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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY: PUTTUR
(AUTONOMOUS)

B. TECH II Year I Semester Supplementary Examinations December-2021
BASIC ELECTRICAL AND MECHANICAL ENGINEERING
(Civil Engineering)

Time: 3 hours

Max. Marks: 60

(Answer all Six Units 6 X 10 = 60 Marks)

PART- A**UNIT-I**

- 1 a State and explain Kirchoffs current law 5M
b State and explain Kirchoffs Voltage law 5M

OR

- 2 Explain the construction and working principle of PMMC type instruments. 10M

UNIT-II

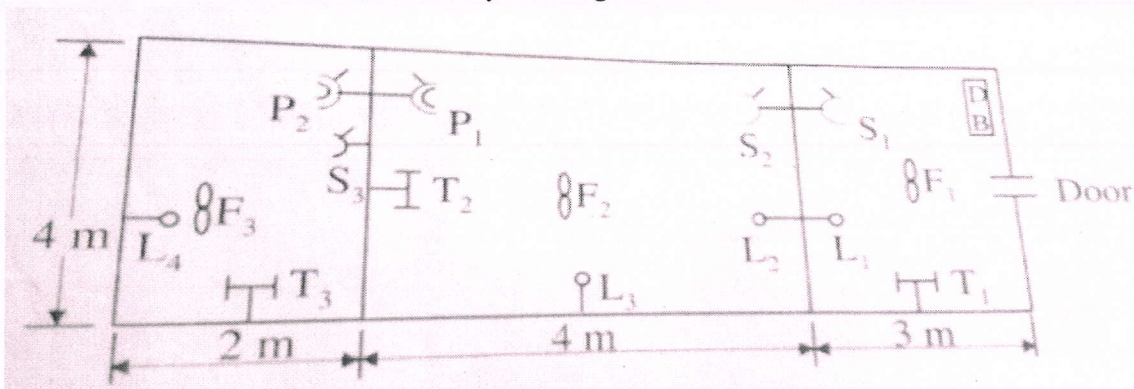
- 3 a Define the Plane angle and solid angle. 2M
b State and explain the Laws of Illumination 8M

OR

- 4 a Explain the following electrical wiring system with necessary diagrams.CTS wiring 5M
b Concealed wiring 5M

UNIT-III

- 5 The plan of a residential building is shown in figure. It is to be provided with PVC system of wiring. Estimate the no. of sub circuits required. Also estimate the size of the cables, main switch and distribution box. Assume any missing data. 10M



OR

- 6 What are the steps to be followed for estimation of power load installations? Explain in detail 10M

PART - B**UNIT-I**

- 7 a What are the various classifications of air compressors? 3M
b Explain Centrifugal and Axialflow compressor with neat sketch. 7M

OR

- 8 Explain Central Packaged Air Conditioner with neat sketch. 10M

UNIT-II

- 9 Explain Belt and bucket conveyers & Power shovel with neat sketch. 10M

OR

- 10 a What are the types of flat belt drives? 3M
b Explain about open belt and cross belt drives? 7M

UNIT-III

- 11 a What is welding? What are the types of welding process? 5M
- b What are the applications of welding? 5M

OR

- 12 a What is TIG welding? 3M
- b Explain working of TIG Welding process with neat sketch. 7M

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