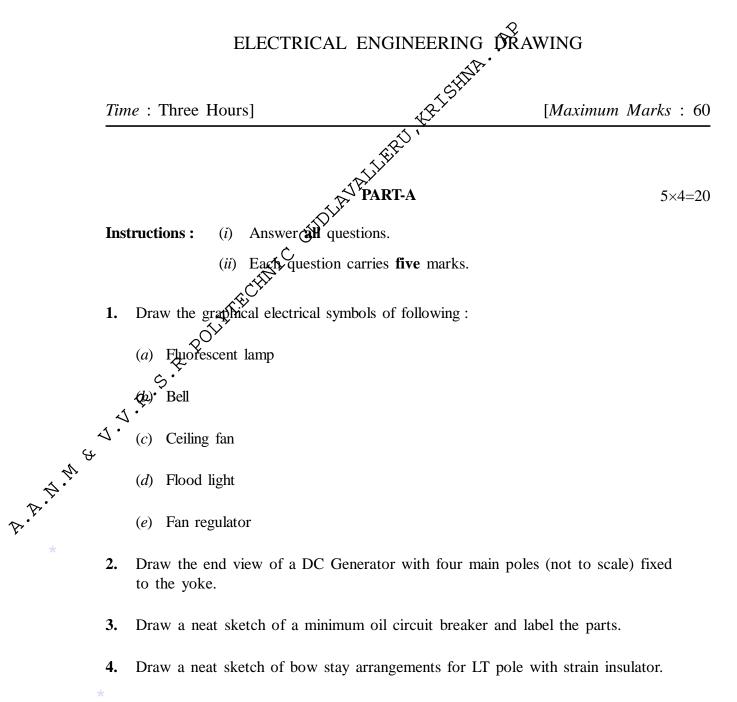


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BOARD DIPLOMA EXAMINATION, (C-16)

MARCH / APRIL — 2021

DEEE — FOURTH SEMESTER EXAMINATION



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

- (ii) Each question carries twenty marks.
- 5. (a) Draw developed diagram of single layer lap winding for a DC machine having 36 armature conductors and 6 poles. Also mark the brush position. 10
 - (b) Draw a neat sketch pipe earthing with pit dimensions and label the parts. 10
- 6. Draw the sectional elevation and plan of a single wase 220/660 V, 10 kVA transformer with the following data : 10+10

		A A	È.	
	i.	Cross-section of the core	3 stepped core	
	ïi.	Cross-section of the core	65 mm	
	<u>iii</u> .	Distance between the core pentres Height of yoke	185 mm	
	iv.	Height of yoke	60 mm	
	v.	Internal diameter ET winding	70 mm	
	vi.	Outer diameter LT winding	120 mm	
		Height of the LT winding	200 mm	
	viii. Ç~	Outer diameter of HT winding	170 mm	
1	ix.	Inner diameter of HT winding	125 mm	
P. P	X.	Number of HT coils per limb	4	
₽. ₽.	xi.	Overall height of yoke and core	360 mm	
*	Use	e five Bakelite rings each of 4 mm thickness	at top and bottom. Assume	

Use five Bakelite rings each of 4 mm thickness at top and bottom. Assume other dimensions and draw to suitable scale.

- 7. (a) Draw the half-sectional end view of a 3-phase, 440 V squirrel cage induction motor with the following dimensions :
 - i. Outer diameter of stator stamping 230 mm

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[Contd...

12

2

	Inner diameter of the stator s	amping 164	mm
*	Thickness of stator frame	25 m	m
	Type of slots	open	L
	Size of stator slots	15×8	3 mm
	Width of air gap	2 mm	n
	. Outer diameter of rotor stamp	ing 160	mm
	i. Inner diameter of rotor stampi	ng 🔗 5 m	m
	Shaft diameter at centre	35 m	m
	Distance between belt hole to	bolt hole 185	mm
	Distance between belt hole to Total distance at footrest ssume any missing dimensions ar	220	mm
	ssume any missing dimensions ar	d label the parts.	
	politicities ***	tarter of a 5-phase 1	nduction motor and
A.A.			

8

*