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



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

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

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

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|  |  | **Semester :** | **2016-17 ODD** |
| **Code :** | **14BT2011** | **Duration :** | **3hrs** |
| **Sub. Name :** | **Molecular Biology** | **Max. marks :** | **100** |

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

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. |  | Describe Warren Blender experiment to prove that the DNA is the genetic material.? | CO1 | 20 |
| (OR) | | | | |
| 2. |  | Explain the process of conjugation for the transfer of Hfr, F+ and F` plasmids | CO1 | 20 |
| 3. |  | Detail the process of DNA replication in *E.coli* with neat illustrations. | CO1 | 20 |
| (OR) | | | | |
| 4. |  | Explain the events that are taking place in the replication fork? | CO1 | 20 |
| 5. | a. | Why the eukaryotic genome organization is complex? Give its picture | CO1 | 10 |
|  | b. | Comment on the replication mechanism of the eukaryotic telomere DNA. | CO1 | 10 |
| (OR) | | | | |
| 6. | a. | Describe the process of transcription in E.coli. with neat diagram. | CO2 | 15 |
|  | b. | Write the role and characteristics of enhancer in eukaryotes | CO2 | 5 |
| 7. | a. | Describe the post transcriptional processing of rRNA in prokaryotes | CO2 | 5 |
|  | b. | Why eukaryotic transcription is complex? Detail the process of transcription in eukaryotes for the synthesis of mRNA | CO2 | 15 |
| (OR) | | | | |
| 8. |  | Explain the different steps involved in protein synthesis in E.coli with a neat diagram | CO3 | 20 |
|  | | **Compulsory:** |  |  |
| 9. |  | Explain the mechanisms of Lac operons and Trp operons with neat diagrams? | CO3 | 20 |

ALL THE BEST