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Question Paper Code: 95B02

B.E./B.Tech. DEGREE EXAMINATION, MAY 2022

Fifth Semester

Biomedical Engineering

19UBM502 – DIAGNOSTIC AND THERAPEUTIC EQUIPMENT - II

(Regulation 2019)

Duration: Three hours

Maximum: 100 Marks

PART – A (10 x 2= 20Marks)

(Answer any 10 out of 15)

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| 1. What is preparation procedure to take echoencephalogram? | CO2- App |
| 2. Define Ultrasound waves. | CO1- U |
| 3. Write about axis of transducer. | CO1- U |
| 4. Comparative analysis of spirometer and pneumotachograph . | CO2- A |
| 5. What is diffusion measurement? | CO2- U |
| 6. Write about artificial ventilation | CO2- U |
| 7. List out the advantages photo acoustic imaging | CO3- A |
| 8. Write about applications of physiological measurements | CO3- U |
| 9. Enumerate the various types of PA imaging devices | CO3- U |
| 10. Write about electrodes used for surgical diathermy | CO4-U |
| 11. What is meant by surgical diathermy? | CO4-U |
| 12. Enumerate the various types of electro-surgery technique. | CO4 -U |
| 13. How susceptibility parameters are varying with Body weight? | CO5-U |
| 14. Enumerate the necessity of the grounding system in biomedical devices. | CO5-U |
| 15. Differentiate Macro shock and Micro shock | CO5-U |

PART – C (5 x 16= 80 Marks)

16. (a) Discuss in detail about acoustic windows of echocardiography. CO1-U (16)
- Or
- (b) How Ultrasound waves are detected? Explain the procedure of US generation. CO1-U (16)
17. (a) Discuss in detail about Pnemography and their types CO2-Ana (16)
- Or
- (b) Discuss in detail about pnemotachometer and their types CO2-Ana (16)
18. (a) Explain with neat diagram about audiometer and their types CO3-U (16)
- Or
- (b) Write in detail about audiometer and their types. CO3-U (16)
19. (a) Discuss in detail about microwave diathermy with neat diagram CO4- U (16)
- Or
- (b) Explain with neat diagram about electro surgery machine CO4- U (16)
20. (a) Discuss in detail about Electrical safety codes and standards. CO5- U (16)
- Or
- (b) Discuss the design of electrical safety analyzer and their uses. CO5- U (16)