

C 1132

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**SIXTH SEMESTER B.TECH. (ENGINEERING) [09 SCHEME] DEGREE
EXAMINATION, APRIL 2016**

AI 09 603—BIOMEDICAL INSTRUMENTATION

Time : Three Hours

Maximum : 70 Marks

Part A

Answer all questions.

1. Define sensitivity.
2. Name the *two* parts of a transducer.
3. Define mean arterial pressure.
4. What is pacemaker ?
5. Write the characteristics of X-ray radiation.

(5 × 2 = 10 marks)

Part B

Answer any four questions.

6. What is resting potential ? What are the characteristics of resting potential ?
7. Write short notes on biometrics.
8. What is plethymography ? Explain.
9. What is neural communication ? Explain.
10. What is tomogram ? Explain.
11. Explain the principle of X-rays.

(4 × 5 = 20 marks)

Part C

Answer all questions.

12. (a) Explain the physiological systems of the body.

Or

- (b) Explain the transducers for biomedical applications.

Turn over

13. (a) Explain the working of ECG with neat sketch.

Or

(b) Explain measurement of blood flow and cardiac output.

14. (a) Explain the anatomy of nervous system.

Or

(b) Explain the working of heart lung machine.

15 (a) Write short notes on :

(1) Endoscopy.

(2) Diathermy.

Or

(b) With neat sketch describe the operation of ultrasonic imaging system.

(4 × 10 = 40 marks)