

PART B — (5 × 16 = 80 marks)

11. (a) Explain the constructional details and working principle of a d.c. generator and derive the Induced EMF equation.

Or

- (b) Explain with a neat sketch, a three-point starter used for a d.c. shunt motor.

12. (a) Draw and explain the no-load phasor diagram and equivalent circuit of a single-phase transformer.

Or

- (b) Explain in detail the O.C. test and S.C. test on a single-phase transformer and what are the information's that can be obtained from the above tests?

13. (a) With a neat diagram describe the construction of a three phase induction motor and give the principle of operation.

Or

- (b) (i) Describe the various speed control methods of a three-phase Induction motor. (8)
(ii) Explain the principle of operation of a single phase Induction motor. (8)

14. (a) Explain the construction and working principle of an alternator.

Or

- (b) Explain the construction and working principle of a reluctance motor.

15. (a) With a neat diagram explain the structure of a power system.

Or

- (b) Describe the various types of distribution system with necessary diagrams.