

End Term Examination (December 2018)

School: School of Engineering

Program: B.Tech (Medical Biotechnology)

Course: Tissue engineering, Transplantation and Artificial Organs **Course code:** BTE307

Semester: V

Max Marks: 40

Duration (mins) : 120

PART-A

Answer any FIVE questions.

Each question carriers 4 marks.

Q1. Write short notes

[20]

- (a) in-vitro and in-vivo testing
- (b) Wound dressing
- (c) Artificial skin
- (d) Host-tissue reaction
- (e) Biofilm
- (f) Stem cells

PART-B

Answer any TWO questions.

Each question carriers 10 marks.

[20]

Q2. What is bio-ceramics? Classify the ceramics as biomaterials.

or

Explain:

- (a) Different mechanical properties of biomaterials.
- (b) Ceramics used in biomedical application

Q3. What is artificial organ? Give two example of artificial organ with its working principles.

or

Explain various sterilization processes of implantable biomaterials.

Q4. State and explain different immunochemical techniques used in tissue engineering.

or

Short notes on:

- (a) Dialysis
- (b) Ocular prosthesis