

Reg. No.

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B.E./ B. TECH.DEGREE EXAMINATIONS, MAY 2024

Third Semester

CE22302– CONSTRUCTION TECHNIQUES EQUIPMENT AND PRACTICES*(Civil Engineering)***(Regulation2022)****TIME:3 HOURS****MAX. MARKS: 100**

COURSE OUTCOMES	STATEMENT	RBT LEVEL
CO 1	Know the different construction techniques and structural systems	2
CO 2	Identify suitable site and techniques involved in good construction practices	2
CO 3	Apply appropriate technique for sub structure in a construction project.	2
CO 4	Apply appropriate technique for super structure in a construction project.	2
CO 5	Identify the different construction equipments for various applications	2

PART- A (20x2=40 Marks)

(Answer all Questions)

	CO	RBT LEVEL
1. Mention the types of buildings based on the Structural System.	1	2
2. List out the recent smart materials used in building construction.	1	2
3. Outline the major sources to be considered to make the building energy efficient.	1	2
4. Comment about Building Automation System.	1	2
5. State the purpose of providing DPC in a building.	2	2
6. Brief the essential requirements of form work.	2	2
7. State the various types of flooring adopted in practice.	2	2
8. Define the following terms: a) Header b) Stretcher	2	2
9. Define a caisson. What are its types?	3	2
10. List out the various methods of tunneling in soft soil.	3	2

11.	What are problems normally developed during deep excavations?	3	2
12.	Write any two functions of sheet pile.	3	2
13.	Mention the reasons for using special forms of shells.	4	2
14.	Write the various operations involved in the construction of offshore platforms.	4	2
15.	How skyscraper is differentiated from normal structure.	4	2
16.	State the problems that may occur in construction of cooling towers.	4	2
17.	Brief the functions of earth movers.	5	2
18.	Mentions the names of any two equipment necessary for pile driving.	5	2
19.	List the equipment used for compacting concrete in a beam.	5	2
20.	How do you calculate the output of the scraper?	5	3

PART- B (5x 10=50 Marks)

		Marks	CO	RBT LEVEL
21. (a)	Elaborate the role of materials and methods to achieve green building concepts.	(10)	1	3
(OR)				
(b)	Explain in detail about Limitation, benefits and requirements of Intelligent buildings.	(10)	1	3
22. (a)	Classify various types of stone masonry with neat diagrams.	(10)	2	2
(OR)				
(b)	Write short notes on	(10)	2	2
	(i) Stretcher bond			
	(ii) Header bond			
	(iii) English bond			
	(iv) Flemish bond			

23. (a) In which situation pile foundation is adopted? Explain the various types of pile foundation with a neat sketch. **(10) 3 3**

(OR)

(b) What is a cofferdam? With the help of sketches explain the types of cofferdams. **(10) 3 3**

24. (a) What are the erection methods available for launching heavy decks and explain them. **(10) 4 3**

(OR)

(b) Explain the procedure of prestressing in detail and also explain in-situ prestressing in high rise building. **(10) 4 3**

25. (a) Explain the working principle of a concrete batching and mixing plant with neat sketch. **(10) 5 2**

(OR)

(b) What factors must be taken into account during selection of earthwork equipment? **(10) 5 2**

PART- C (1x 10=10Marks)

(Q.No.26 is compulsory)

		Marks	CO	RBT LEVEL
26.	Explain the working principle and constructional features of tunnel boring machine with neat diagram.	(10)	3	5
