

- Q.4. Explain the principle of EEG. How does it help in estimating the nervous system?
- Q.5. What is biotelemetry? Write down its principle, working and application with the help of an suitable diagram.

Printed Pages: 4

EBT-061

(Following Paper ID and Roll No. to be filled in your Answer Books)

Paper ID : 154853

Roll No.

B.TECH.

Theory Examination (Semester-VIII) 2015-16

BIOMEDICAL INSTRUMENTATION

Time : 3 Hours

Max. Marks : 100

Section-A

Q.1. Attempt all parts. All parts carry equal marks. Write answer of each part in short. (2×10=20)

- (a) Discuss the role of instrumentation in biomedical science.
- (b) What are signal transducers?
- (c) Write down about colored Doppler.
- (d) What are scintillations?
- (e) Write down the noninvasive instruments?

- (f) What do you understand by bioelectric potential?
- (g) What are good laboratory practices?
- (h) Explain the parameter of cardiac measurement?
- (i) What do you understand by behavior change?
- (j) Write a short note on patient care?

**Section-B**

**Q2. Attempt any five parts. All parts carry equal marks:**  
**(5×10=50)**

- (a) What are the effective methods to monitor cardiovascular parameters? Discuss the instrumentation which monitors the working of cardiovascular system.

- (b) What do you understand by source of bioelectric potential? How does it help in biomedical instrumentation?

- (c) Describe the role of computer in biomedical instrumentation with the help of suitable examples. Describe its role for monitoring and measurement intervention.

(2)

06/278/24/600

- (d) What do you understand by radioactive- tracers. Describe the emission of radiation from any radio nuclei used in radiotherapy and its measurement with the help of suitable example.

- (e) Describe the behavioral parameters. How does the instrumentation work for monitoring the behavioral changes change with the help of an example?

- (f) Write down the safety rule of medical equipment and their categorization.

- (g) Explain the principle, working and advantages of CT-SCAN and MRI.

- (h) Write down the principle and purpose of electrical safety of medical equipment?

**Section-C**

**Note: Attempt any two questions from this section.**  
**(2×15=30)**

- Q.3.** What do you understand by X-rays? Define its role in diagnostics and explain its advantages and disadvantages in medical field.

(3)

106/278/24/600

P.T.O.

- Q.4. Explain the principle of EEG. How does it help in estimating the nervous system?
- Q.5. What is biotelemetry? Write down its principle, working and application with the help of an suitable diagram.

Printed Pages: 4

EBT-061

(Following Paper ID and Roll No. to be filled in your Answer Books)

Paper ID : 154853

Roll No.

B.TECH.

Theory Examination (Semester-VIII) 2015-16

BIOMEDICAL INSTRUMENTATION

Time : 3 Hours

Max. Marks : 100

Section-A

Q.1. Attempt all parts. All parts carry equal marks. Write answer of each part in short. (2×10=20)

- (a) Discuss the role of instrumentation in biomedical science.
- (b) What are signal transducers?
- (c) Write down about colored Doppler.
- (d) What are scintillations?
- (e) Write down the noninvasive instruments?