C 14726

SIXTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION DECEMBER 2010

EE 04 606—ELECTRICAL ENGINEERING DRAWING

(2004 admissions)

Time : Three Hours   Maximum : 100 Marks

I. (a) Draw the winding diagram in developed form for a simplex lapwound 24 slot, 4 poled d.c. armature with 24 commutator segments. Also draw the sequence diagram to show the position of brushes.

(25 marks)

Or

(b) Draw a winding diagram for a 4-pole, 36 slots, 3-phase mush connected armature.

(25 marks)

II. (a) Draw to half scale the sectional plan of one limb showing the winding on a core of an oil immersed 12000/550 volts, 3-phase transformer. The core is 24 cm in dia and has 3 steps. The internal and external diameters of low tension windings are 25.4 cm and 29.8 cm respectively, and of high tension 2.3 cm thick and outer dia 40.5 cm. Show the arrangements for keeping the coils in position and the oil ducts.

Or

(b) Draw the single line diagram of a outdoor transformer station comprising powerloads in an industry.

(25 marks)

III. Draw the half sectional elevation and quarter sectional end of a 3 phase slip ring motor with the following dimensions :

Inside dia. of stator	=	55 cm
Stator length	=	20 cm
Stator overhang on each side	=	10 cm
Length of stator frame	=	38 cm
Dia of rotor	=	54.6 cm
Total length of motor at footstep	=	73 cm
Height of base up to eye bolt	=	93.04 cm
Width at footstep	=	92.76 cm
Foot thickness	=	5 cm
Length	=	14 cm

Other missing data may be assumed.

(50 marks)