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Total No. of Pages : 02

Total No. of Questions : 09

B.Voc. (Electronics & Information Technology) (Sem.-4)

MEDICAL ELECTRONICS

Subject Code : BVET-401-20

M.Code : 91663

Date of Examination : 05-07-22

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A** is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

SECTION-A

1. Write briefly :

- a) What do you mean by cardiac output?
- b) Write the need of a radio pill?
- c) What do you understand by the term sensor? Give example.
- d) Name the different methods for pulse rate measurement.
- e) What is the principle of working of defibrillator?
- f) Differentiate between Gross and micro current shock.
- g) Explain auscultatory blood pressure measurement.
- h) Name the characteristics required for Bio-amplifier.
- i) Differentiate between internal and external defibrillators.
- j) Mention the cause of first and second heart sound.

SECTION-B

2. List and discuss the characteristics and frequency bands of EEG signals.
3. Explain any two methods for measurement of respiration rate.
4. Explain the working principle of ultrasonic blood flow meter and its various types.
5. Explain how can the current leakage be measured with safety analysers?
6. Write a short note on Bioelectric Signals and the electrodes used to sense them.

SECTION-C

7. Explain the 12-lead system used to record ECG.
8. With a neat diagram, explain the working of arterial synchronous pacemaker.
9. Explain in detail about the origin of action and resting potential with diagrams and equations.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.