1187 **Code : 15EC63A**

Register Number | | | | | | | | | | |

VI Semester Diploma Examination, Nov./Dec.-2018

MEDICAL ELECTRONICS

Time : 3 Hours] **[Max. Marks : 100**

Note : (i) Answer any **six** questions from Part – **A**. **(5 × 6 = 30 Marks)**

(ii) Answer any **seven** full questions from Part – **B**. **(10 × 7 = 70 Marks)**

PART – A

1. Explain resting potential and action potential. **5**

2. What is ECG ? Explain briefly typical ECG waveform. **5**

3. List the effects of artifacts in ECG measurement. **5**

4. What is pacemaker ? Write the difference between internal and external pacemaker. **5**

5. What is meant by diathermy ? Sketch the schematic of a microwave diathermy setup. **5**

6. Define M.C.V., M.C.H., M.C.H.C., M.P.V. and RDW. **5**

7. Define pH. Explain the working of digital pH meter. **5**

8. List the advantages, disadvantages and applications of CT Imaging. **5**

9. Explain micro shock and macro shock. **5**

PART – B

10. (a) Explain the different types of electrodes used in EMG recording. **5**

    (b) List the factors on which selection of physiological transducer depends. **5**

11. Explain 10-20 electrode system to record the EEG. **10**

12. Explain how EMG recordings are made. List the uses of EMG. **10**

13. Describe the working of haemodialyser machine with a neat diagram. **10**

14. (a) Differentiate between external and internal defibrillators. **5**

    (b) Explain the working of Digital hearing aid with diagram. **5**

15. Explain the working of Spectro photometer. **10**

16. Describe ultrasonic Doppler shift method of measuring F.H.R. **10**

17. Explain the working of N.M.R. Imaging system. **10**

18. Explain the working of CT Imaging and list its advantages. **10**

19. (a) Define E-waste. Explain any two methods disposing E-waste. **5**

    (b) Explain the physiological effects of electric current. **5**