

BACHELOR OF TECHNOLOGY (C.B.C.S.) (2014 COURSE)
B.Tech.Sem - VIII ELECTRONIC :SUMMER- 2022
SUBJECT : BIOMEDICAL ENGINEERING

Day : Thursday
Date : 16-06-2022

S-13402-2022

Time : 02:30 PM-05:30 PM
Max. Marks : 60

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Assume suitable data, if necessary.

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- Q.1** a) Draw the diagram of cell. What is the function of golgi apparatus and mitochondria? (04)
b) List the different systems in the body. Write the functions of any four systems. (06)

OR

- Q.1** What are the parts of digestive system? Explain digestive system with the help of neat diagram. (10)

- Q.2** Classify ECG lead system and explain lead configurations with diagram. (10)
Why right leg is grounded while recording ECG signal?

OR

- Q.2** What is the difference between heart sounds and heart murmurs? How do you record heart sounds? Explain the importance of microphone used in phonocardiograph. (10)

- Q.3** Draw and explain DC defibrillator. What are the disadvantages of AC defibrillator? What is the relationship between voltage and energy delivered to the patient? (10)

OR

- Q.3** Why ventilator is called as life saving device? Categorize the modes of ventilator and explain with the help of example. (10)

- Q.4** a) Why patient monitoring is essential in hospital and state the parameters measured? (05)
b) Explain the importance of baby incubator in NICU. (05)

OR

- Q.4** Draw wiring diagram of phototherapy unit and explain its function and applications. (10)

- Q.5** State various instruments in clinical laboratory and explain in detail any of them. (10)

OR

- Q.5** a) What is RBC and WBC count in male and female respectively? Explain which unit is more preferred for counting? (05)
b) What is typical method used for blood gas monitoring? (05)

- Q.6** Explain the working of short wave diathermy in detail. (10)

OR

- Q.6** a) What are various methods for patient safety? (05)
b) What is cautery unit and state its various modes used in surgery? (05)

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