



C16-EE-406

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**BOARD DIPLOMA EXAMINATION, (C-16)
SEPTEMBER/OCTOBER - 2020
DEEE—FOURTH SEMESTER EXAMINATION
ELECTRICAL ENGINEERING DRAWING**

Time : 3 hours]

[Total Marks : 60

PART—A

5×4=20

Instructions : (1) Answer **all** questions.

(2) Each question carries **five** marks.

(3) Assume any other missing data.

1. Draw a neat sketch of HRC fuse and label the parts.
2. Draw the end view of a DC machine with main poles, interpoles and yoke.
3. Draw a neat sketch of Thyrite-type lightning arrester and label the parts.
4. Draw a neat sketch of 132 kV steel tower for double circuit.

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1

[*Contd...*

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PART—B

20×2=40

Instructions : (1) Answer *any two* questions.

(2) Each question carries **twenty** marks.

(3) Take suitable scale wherever required and assume any other missing data.

5. A 10 kVA three-phase 3300/400 V transformer with 3-stepped core has following dimensions. Draw the full sectional elevation and plan :

Circle diameter of core	8 cm
Distance between core centers	18 cm
LT winding	
Outer diameter	11 cm
Inner diameter	9 cm
HT winding	
Outer diameter	17 cm
Inner diameter	14 cm
Yoke height	10 cm
LT winding height	24 cm
HT winding height	24 cm
Total transformer height	52 cm

Assume any other missing data.

6. (a) Develop a single-layer three-phase lap winding for an AC machine having 4 poles 24 slots and one conductor per slot.

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(b) Draw a neat sketch of transformer yard earthing and label the parts.

7. Draw the half-sectional elevation and end view of a three-phase 440 volts, squirrel-cage induction motor with the following data :

Outer diameter of stator stampings	230 mm
Inner diameter of stator stampings	164 mm
Length of stator core	120 mm
Thickness of stator frame	30 mm

Type of stator slot [*]	Open
Number of stator slots	36
Size of stator slots	15 mm × 8 mm
Width of air gap	2 mm
Outer diameter of rotor stampings	160 mm
Inner diameter of rotor stampings	35 mm
Type of rotor slot	Open
Number of rotor slots	36
Size of rotor slots	12 mm × 6 mm
Shaft diameter a center	35 mm
Shaft diameter at bearings	30 mm

Assume any other missing data.

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