

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Sixth Semester B.Tech Degree Regular and Supplementary Examination July 2021

Course Code: EE372**Course Name: BIOMEDICAL INSTRUMENTATION**

Max. Marks: 100

Duration: 3 Hours

PART A*Answer all questions, each carries 5 marks.*

Marks

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| 1 | With the help of a neat diagram write about physiology of respiratory system. | (5) |
| 2 | With the help of a neat diagram of the Einthoven triangle, mention the necessity of the Einthoven triangle. | (5) |
| 3 | Write a short note on photo electric plethysmography. | (5) |
| 4 | With the help of a neat diagram write about DC Defibrillator. | (5) |
| 5 | With help of Suitable diagram write about principle X-Ray generation. | (5) |
| 6 | List various components in infant incubators? Mention function of components. | (5) |
| 7 | Write a short note on working of spectrophotometer. | (5) |
| 8 | Describe about various components of Tele-medicine system. | (5) |

PART B*Answer any two full questions, each carries 10 marks.*

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| 9 | a) Identify various frequency ranges in Electro Encephalogram. Mention about each frequency range. | (5) |
| | b) With help of relevant diagrams write about anatomy of human nervous system. | (5) |
| 10 | List various components of Electro Cardiography Machine. With the help of block diagram and graph write about working of Machine. | (10) |
| 11 | a) Identify the various problems encountered in biomedical measurements? | (5) |
| | b) With relevant diagrams explain about different types of skin surface electrodes used to measure bio potential. | (5) |

PART C*Answer any two full questions, each carries 10 marks.*

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| 12 | a) Identify the use of phonocardiography. Write a short note about it. | (5) |
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- b) Identify how a fibre optic intravascular pressure sensor helps to measure Blood pressure. (5)
- 13 Identify various components of Electro Encephalogram (EEG), With the help of block diagram write about role of each component. (10)
- 14 a) List out any five respiratory parameters. (5)
- b) Write a short note on Impedance plethysmographs. (5)

PART D

Answer any two full questions, each carries 10 marks.

- 15 a) With the help of a suitable diagram write how a hemodialysis helps a patient. (5)
- b) Enumerate the various uses of X-rays. (5)
- 16 a) With help of Suitable diagram write about principle ultrasonic imaging system. (5)
- b) Enumerate different applications of Telemedicine. (5)
- 17 Enumerate about physiological effects of electric currents & write briefly about various susceptance parameters. (10)
