 | 14+6=20 |
|  |  |  |  |  |
| 3 | a | Present the protocol for production of monoclonal antibodies using r-DNA Technology and discuss methods of screening. | CO1 | 10+5=15 |
|  | b | Describe the structure and types of immunoglobulins. | CO1 | 5 |
| **(OR)** | | | | |
| 4 | a | Classify Cell Culture and Cell Lines with examples. | CO1 | 8 |
|  | b | Explain the Parameters for Culture, their Kinetics and Characterization. | CO1 | 4+4+4 |
|  |  |  |  |  |
| 5 | a | Transgenic Technology is both a boon and bane in the society. Justify the statement with any FIVE Transgenic organisms and their relevance. | CO3 | 5+5+5 |
|  | b | Enumerate any FIVE serious concerns of Transgenesis. | CO3 | 5 |
| **(OR)** | | | | |
| 6 | a | Classify and describe the methods of gene transfer in Transgenesis | CO3 | 15 |
|  | b | Compare and contrast cloning and Transgenesis. | CO3 | 5 |
|  |  |  |  |  |
| 7 |  | What is ART?  Describe the technology with reference to (i) Animal breeding and (ii) Infertility in man. | CO2  CO2 | 2  4+14 |
| **(OR)** | | | | |
| 8 |  | Write notes on the following:   1. Embryo Splitting 2. Biotechnology 3. Immunization 4. Explant 5. MOET | CO2  CO1  CO1  CO1  CO2 | 5x4=20 |
|  |  | **Compulsory:** |  |  |
| 9 |  | Tissue Engineering is an interdisciplinary science that has revolutionized medical treatment and therapy. Justify giving descriptive notes on (i) Components of Tissue-graft (ii) Artificial Organs and (iii) Non-therapeutic applications. | CO1 | 12+5+3=20 |