



**B.E DEGREE EXAMINATIONS: MAY 2018**

(Regulation 2015)

Fourth Semester

**CIVIL ENGINEERING**

U15CET401: Building Services

**COURSE OUTCOMES**

- CO1:** Plan for essential services for the building  
**CO2:** Choose appropriate equipment for buildings  
**CO3:** Implement wiring systems and prepare the plan for electrical wiring for buildings  
**CO4:** Plan for lighting facilities in the building  
**CO5:** Choose suitable air conditioning system for the building  
**CO6:** Choose fire safety systems for various types of buildings

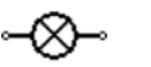
**Time: Three Hours**

**Maximum Marks: 100**

**Answer all the Questions:-  
PART A (10 x 1 = 10 Marks)**

1. Match List I with List II

CO3 [K<sub>1</sub>]

List I		List II	
A.		i.	Lamp
B.		ii.	Fuse
C.		iii.	Transformer
D.		iv.	Open Switch

- |    |     |    |     |    |
|----|-----|----|-----|----|
|    | A   | B  | C   | D  |
| a) | ii  | i  | iii | iv |
| b) | iii | iv | ii  | i  |
| c) | ii  | iv | iii | i  |
| d) | iii | i  | ii  | iv |

2. The maximum distances to be travelled by an occupant to reach an exit for a business/ office building is

CO6 [K<sub>2</sub>]





23. a) Discuss on the classification of lighting schemes available. (7)
- b) What are the special features considered in lighting for physically handicapped people? (7) CO4 [K<sub>2</sub>]
24. What is the need for vibrators in concrete manufacturing? List and explain the types of vibrators used in construction field. CO2 [K<sub>2</sub>]
25. Discuss in detail about any four active systems that can be adopted to protect against fire in buildings. CO6 [K<sub>2</sub>]
26. Elaborate in detail about
- i) Window air conditioners (6) CO5 [K<sub>1</sub>]
- ii) Cooling towers. (8)
27. List out the various recommendations of National Building Code with respect to fire safety. CO6 [K<sub>1</sub>]

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