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



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

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|  |  |  |  |
| **Code :** | **14BI2004** | Duration : | **3hrs** |
| **Sub. Name :** | **GENOMICS AND PROTEOMICS** | Max. marks : | **100** |

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

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | Elaborate on various approaches in sequencing a genome. |  | 16 |
| b. | Differentiate between transcription and translation. |  | 4 |
| (OR) | | | | |
| 2. | a. | Give a brief account on:   * 1. Chromosome walking   2. Single Nucleotide Polymorphism (SNP) |  | 10 |
| b. | Compare and contrast the genomic and cDNA library. |  | 10 |
|  |  |  |  |  |
| 3. | a. | Compile the information on the source, salient features, significance and outcome of Human Genome Project. |  | 20 |
| (OR) | | | | |
| 4. | a. | Discuss and deliberate the various physical mapping strategies employed in mapping a genome. |  | 15 |
|  | b. | Analyze the applications of shotgun method in contig assembly. |  | 5 |
|  |  |  |  |  |
| 5. | a. | State the principle of 2D PAGE. Discuss the technology of detecting and analyzing co and post translational modification in proteins. |  | 15 |
|  | b. | List the tools, databases and softwares used in functional genomics. |  | 5 |
| (OR) | | | | |
| 6. | a. | With specific examples, substantiate the fact that Proteome is a new field of biology. |  | 12 |
|  | b. | Distinguish between Genomics and Proteomics. |  | 8 |
|  |  |  |  |  |
| 7. | a. | Give short notes on following proteome databases:   * 1. SWISS PROT   2. PROSITE   3. BLOCKS   4. OMIM |  | 20 |
| (OR) | | | | |
| 8. | a. | Elaborate the application of proteomics in medicine and toxicology. |  | 18 |
|  | b. | Differentiate between intron and exon. |  | 2 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. | a. | Define genome. Explain in detail the structure, organization and anatomy of eukaryotic genome. Add a note on satellite DNA. |  | 20 |