

C 26768

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Name.....

Reg. No.....

**SIXTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION
MAY 2012**

EE/PTEE 09 605—ELECTRICAL ENGINEERING DRAWING

(2009 Admissions)

Time : Three Hours

Maximum : 70 Marks

- I. (a) Draw the developed winding diagram for a 16 slots, 4 pole, double layer lap wound dc machine. Also draw the sequence diagram to show the position of the brushes.

(15 marks)

Or

- (b) Draw a winding diagram for a 4-pole, 24 slots, 3-phase induction motor with single layer Mush winding.

(15 marks)

- II. (a) Sketch the sectional plan and elevation of the core and yoke assembly of 15 kVA, 3-phase, 1000/415 V core type transformer. The main dimensions are given below.

Core diameter = 22 cm ;

Height of the core = 50 cm ;

LV winding in one layer with height = 42.5 cm ;

HV winding in one layer with height = 42.5 cm.

Show suitable spacers and position for LV and HV winding arrangement.

Assume any additional data necessary.

(20 marks)

Or

- (b) Draw the complete layout of a 220 kV substation with two incoming feeders, two 220kV, 20 MVA, 3-phase transformers, one 66 kV outgoing feeder and six 11 kV outgoing feeders. Show all the protective devices.

(20 marks)

- III. (a) Draw to a suitable scale the half sectional front and elevation views of a 20kVA, 4-pole, 3-ph, salient pole alternator with following main dimensions.

Outer dia. of the motor = 50 cm ;

Stator inner dia = 25 cm ;

No of stator slots = 48 ;

Turn over

yoke width = 3 cm,
rotor dia = 24 cm,
rotor length = 16 cm ;
shaft = 3cm dia with ball bearing ;
rotor is provided with damper winding ;
motor height = 52 cm ; motor length = 28 cm ;
Assume any additional data necessary.

(35 marks)

Or

- (b) Draw to a suitable scale the half sectional front and elevation views of squirrel cage induction motor. Main dimensions are given below.

Outer dia. of the motor = 40 cm ;
stator inner dia = 24 cm ;
No. of stator slots = 40 slots
No. of rotor slots = 35 ;
rotor length = 15 cm ;
shaft = 3cm dia with ball bearing ;
motor height = 43 cm ; motor length = 32 cm ;
Assume any additional data necessary.

(35 marks)