32972

Name : ....

Reg. No: ....

THIRD SEMESTER B.TECH (04 SCHEME) DEGREE EXAMINATION, FEBRUARY 2013

EC/AI 04 304 – ELECTRICAL ENGINEERING

Time : Three Hours   Maximum : 100 Marks

I.   (a) What are the types of DC machines?

        (b) What are starters? Explain.

        (c) Write a note on OC and SC test.

        (d) Explain the phasor diagram of a Transformer.

        (e) Explain the principle of operation of an Alternator.

        (f) Explain the various losses and efficiency of a Synchronous motor.

        (g)Explain Schering Bridge.

        (h) What is an Ayrton Shunt? Explain.

                                                       (8 x 5 = 40 Marks)

II.   (a) With neat sketch, explain in detail about the construction and working of a DC generator.

                                       (or)

       (b) With neat sketch, explain in detail about the construction and working of a DC motor.

III.   (a) Explain the principle of operation and derive the emf equation of a Transformer.

                                       (or)

       (b) Explain in detail about Auto transformer and three phase transformer.

IV.   (a) Explain the constructional features and principle of operation 3 phase induction motor.

                                       (or)

       (b) Explain the starting and speed control methods for squirrel cage motor.

V.   (a) Explain moving coil, moving iron and dynamometer type instruments.

                                       (or)

       (b) Explain (i) Wheatstone Bridge and (ii) Kelvin's Double Bridge.

                                           ******   (4 x 15 = 60 Marks)