



C16-EE-407

5660

BOARD DIPLOMA EXAMINATION, (C-16/C-16S)
OCTOBER/NOVEMBER-2018
DEEE - FOURTH SEMESTER EXAMINATION

ELECTRICAL ENGINEERING DRAWING

Time : 3 Hours]

[Total Marks: 60

PART-A

5X4=20

- Instructions* :
1. Answer **All** questions.
 2. Each question carries **five** marks.

1. Draw the cross sectional elevation of HRC fuse indicating all the parts (not to scale)
2. Draw the half sectional elevation and end view of ball bearings (not to scale)
3. Draw the line diagram of 33/11 KV substation.
4. Draw the sketch for 132KV double circuit steel tower.

PART-B

20X2=40Marks

- Instructions* :
1. Answer **any two** questions.
 2. Each question carries **twenty** marks

5. (a) Draw the end view of a DC machine showing 4 main poles 4 inter poles yoke
(b) Draw the assembled sectionised view of the armature core, hub and shaft whose dimensions are as follows:

*

Diameter of the shaft	:	60
Diameter* of the core	:	440
Diameter of the hub	:	380
Radius from the center of the axle to bolt center	:	125
Dimensions of the bolt head	:	40 X 17
Dimensions of the ventilating duct	:	100
Distance of the duct from the centre	:	60
Length of the core gap equally spaced	:	155

Assume the missing data and all dimensions are in mm only.

6. Draw the sectional elevation and plan of a three phase transformer with the following data:

Cross sectional of the core	:	3 stepped core
Diameter of the circum circle	:	24 cm
Diameter between core centers	:	42.5cm
Size of first core	:	21.6 cm
Size of second core	:	16.8 cm
Size of the third core	:	10.0 cm
Height of yoke	:	25.0 cm
* Overall height of yoke and core	:	110.0 cm
Length of core	:	108.0 cm
Outer dia of LT winding	:	28.3 cm
Inner dia of LT winding	:	25.0 cm
Height of LT winding	:	53.5 cm
Number of turns per phase	:	12
Outer dia of HT winding	:	41.5 cm
Inner dia of HT winding	:	34.3 cm
Height of HT winding	:	53.5 cm
Number of turns per phase	:	572

Assume any missing data.

7. Draw the following views of 7.5 H.P 400 volts 3 phase 1440 rpm slip ring induction motor.

(i) Half sectional front elevation

(ii) Half sectional end view.

The main dimensions have been given as:

Outside diameter of the stator stampings	:	288
Inside diameter of the stator stampings	:	216
Stator core length	:	106
Thickness of the stator frame	:	31
Slots type	:	Open
Number of slots	:	36
Size of slots	:	18 x 12
Air gap	:	4
Outside diameter of rotor stampings	:	212
Inside diameter of rotor stampings	:	36
Rotor core length	:	106
Rotor slots type	:	Open
Number of rotor slots	:	36
Rotor slots size	:	12 x 8
Shaft diameter at center	:	36
Shaft diameter at bearing	:	32

Stator frame has eight and rotor stampings have four equally spaced ducts for ventilation

All dimensions are in mm and assume any missing data.

8. Develop three phase wave winding for an A.C. machine having 24 slots, one conductor per slot and 4 poles.