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Question Paper Code: 94B06

B.E./B.Tech. DEGREE EXAMINATION, DEC 2021

Fifth Semester

Biomedical Engineering

19UBM406 – DIAGNOSTIC AND THERAPEUTIC EQUIPMENT - I

(Regulation 2019)

Duration: Three hours

Maximum: 100Marks

PART – A (10 x 2= 20Marks)

(Answer any 10 out of 15)

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| 1. What is the importance of bedside monitors? | CO1 – U |
| 2. How EEG monitoring parameters are transmitted using telemetry? | CO2 – A |
| 3. List the functional requirements of bedside monitoring design | CO1- R |
| 4. State the usage of tonometer. | CO1- U |
| 5. How cryogenic materials are transported? | CO3- A |
| 6. Define Holter monitor | CO1-U |
| 7. Draw Einthoven Triangle | CO1- R |
| 8. How Ventricular Fibrillation can be detected? | CO3- A |
| 9. Define AEP | CO1- U |
| 10. How Epilepsy can be identified? | CO2- A |
| 11. What is extra and intracranial EEG? | CO1- U |
| 12. How Epilepsy can be identified? | CO2- A |
| 13. Which and Where the array of magnetometer is fixed in diagnosis machine? | CO3– A |
| 14. Write about NCV test? | CO1- U |
| 15. Write notes on bio-feedback. | CO1- R |

PART – C (5 x 16= 80 Marks)

16. (a) Explain the working of an ECG Machine. Draw suitable block diagram. CO1- U (16)
- Or
- (b) Explain about i) Internal Pacemaker CO1-U (16)
ii) External Pacemaker
17. (a) Discuss in detail about CO1-U (16)
ii) MEG (Magneto Encephalo Graph)
ii) Polysomnography
and their types
- Or
- (b) With neat diagram explain about EEG. CO1-U (16)
18. (a) Which instrument allow the surgeon to operate with two free hands CO2–A (16)
and explain the same?
- Or
- (b) Write in detail about EMG. CO1-U (16)
19. (a) Discuss in detail about CO1-U (16)
(i) Portable and Landline Telemetry unit
(ii) Applications in ECG and EEG Transmission.
- Or
- (b) Explain with neat diagram about Patient monitoring systems CO1-U (16)
20. (a) Explain in detail about CO1-U (16)
(i) Endoscopy
(ii) Laparoscopy
(iii) Thermography
- Or
- (b) Explain about principle of Cryogenic technique and application. CO1-U (16)

