

C 41255

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Name

Reg.

**SIXTH SEMESTER B.TECH. (ENGINEERING) DEGREE  
EXAMINATION, MAY 2013**

**EE/PTEE 09 605—ELECTRICAL ENGINEERING DRAWING**

(2009 Admission onwards)



Time : Three Hours

Maximum : 70 Marks

- I. (a) Draw the developed winding diagram for a d.c. machine with 24 slots, 6 pole, double layer lap winding ? Also draw the sequence diagram to show the position of the brushes. (15 marks)

Or

- (b) Develop a three-phase single layer concentric winding for an a.c. machine having 36 slots, 6 pole, hemitropic winding in 3 plane overhang. (15 marks)

- II. (a) Draw the full sectional elevation and sectional plan of core and yoke assembly for a 500 kVA, 6.6 kV/415 V single-phase transformer. Main dimensions are given below :

Core :

Core construction-cruciform

Laminated steel plates of 0.35 mm thickness

Width of largest stamping = 28 cm

Width of smallest stamping = 17.5 cm

Height of core = 45 cm.

Centre to centre distance between cores = 50 cm

Yoke :

construction : cruciform

Yoke height = 25 cm

Yoke length = 78 cm

Total height of transformer = 100 cm

Any missing data may be assumed.

(20 marks)

Or

Turn over

- (b) Draw the complete layout for a 220 kV substation with two incoming feeders, one 110 kV outgoing feeder, five 11 kV outgoing feeders.

(20 marks)

- III. (a) Draw the half sectional front elevation and half sectional end view of the DC machine commutator assembly for the given below main dimensions.

Diameter of commutator = 15 cm

Length of the commutator = 12 cm

Diameter of the shaft = 3 cm

Number of segments = 70

Any missing data may be assumed.

(35 marks)

Or

- (b) Draw the half sectional front and half sectional side elevations of a 20 kVA, 3-phase 4-pole salient pole alternator. Main dimensions are given below.

Motor outside diameter = 50 cm

Stator inside diameter = 27 cm

Slots semi-closed type 42 nos

Shaft diameter = 3 cm

Rotor with damper winding :

Motor length = 30 cm

Dimensions not given are to be assumed.

(35 marks)