

Hall Ticket Number:

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Code No. : 13119D

VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD
B.E. (CBCS) III-Semester Main Examinations, December-2018

Electrical Installation and Safety
 (Open Elective-I)

Time: 3 hours

Max. Marks: 60

Note: Answer ALL questions in Part-A and any FIVE from Part-B

Q.No.	Stem of the question	M	L	CO	PO
Part-A (10 × 2 = 20 Marks)					
1.	What do you understand by Electrical wiring?	2	2	1	1,2
2.	Which parameters decide the selection of wiring?	2	1	1	1,2
3.	What is meant by Electrocutation?	2	2	2	1
4.	List the Hazards of Electricity.	2	1	2	1
5.	What are the requirements of good lighting?	2	2	3	1
6.	What is meant by stroboscopic effect?	2	2	3	1
7.	Which type of starter will you suggest for 500W, 1-ph, Induction motor?	2	3	4	1,2
8.	How do you determine the rating of the fuse switch used for motor?	2	3	4	1,2
9.	Why ducts are used in Electrical installation?	2	1	1	1,2
10.	Calculate the input current drawn by a 5 H.P Irrigation pump.	2	3	4	1,2
Part-B (5 × 8 = 40 Marks)					
11. a)	Explain about Cleat wiring with a neat sketch.	6	2	1	1,2
b)	Estimate the current drawn by 120KVA load.	2	5	1	1,2
12. a)	What do you understand by Cardio Pulmonary Resuscitation? Explain steps involved in it.	6	2	2	1
b)	How much is the resistance of Dry skin of Human body?	2	2	2	1
13. a)	An auditorium of 25m X 8m X 5m is to be fitted with eight fans of 60W each and the illumination required is 10W/m ² . Estimate the number of lamps with wattage and draw the arrangement of lamps fans.	6	5	3	1
b)	What is the maximum load and number of points that can be connected in a lighting sub-circuit?	2	2	3	1
14. a)	A workshop of 20m X 40m has to be equipped with 5hp, 3hp, 1hp 3-ph, 415V motors. Determine the size of main fuse switch, motor control switch and cable sizes of each motor.	6	3	4	1,2
b)	Why starter is necessary for the Induction motor?	2	2	4	1,2
15. a)	What do you understand by Artificial External Defibrillator?	3	1	2	1
b)	Explain the Hazards of electricity in detail.	5	3	2	1

Contd...2

16. a)	Calculate the size of service cable required for a commercial building with a connected load of 25KVA.	4	3	3	1
b)	Give the required standard Lux levels of Hall, Kitchen, corridor and Bed room.	4	2	3	1
17.	Answer any <i>two</i> of the following:				
a)	Explain the points to be considered for selection of wiring	4	2	1	1,2
b)	How many points and how much load can be connected in a Raw power sub circuit?	4	2	3	1
c)	A Factory of 36m X 20m is to be illuminated so as to provide 35 lumens/m ² . If the mounting height 3m, space height ratio 1.3 and depreciation 1.3. Calculate the number of incandescent lamps, wattage of each lamp if the utilization factor is 50%.	4	3	4	1,2

M: Marks; L: Bloom's Taxonomy Level; CO: Course Outcome; PO: Programme Outcome

S. No.	Criteria for questions	Percentage
1	Fundamental knowledge (Level-1 , 2)	56
2	Knowledge on application and analysis (Level-3 , 4)	34
3	*Critical thinking and ability to design (Level-5 , 6) (*wherever applicable)	10
