

Total No. of Questions : 4]

SEAT No. :

P895

[Total No. of Pages : 2

[5315] - 495
T.Y.B.Sc. (Semester - IV)
Electronic Equipment Maintenance
Medical Instrumentation
Vocational EEM Paper - VI

Time : 2 Hours]

[Max. Marks :40

Instructions to the candidates:

- 1) *All questions are compulsory.*
- 2) *Figures to the right indicate full marks.*
- 3) *Draw neat diagrams wherever necessary.*

Q1) a) Answer the following :

[4 × 1 = 4]

- i) Which ion selective electrode is used as reference electrode?
- ii) What is CNS?
- iii) What is bioelectric potential?
- iv) State full forms of
 - 1) ENG,
 - 2) EEG

b) Answer the following :

[2 × 2 = 4]

- i) What are
 - 1) SA node
 - 2) AV node
- ii) State two considerations for bioelectric recorder amplifier.

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- c) Answer the following : **[2 × 2 = 4]**
- i) State 2 general senses and 2 special senses.
 - ii) What is reflex arc?

Q2) Attempt any two **[2 × 4 = 8]**

- a) Explain electrical activity of excitable cells.
- b) Write a note on ENG.
- c) Discuss electrodes for electrical stimulation of tissues.

Q3) Attempt any two **[2 × 4 = 8]**

- a) Give key features of EEG waves
- b) Discuss direct writing system.
- c) What are physiological effects of electric current on human body.

Q4) Attempt any two **[2 × 6 = 12]**

- a) Explain filter photometer.
- b) Discuss external noise sources in medical instrumentation.
- c) Explain spectrophotometer.

OR

Q4) Answer the following :- **[3 × 4 = 12]**

- a) Explain protection aspect with respect to equipment design in medical instrumentation.
- b) Write a note on ECG.
- c) Explain any one type of amplifier used with bioelectric recorders.

