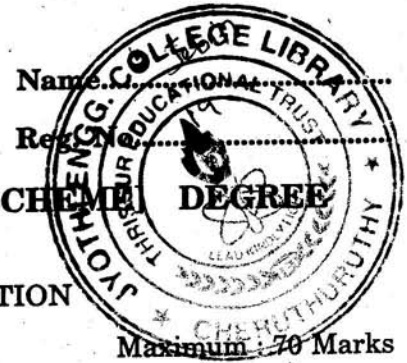


C 80784



**SIXTH SEMESTER B.TECH. (ENGINEERING) [09 SCHEME]
EXAMINATION, APRIL 2015**

AI 09 603—BIOMEDICAL INSTRUMENTATION

Time : Three Hours

Part A

1. Draw the configuration of a cell in resting state.
2. State the range of values of bioelectric potential of EEG and ECQ.
3. State the function of SA node and AV node.
4. Which part of the nervous system handles the reflex action of humans ?
5. What is angiography ?

(5 × 2 = 10 marks)

Part B

6. Explain the concept of action potential.
7. Explain about Eithoven triangle.
8. Explain the operation of Plethysmograph.
9. How EMG is measured ? Briefly explain.
10. What is synchronized pacemaker ? Explain its function.
11. What are tests taken on blood cells ? Explain.

(4 × 5 = 20 marks)

Part C

12. Describe briefly about the components of man-instrument system.

Or

13. Describe briefly about the electrodes used for biomedical measurements.
14. Discuss briefly about the working of cardiovascular system.

Or

15. With a suitable figure, show how blood pressure and blood flow is measured.
16. Describe the anatomy of nervous system.

Or

17. Explain the operation of heart-lung machine.
18. Discuss in detail about ultrasonic imaging system and diathermy.

Or

19. Discuss in detail about the micro-shock hazard, macro-shock hazard and X-Ray.

(4 × 10 = 40 marks)