

# School of Basic and Applied Sciences

BioScience

Summer Term September 2023

Time : 3 Hours

Marks : 50

## SEM V - BBBMBT5001 - Biomaterials and Tissue Engineering

*Your answer should be specific to the question asked*

*Draw neat labeled diagrams wherever necessary*

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|-----|---|-----|-----|
| 1.  | Outline the major factors that influence the success of a biomaterial or an implant.          | CO1 | (2) |
| 2.  | Explain the Biocompatibility and its significance.  | CO2 | (2) |
| 3.  | Discuss the composite material.   | CO3 | (2) |
| 4.  | Explore the intrinsic and extrinsic factors that can affect the Bone cement properties.       | CO4 | (2) |
| 5.  | Explore the scope of Tissue engineering.  | CO5 | (2) |
| 6.  | Explore the application of biomaterials for medical purpose.                                  | CO1 | (5) |
| 7.  | Elaborate the causes of Implant-Associated Infections.  | CO2 | (5) |
| 8.  | Illustrate the Criteria for Judgment and Registration of Bone Cements by FDA.                 | CO6 | (6) |
| 9.  | Explore the keywords 1. Elastic deformation 2. Plastic deformation 3. Necking and 4. Drawing. | CO3 | (8) |
| 10. | Describe the Degrees of Burn and Artificial Skins used for Burn Dressing.                     | CO4 | (8) |
| 11. | Illustrate the process of Tissue Engineering and 3D bioprinting techniques.                   | CO5 | (8) |