

Scoring Indicators

COURSE NAME : ELECTRICAL ENGINEERING-1 (TRADE THEORY)

COURSE CODE :1031

QID:

Q No	Scoring Indicators	Split score	Sub Total	Total Score
	PART A			20
I. 1.	d		1	
I. 2.	d		1	
I. 3.	a		1	
I. 4.	a		1	
I. 5.	c		1	
I. 6.	d		1	
I. 7.	c		1	
I. 8.	c		1	
I. 9.	d		1	
I.10.	c		1	
I.11.	b		1	
I.12	d		1	
I.13	b		1	

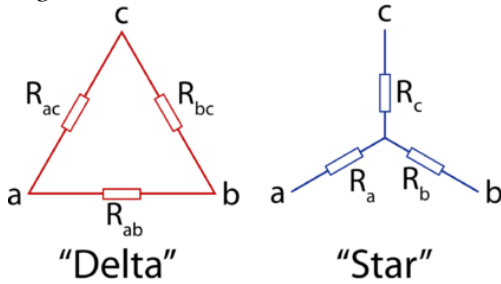
I.14	d		1	
I.15	a		1	
I.16	b		1	
I.17	a		1	
I.18	d		1	
I.19	b		1	
I.20	d		1	
	PART B			60
II. 1.	<ul style="list-style-type: none"> ● MCB ● ELCB ● RCCB ● MCCB ● Kitkat fuse 	5x1	5	
II. 2.	<i>Area of the electrode, earth resistance, type of soil, moisture content, depth of electrode, temperature</i>	5x1	5	
II. 3.	<i>Any 3 comparison Figure</i>	3x1 2x1	5	
II.4	Figure	3	5	

Definition -apparent power
Formula of apparent power

2
0.5

II.10.

Figure



“Delta”

“Star”

Comparison

Sl. No.	Star (Y) Connected System	Delta (Δ) Connected System
1.	In star connected system there is common point known as neutral 'n' or star point. It can be earthed.	There is no neutral point in delta connected system
2.	In star connected system we get 3-phase, three wire system and also 3-phase, 4 wire system is taken out.	Only 3-phase, 3 wire system is possible in delta connected system
3.	Line voltage $V_L = \sqrt{3} V_{ph}$ or, $V_{ph} = \frac{1}{\sqrt{3}} V_L$	Line voltage = Phase voltage $V_L = V_{ph}$
4.	Line current = Phase current $I_L = I_{ph}$	Line current $I_L = \sqrt{3} I_{ph}$ $I_{ph} = \frac{1}{\sqrt{3}} I_L$
5.	Three phase power = $\sqrt{3} V_L I_{ph} \cos \phi$ $= 3 V_{ph} I_{ph} \cos \phi$	Three phase power = $\sqrt{3} V_L I_L \cos \phi$ $= 3 V_{ph} I_{ph} \cos \phi$

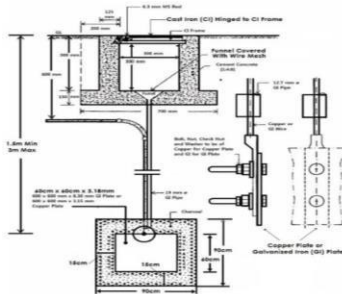
2
5
3

II.11

Any one method – pipe/plate earthing

Figure

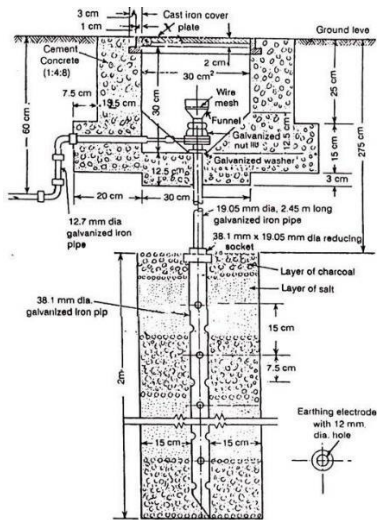
Plate Type Earthing



Pipe earthing

3
2

5



explanation

II.12

Any 5 measures

- *Keep the top of every battery clean to prevent corrosion and leakage of current.*
- *Keep the level of electrolyte battery. Distilled water is only added to the electrolyte till all plates are completely submerged in electrolyte.*
- *Check the condition of electrolyte by checking specific gravity by hydrometer.*
- *Do not charge the battery at high rise in temperature excessive gassing will take place.*
- *Do not over charge the battery.*
- *Do not keep the battery in a discharged condition for several days.*
- *Do not allow the short circuit of terminals of the battery. Since internal resistance is very small, heavy current flows when short circuit occurs and plates of the battery get damaged*

5x1

5