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B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2005.

Second Semester

Polymer Technology

EE 1163 — ELECTRICAL AND ELECTRONICS ENGINEERING

(Common to Bio-technology)

(Regulations 2004)

Time : Three hours   Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. State Kirchoff's laws.

2. What is meant by commutation?

3. List out the characteristics of motor.

4. What are the different methods of speed control of motors?

5. What are the advantages of PMMC instruments?

6. Distinguish between intrinsic and extrinsic semi conductors.

7. What is meant by load regulation and line regulation?

8. Draw the input characteristics of CB configuration.

9. How an amplifier is classified as class C amplifier?

10. Draw the circuit diagram of an Op-Amp based integrator.

PART B — (5 × 16 = 80 marks)

11. (i) With simple diagrams, explain the operating principles of energy meter.

    (ii) Describe the operation of a Wein bridge oscillator.

12. (a) Describe the principles involved in the single phase and three phase transformers.

Or

    (b) Describe the operation of three phase induction motor.

13. (a) Describe the principles involved in moving coil ammeter and voltmeter.

Or

(b) Draw the circuit diagram of a full wave rectifier and explain its operation, with relevant waveforms.

14. (a) Draw the circuit diagram of a class B push-pull amplifier and explain its principle of operation.

Or

(b) With a neat circuit diagram, explain the operation of a single tuned amplifier.

15. (a) Draw the circuit diagram of RC phase shift oscillator and explain its working.

Or

(b) Draw the circuit diagram of a monostable multivibrator and explain its operation.

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