C 28739

Name.................................

Reg. No.................................

SIXTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION, JUNE 2012

EE 04 606—ELECTRICAL ENGINEERING DRAWING

Time : Three Hours   Maximum : 100 Marks

1. (a) A 4-pole simplex wave wound armature has 25 slots and 25 coils. The commutator has 25 segments. Work out the winding details and draw the winding diagram. Also draw the sequence diagram to show the position of brushes.

Or

   (b) Draw a mush winding diagram for a 4-pole, 36 slots, 3-phase armature. Assume the coil is full-pitched.

(1 × 25 = 25 marks)

2. (a) Draw the full sectional elevation and sectional plan of a 3-phase transformer for the dimensions given below :

Core diameter	—	220 mm.
Height of core	—	480 mm.
Height of yoke	—	250 mm.
Centre to centre distance between the cores	—	350 mm.

Or

   (b) Draw the single line diagram and Layout of typical 11 kV/400 V indoor substation with two 400 kVA transformers and one generator set. Show the arrangement to sectionalise the bus through the bus couplers.

(1 × 25 = 25 marks)

3. Draw a neat sketch of a foot-mounted, 3-phase Induction motor showing both elevation and side view. Show the following dimensions on it as per Indian Standard Specifications.

   (a) Distance from centre-line of shaft to bottom of feet (H).

   (b) Distance between centre-line of mounting holes (A).

   (c) Overall dimension across feet (BB).

   (d) Diameter of shaft extension (D).

   (e) Overall length of machine with single shaft extension (L).

   (f) Distance from shoulder of shaft to centre-line of mounting holes in the nearest feet (C).

   (g) Length of the second shaft extension from shoulder (EA).

   (h) Overall length of the machine when there is a double shaft extension (LC).

(50 marks)