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Question Paper Code: 94B06

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2023

Fourth Semester

Biomedical Engineering

19UBM406- Diagnostic and Therapeutic Equipments - I

(Regulation 2019)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. Define Heart rate Monitor. CO1-U
2. As a biomedical engineer, what would be the major activities to overcome day to day needs of disabled people? CO3-Ana
3. Write about bio feedback instrumentation. CO1-U
4. Compare muscle feedback and neuro feedback instruments. CO2-App
5. Define ultrasound therapy. CO1-U
6. Mention some surgical instruments. CO1-U
7. Write the importance of bedside monitors. CO1-U
8. List the functional requirements of bedside monitoring design CO1-U
9. Define biomedical technology. CO1-U
10. Mention any 10 types of sensor. CO1-U

PART – C (5 x 16= 80 Marks)

11. (a) Which device is used to ‘ restore a normal heartbeat ’ - Justify CO3- Ana (16)
Or
(b) What is a pacemaker? Is it different from an implantable defibrillator? How? – Explain. CO3- Ana (16)

12. (a) Which device is used to measure and recording activity of brain and explain the block diagram. CO3- Ana (16)
- Or
- (b) Summarize the concept of polysomnography. CO3- Ana (16)
13. (a) Summarize the concept of biofeedback instrumentation. CO2- App (16)
- Or
- (b) Classify the surgical instruments and its various types. CO1- U (16)
14. (a) Write the brief notes on the applications of telemetry system in hospital. CO2- App (16)
- Or
- (b) Explain the overview of telemetry system. CO1- U (16)
- 15 (a) Suggest the device used to navigate ulcer and explain how it is done. CO3- Ana (16)
- Or
- (b) How to design and test the simple Oximetry device. CO3- Ana (16)