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



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

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| **Code :** | **15EI2007** | **Duration :** | **3hrs** |
| **Sub. Name :** | **MEDICAL DIAGNOSTIC EQUIPMENT** | **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. | Detail the working of MEMS based digital blood pressure monitor. | CO2 | 10 |
| b. | List the applications of digital blood pressure monitor. | CO2 | 10 |
| (OR) | | | | |
| 2. | a. | Design the system for human body temperature indicator. | CO3 | 15 |
| b. | List the advantages of digital thermometer. | CO1 | 5 |
|  | | | | |
| 3. | a. | Discuss the working of ultrasonic blood flow meter. | CO2 | 10 |
|  | b. | Specify merits and demerits of ultrasonic blood flow meter. | CO2 | 10 |
| (OR) | | | | |
| 4. |  | Discuss the salient features of respiration rate measurement using:  i. Strain gauge method ii. Thermal method | CO2 | 20 |
|  | | | | |
| 5. | a. | Give notes on the physiology of cardiovascular system. | CO1 | 10 |
|  | b. | Elaborate the methodology of lead placement and configurations of Electro Cardio Gram. | CO2 | 10 |
| (OR) | | | | |
| 6. | a. | Classify the applications of EMG signal recordings. | CO2 | 10 |
|  | b. | Design the EMG based prosthetic arm for disabled subjects. | CO3 | 10 |
|  | | | | |
| 7. | a. | Elaborately explain the lead placements, signal acquisition method and applications of Electro encephalogram. | CO2 | 15 |
|  | b. | Mention the applications of EEG recording system. | CO2 | 5 |
| (OR) | | | | |  |  | CO |
| 8. | a. | Discuss the working principle and applications of double beam spectro photometers. | CO2 | 15 |
|  | b. | Explain the principle of optical detector used for spectro photometry. | CO1 | 5 |
|  |  |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. |  | Mention the working principle and applications of Gas chromatography in clinical measurements. | CO2 | 20 |

ALL THE BEST