

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

Time: Three hours

Maximum: 100 marks

(Regulation 2013)

Answer ALL questions.

PART A- (10 x 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 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 x 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 Transformer. (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 the operation of storage oscilloscope. (16)

Or

- (b) With neat diagram explain the working of Wien's bridge for capacitance measurement (16)

