

Reg. No: 

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**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**  
(AUTONOMOUS)

**B.Tech II Year I Semester Regular & Supplementary Examinations March-2023**  
**BUILDING TECHNOLOGY**

(Civil Engineering)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

**UNIT-I**

- 1 Describe briefly spread footing with neat sketch. CO1 L1 12M
- OR
- 2 What are the causes of failure of foundations? What measures are to be taken to prevent such failure? CO1 L1 12M

**UNIT-II**

- 3 What is the purpose of flooring and what are the materials used for construction? CO2 L1 12M
- OR
- 4 a Define Plastering. What are the objectives or requirements of Plastering? CO2 L1 6M  
b Write short notes on types of mortars for plastering? CO2 L1 6M

**UNIT-III**

- 5 a Explain briefly about Dog-legged stair case with neat sketch CO3 L2 6M  
b Plan a dog legged stair for a building in which the vertical distance between the floors is 3.6m. The stair hall measures 2.5m x 5m. CO3 L3 6M
- OR
- 6 a State briefly essential requirements of a good roof. CO4 L2 6M  
b Explain, in brief with neat sketches CO4 L2 6M  
i) Madras Terrace roof ii) Bengal Terrace roof

**UNIT-IV**

- 7 a What are the functional requirements of a good ventilating system? CO5 L1 6M  
b Describe briefly various types of filters for Air-conditioning CO5 L1 6M
- OR

- 8 Summarize the fire-resisting properties of common building materials. CO5 L2 12M

**UNIT-V**

- 9 An office block with 20 storeys above ground floor having unified starting and stopping times is to have a floor area above the ground floor of 8000 m<sup>2</sup> and floor pitch of 3 m. A group of four lifts, each car having a capacity of 20 persons and a car speed of 2.5 m/s are specified. The clear door width is to be 1.1 m and the doors are to open at a speed of 0.4 m/s. Estimate the interval for the group. CO6 L4 12M

OR

- 10 Discuss how Radio sensor, pressure mat and taut wiring detectors are security for various buildings. CO6 L2 12M

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**INDIAN INSTITUTE OF ENGINEERING & TECHNOLOGY, PATNA**  
**(AUTONOMOUS)**  
**B.Tech II Year I Semester Regular & Supplementary Examinations March-2023**  
**BUILDING TECHNOLOGY**  
**(Civil Engineering)**

Time: 3 hours  
 Max. Marks: 60  
 (Answer all Five Units 2 x 12 = 60 Marks)

**UNIT-I**

1 Describe briefly ground footing with neat sketch. CO1 L1 12M

2 What are the causes of failure of foundation? What measures are to be taken to prevent such failure? CO1 L1 12M

**UNIT-II**

3 What is the purpose of footing and what are the materials used for construction? CO1 L1 12M

4 a) Define 'Roofing'. What are the objectives or requirements of 'Roofing'? CO2 L1 6M

b) What kind roof is an apex or gable roof? CO2 L1 6M

**UNIT-III**

5 a) Explain briefly about three-legged joint with neat sketch. CO3 L1 6M

b) The following is a section of a building in which the vertical distance between the floor is 3.0m. The stair fall measures 2.5m x 2m. CO3 L1 6M

6 a) Describe briefly essential requirements of a good roof. CO4 L1 6M

b) Explain in brief with neat sketches: CO4 L1 6M

i) Pitched Truss roof ii) Bangal Truss roof

**UNIT-IV**

7 a) What are the functional requirements of a good ventilating system? CO5 L1 6M

b) Describe briefly various types of filter for air-conditioning. CO5 L1 6M

8 Summarize the fire resisting properties of common building materials. CO6 L1 12M

**UNIT-V**

9 The office block with 20 columns above ground floor having rafted ceiling and supporting them is to have a floor area above the ground floor of 8000 m<sup>2</sup> and floor area of 5 m. A group of four floor each can having a capacity of 20 persons and a rise of 1.7 m is specified. The clear floor width is to be 1.1 m and the doors are to open in a span of 1.4 m. Estimate the interval for the group. CO6 L1 12M

10 Discuss how loads are transferred from one floor to another in a building. CO6 L1 12M