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**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

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

**End Semester Examination – Nov/Dec – 2016**

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|  |  | **Semester :** | **2016-17 ODD** |
| **Code :** | **10MB325** | **Duration :** | **3hrs** |
| **Sub. Name :** | **MOLECULAR BIOTECHNOLOGY** | **Max. marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

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| **Q. No.** | **Sub Div.** | **Questions** | **Marks** |
|  |  | **COMPULSORY:** |  |
| 1. | a. | Explain in detail about Monoclonal Antibody Production with necessary illustrations. | 10 |
| b. | Discuss FISH. | 10 |
| 2. | Illustrate the role of enzymes involved and discuss the process of Eukaryotic DNA replication. | | 20 |
| (OR) | | | |
| 3. | a. | Describe the process involved in Prokaryotic translation. | 10 |
|  | b. | Discuss Lac and Trp Operon. | 10 |
| 4. | a. | Write a detail note on Type II Restriction Endonucleases with examples. | 10 |
|  | b. | Discuss about Blunt end, Sticky end and Homopolymer tailing with examples. | 10 |
| (OR) | | | |
| 5. | a. | Discuss the characteristics of Vector and write in detail about PBR 322. | 10 |
|  | b. | Discuss with examples Yeast Episomal Plasmid vectors. | 10 |
| 6. | Define Random and Site directed Mutagenesis and discuss in detail about Kunkel’s method of Mutagenesis. | | 20 |
|  |  | (OR) |  |
| 7. | a. | Write a note on Gene Shuffling. | 10 |
|  | b. | Enumerate about Protein Engineering by DNA shuffling with an example. | 10 |
| 8. | Enumerate the use of stem cells for the development of transgenic animals. | | 20 |
| (OR) | | | |
| 9. | What is gene therapy and discuss the methods involved for gene therapy with examples and its applications. | | 20 |

ALL THE BEST