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



**End Semester Examination – Nov/Dec – 2017**

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| **Code :** | **15BT2004** | **Duration :** | **3hrs** |
| **Sub. Name:** | **BIOMATERIALS AND ARTIFICIAL ORGANS** | **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. | Discuss the Phenomenon of Immune response after Implantation of a Biomaterial. | CO1 | 10 |
| b. | Summarize the Classification and Properties of Biomaterials. | CO1 | 10 |
| (OR) | | | | |
| 2. | a. | Based on the Research Paper, “Foreign Body Reaction to Biomaterials”which you have been assigned for Self-study:  Discuss the “Inflammatory Response following material Implantation.” | CO2 | 14 |
|  | b. | Comment on the Article “Indian-made heart pump at 1/3rd cost”, in Times Now on Jun 9, 2016. | CO3 | 6 |
|  |  |  |  |  |
| 3. |  | Discuss the methods employed for Testing Implants for biological performance. | CO3 | 20 |
| (OR) | | | | |
| 4. |  | Elaborate the Application of Soft tissue Implants used as Eye Implants and Cochlear Implants. | CO2 | 20 |
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| 5. |  | Summarize the Properties and Applications of Polymeric Implants. | CO3 | 20 |
| (OR) | | | | |
| 6. |  | Discuss an overview of implant materials with special emphasis on metallic implants, types, characteristics and functions. | CO1 | 20 |
|  |  |  |  |  |
| 7. |  | Summarize the Applications and Uses of Ceramic Implant Materials. | CO2 | 20 |
| (OR) | | | | |
| 8. | a. | Explain in detail the Characteristic features of an Artificial Heart showing the difference by drawing a neat labelled diagrams of a Human Heart. | CO3 | 12 |
| b. | Infer the significance of Artificial Skin and Maxillofacial Implants. | CO3 | 8 |
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|  | | **Compulsory:** |  |  |
| 9. | a. | Elucidate the Significance of Oxygenators, Dialysers and Heart Valves. | CO3 | 15 |
| b. | Short notes on “Why do people need Dental Implants?” | CO2 | 5 |

ALL THE BEST