

Total No. of Printed Pages:02

SUBJECT CODE NO:- H-460
FACULTY OF SCIENCE AND TECHNOLOGY
B.E. (EC/ECT/E&C) (Sem-I)
Elective-I: Biomedical Electronics
[OLD]

[Time: Three Hours]**[Max.Marks:80]**

Please check whether you have got the right question paper.

N.B

- 1) Solve any two question No.1 and Q.No.6 which are compulsory from each section
- 2) Solve any two questions from section A and section B each from remaining questions.
- 3) Assume suitable data if required.

Section 'A'

- | | | |
|-----|---|----------|
| Q.1 | Solve any two out of five | 10 |
| | <ol style="list-style-type: none"> a) What ST segment in ECG. b) Explain working principle of MRI c) Explain the signals used for ultrasound imaging technique d) Enlist x-ray applications e) Explain disadvantages of x-rays | |
| Q.2 | <ol style="list-style-type: none"> a) Explain working principle of pulse transducer. b) Explain Inductive transducer and its application | 07
08 |
| Q.3 | <ol style="list-style-type: none"> a) Explain EEG and it's characteristics b) Explain the effect of High coufact impedance | 07
08 |
| Q.4 | <ol style="list-style-type: none"> a) Explain X-Ray computed Tomography. (CT) b) Explain Basic principle of X-Ray. | 07
08 |
| Q.5 | <ol style="list-style-type: none"> a) Explain capacitive transducer used in Biomedical b) Explain the muscle force & stress measurement techniques. | 08
07 |

Section 'B'

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|-----|---|----------|
| Q.6 | Solve any two out of five | 10 |
| | <ol style="list-style-type: none"> a) Define Arrhythmia b) Enlist the types of Heart diseases c) Explain working principle of physiotherapy d) Enlist safety precautions required against the X-Ray hazards e) Enlist the objectives of use of pacemaker | |
| Q.7 | <ol style="list-style-type: none"> a) Explain Bead side patient monitoring system. b) Explain "PQRST" wave | 07
08 |

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|------|---|----|
| Q.8 | a) Explain Ultrasound therapy | 07 |
| | b) Enlist electrotherapy Equipment's | 08 |
| Q.9 | a) Explain Microwave diathermy | 07 |
| | b) Explain the importance of ventilators | 08 |
| Q.10 | a) What do you mean by therapeutic equipment and its advantages | 07 |
| | b) Explain Cardiac fibrillation and defibrillators | 08 |