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**Question Paper Code: 95B02**

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

Fifth Semester

Biomedical Engineering

19UBM502- Diagnostic And Therapeutic Equipments – II

(Regulations 2019)

Duration: Three hours

Maximum: 100 Marks

Answer All Questions

PART A - (10x 2 = 20 Marks)

1. In medical application ultrasonic waves are preferred than audible sound waves. Justify. CO1- U
2. Write some uses of ultra sound waves in medical application. CO1- U
3. What are 5 examples of ventilator modes? CO2- U
4. What is the most important factor in determining airway resistance? CO2- U
5. What is GSR galvanic skin response and how does it work? CO3- U
6. How is an Electroretinograph performed? CO3- U
7. What are lasers used for in medicine? CO4- U
8. What are the four types of laser tissue interactions? CO4- U
9. What is isolation monitor? CO5- U
10. What is a ground fault detector? CO5- U

PART – B (5 x 16= 80Marks)

11. (a) Explain the basic pulse echo apparatus system with block diagram. CO1- U (16)  
Or  
(b) With block diagram explain linear B-scan techniques used in CO1- U (16)  
obstetrics and Gynecology.

12. (a) What is Pneumotachometer and what for it is used? Explain the construction and working of Pneumotachometer. CO2- U (16)
- Or
- (b) Explain a method to measure the residual volume. CO2- U (16)
13. (a) Outline the clinical applications of Electro oculograph with case study. CO3- App (16)
- Or
- (b) Distinguish between pure tone audiometer and speech audiometer. CO3- App (16)
14. (a) Discuss in detail about short wave diathermy with its application and treatment methodology. CO4- App (16)
- Or
- (b) Discuss in detail about Ultrasonic diathermy with its application and treatment methodology. CO4- App (16)
15. (a) Write detailed notes on electrical safety analyzer with special mention to the basic protection measures incorporated to prevent shock. CO5- U (16)
- Or
- (b) Explain the basic measures to be taken to protect from shock. CO5- U (16)