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Reg. No. : .....

Name : .....

Seventh Semester B.Tech. Degree Examination, November 2013
(2008 Scheme)
08.705 : ELECTRICAL DRAWING (E)

Time : 3 Hours Max. Marks : 100

PART – A

Answer **any two** questions :

1. a) Draw a 400 KV double circuit transmission tower. 15

   b) Draw the half sectional view of a disc type insulator. 10

2. Draw the single line diagram of a 220 KV substation and mark all the equipments and specifications. 25

3. Draw to a suitable scale the half sectional end view of a squirrelcage induction motor

   Inside dia of stator = 18 cm

   Length of stator = 13.5 cm

   Radial cooling duct = 1 cm wide

   Stator slot size = 0.95 × 2.9 cm

   Outside dia of stator = 32 cm

   Airgap length = 0.06 cm

   Other missing data can be assumed. 25

P.T.O.

PART – B

Answer **any one** question.

4. Draw the full sectional elevation and sectional plan (with winding) of a single phase transformer (core type).

   Core : diameter = 33 cm
   Height of core = 43 cm
   Centre to centre distance between cores = 49 cm
   Yoke construction cruciform
   Yoke height = 25 cm
   Yoke length = $49 + 0.85 \times 33 = 77$ cm
   Total height of transformer = 99 cm
   L.V Winding
   Inside dia of L.V winding = 33.75 cm
   Outside dia of L.V winding = 38.35 cm
   LV winding total turns = 22
   LV wdg conductor cross section made from 20 square straps of size 5.5×5.5 mm = 500 sq:mm
   HT Winding (in 2 layers)
   Outside dia of HT 1st layer = 43.3 cm
   Inside dia of HT 1st layer = 41.5 cm
   Outside dia of HT 2nd layer = 46.8 cm
   Inside dia of HT 2nd layer = 45 cm
   Assume missing data. **50**

5. Draw the half sectional end view and elevation of 3 phase slipring induction motor.

   Inside diameter of stator = 55 cm
   Stator core length = 20 cm
   Stator winding overhang on each side = 10 cm
   Length of stator frame = 38 cm
   Dia of rotor = 54.6 cm
   Total length of motor = 73 cm
   Height of the motor = 93.04 cm
   Assume missing data. **50**