Reg. No. ☐☐☐☐☐☐☐☐☐☐☐☐

Question Paper Code : 97068

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2014.

Third Semester

Electronics and Communication Engineering

EE 6352 — ELECTRICAL ENGINEERING AND INSTRUMENTATION

(Regulation 2013)

Time : Three hours   Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Draw the open circuit characteristics of D.C. Generator.

2. List the types of D.C. Motors. Give any one difference between them.

3. Define regulation in a transformer.

4. Draw the no load phasor diagram of a transformer.

5. Write the principle of operation of 3 phase induction motor.

6. Name the types of alternators.

7. Define 'errors' in measurement.

8. What is a transducer?

9. Compare analog and digital instruments.

10. Write the working principle of 'Q' meter.

PART B — (5 × 16 = 80 marks)

11. (a)   Describe the construction and working of DC Generator.   (16)

Or

    (b)   Explain the different methods of speed control of D.C. Motors.   (16)

12. (a) (i) Derive Emf equation of a transformer. (10)

    (ii) Draw equivalent circuit of a transformer. (6)

Or

    (b) Discuss about

    (i) Transformer losses and efficiency. (6)

    (ii) Explain the working of Auto Transfer. (10)

13. (a) Describe the construction and working of 3 phase induction motor. (16)

Or

    (b) (i) Discuss Methods of starting of synchronous motor. (10)

    (ii) Discuss Torque Equation of synchronous motor. (6)

14. (a) Explain the working of the following sentences.

    (i) Strain Gauge

    (ii) Thermistor. (8+8)

Or

    (b) Explain the operation of

    (i) Capacitor microphone

    (ii) Piezo Electric transducer. (8+8)

15. (a) With neat diagram explain the operation of storage oscilloscope.

Or

    (b) With neat diagram explain the working of Wien's bridge for capacitance measurement.

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