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## Question Paper Code: 50530

#### B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2024.

Third Semester

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Civil Engineering

#### CE 3302 - CONSTRUCTION MATERIALS AND TECHNOLOGY

(Regulations 2021)

(Common to PTCE 3302 - Construction Materials and Technology for B.E (Part-Time) Second Semester - Civil Engineering - Regulations-2023)

Time: Three hours Maximum: 100 marks

Answer ALL questions.

 $PART A - (10 \times 2 = 20 \text{ marks})$ 

- Mention few field tests on bricks.
   State the uses of lime.
   List the properties of glass.
   Identify few earth reinforcement materials.
- Mention different types of scaffolding.
- 6. State situations necessitate under pinning.
- Identify the equipments used for
  - (a) Compacting the concrete (1)
  - (b) Digging for under water construction (1)
- 8. Mention the function of the following equipments
  - (a) Trencher (1)
  - (b) Power shovel excavator (1)
- 9. Define the term 'construction planning'.
- Mention any two construction scheduling techniques.

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## PART B — $(5 \times 13 = 65 \text{ marks})$

11.	(a)	Discuss on various criteria for the selection of a good stone for the construction purpose. (13)
		Or
	(b)	Explain the properties of different types of lime with their application. (13)
12.	(a)	Describe the various types of composite materials with their uses. (13)
		Or
	(b)	Identify the various materials involved in false ceiling work and explain the properties of any one of them. (13)
13.	(a)	Enumerate different types of shallow foundation with the neat sketches. (13)
		Or
	(b)	(i) Explain the various components involved in fire protection system in a building. (7)
		(ii) Describe how natural ventilation can be achieved in a building. (6)
14.	(a)	Suggest the right choice of tools and equipments for the concreting work in a multistoried building and explain the specific functions of the same.  (13)
		Or
	(b)	Identify the various equipments to be used for earth work excavation and dewatering the foundation pit when seepage of sub soil water is appeared. (13)
15.	(a)	(i) Describe the various types of planning for network construction. (6)
		(ii) Explain the three kinds of time estimate permitted by PERT. (7)
		Or
	(b)	Explain the various time elements involved in Critical Path Method. (13)

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### PART C — $(1 \times 15 = 15 \text{ marks})$

16. (a) Suggest various materials for an interior work for a show room and discuss the application of the same for the various components involved in the interior work. (15)

Or

(b) Recommend a scheduling technique for a metro construction project and explain the features of the same. (15)

