| SEAT NO:                                    |      |
|---|------|
| ATION ENGINEERING UNE 2013 ANTS Total marks | : 70 |
| is necessary                                | Tu   |
| Color anne C A                              | 12   |
| Towans ship 2                               |      |
|   | 12   |
| s of tissue                                 |      |
| r. v and explain any three.                 | 11   |
| materials.                                  | 11   |
|   | 12   |

## **GANPAT UNIVERSITY**

## B.TECH. 4TH SEM. BIOMEDICAL AND INSTRUMENTA

|       |     | CBCS REGULAR EXAMINATION MAY/JUNE 2013 2BM405: BIOMATERIALS AND IMPLANTS   |      |
|-------|-----|--|------|
| TIME: | 3 H | lours Total marks:   | : 70 |
| INSTR | RUC | TIONS:   |      |
|       | 1.  | Use separate answer sheets for the two sections  |      |
|       | 2.  | Figures on the right side indicate marks   |      |
|       | 3.  | Please explain with the help of diagram wherever it is necessary   |      |
|       | 4.  | Each sub-question carries equal marks  |      |
|       |     | SECTION - I  |      |
|       |     | Assure and it reaches  Gervantional teams in a sensitivous graheoligis Alexa stowers of the  |      |
| Que.1 |     | Write answers of the following questions.  | 12   |
|       | A   | Write a note on odontocompatibility.   |      |
|       | В   | Write a note on polymerization techniques.   |      |
|       | C   | Wet spinning.  |      |
|       |     | lating in the part of the part |      |
| Que.1 |     | Write answers of the following questions.  | 12   |
|       | A   | Explain the shape memory alloys.   |      |
|       | В   | Write a note on relatively bioinert ceramics.  |      |
|       | С   | Compare and contrast all the invitro assessment tests of tissue compatibility.   |      |
| Que.2 |     | Write answers of the following questions.  | 11   |
|       | A   | Explain in detail the process of bioerosion of polymer.  |      |
|       | В   | Enlist all invivo tests for detecting tissue compatibility and explain any three.  |      |
|       |     | an insurabligation / talor halors in around then milking A   |      |
|       | 4   | B. Write the short by the brief description of ethyrane oxide (E-O) processing of  |      |
| Que.2 | 1   | Write answers of the following questions.  | 11   |
|       | A   | Explain various mechanical properties and testing of materials.  |      |
|       | В   | Explain the applications of smart polymers.  |      |

Write answers of the following questions.

C Define Biomaterials Biocompatibility Plastic deformation, Carcinogenicity

A Write a note on thrombogenicity.

B Classify the composites.

Que.3

SEAT NO: \_\_\_\_\_

## SECTION – II

| COLOR STATE SERVICE MANUAL MANUAL STATES OF THE STATES OF  | 12          |
|--|-------------|
| Que.4 Write answers of the following questions.  A Describe in detail blood compatibility of synthetic vascular implant  |             |
| materials.   |             |
| materials.  B Enlist the biological effects of the implants on the human body and explain  |             |
| each in brief.  C The surface of the intima is negatively charged because  |             |
| OR   |             |
| A DESCRIPTION OF PROPERTY OF PROPERTY OF THE P | 12          |
| Que.4 Write answers of the following questions.  A Define the following term: auto graft, xeno graft, isograft, baroreceptor,  |             |
| chemoreceptor, regurgitation.  B Enlist the all types of mechanical heart valve. And explain each in brief.  |             |
|  | 11          |
| Que.5  Write answers of the following questions.  A Write the short note on viscoelastic solution.  B Draw the schematic diagram of endosteal and subperiosteal dental implant.  | nt.         |
| B Draw the schematic diagram of the schematic  |             |
| A Explain the shape memor solve.   |             |
| Crew e Write short agles to a sociated heniold viewdelet no etch s ethW 6  | 11          |
| Que.5  Write answers of the following questions.  A Enlist the types of the contact lenses. And explain about rigid lenses and the contact lenses.   | 1           |
| elastomeric lenses in detail.  |             |
| B Write the short floto on any   | 12          |
| Que.6  Write answers of the following questions.  With neat diagram explain total knee replacement.  A With neat diagram explain of rejection of tissue graft.   |             |
| A With neat diagram explain total knee repair  B Write the short note on prevention of rejection of tissue graft.  C Provide the brief description of ethylene oxide (EO) processing plant as how EO sterilization kills germs on medical device?  | nd<br>Cours |
| END OF THE PAPER   |             |
| The second of the fact of the second of the  |             |