Q. Code: 559022

Reg. No. | | | | | | | | | | | | | |

B.E. / B.TECH. DEGREE EXAMINATIONS, MAY 2024
CE18007 – CONCRETE TECHNOLOGY

(Civil Engineering)

(Regulation 2018/2018A)

(Code books permitted: IS456, IS10262)

TIME: 3 HOURS **MAX. MARKS: 100**

COURSE OUTCOMES	STATEMENT	RBT LEVEL
CO 1	Describe the various constituent materials used in concrete and their functions.	**2**
CO 2	Explain the effects of chemical and mineral admixtures on the properties of concrete.	**2**
CO 3	Design concrete mixes using BIS and ACI Codes.	**2**
CO 4	Describe the procedures to determine the properties of fresh and hardened concrete.	**2**
CO 5	Summarise the suitability of special concretes for different practical situations.	**2**

PART- A (10 x 2 = 20 Marks)

(Answer all Questions)

		CO	RBT LEVEL
1.	What is the effect of Ca (OH)2 in concrete?	**1**	**2**
2.	Write about heat of hydration.	**1**	**1**
3.	What is the function of accelerators?	**2**	**1**
4.	Differentiate between plasticizers and super plasticizers.	**2**	**2**
5.	Differentiate between nominal mix and design mix.	**3**	**2**
6.	List out the factors affecting the choice of mix proportions.	**3**	**2**
7.	State the importance of controlling workability.	**4**	**2**
8.	What is the effect of maximum size aggregate on strength?	**4**	**2**
9.	State the advantages of Ready Mixed Concrete.	**5**	**1**

10.	List the types of polymer concrete.	**5**	**1**	

PART- B (5 x 14 = 70 Marks)

		Marks	CO	RBT LEVEL
11. (a)	Summarise about the properties of aggregates.	**(14)**	**1**	**2**
	(OR)			
(b)	Explain in detail any three laboratory tests conducted on cement as per IS code.	**(14)**	**1**	**2**
12. (a)	Write briefly about the functions and requirements of water proofing admixtures.	**(14)**	**2**	**2**
	(OR)			
(b)	Discuss about mineral admixtures used in concrete.	**(14)**	**2**	**2**
13. (a)	Describe about the requirements for concrete mix design.	**(14)**	**3**	**2**
	(OR)			
(b)	Explain the design procedure of BIS method concrete mix design.	**(14)**	**3**	**2**
14. (a)	List out the tests to be conducted on fresh concrete and explain any two tests to be conducted on it.	**(14)**	**4**	**2**
	(OR)			
(b)	Enumerate on any three tests on hardened concrete.	**(14)**	**4**	**2**
15. (a)	Explain about self-compacting concrete and shotcrete.	**(14)**	**5**	**2**
	(OR)			
(b)	Discuss about Fibre Reinforced Concrete. Mention the fibres used in concrete.	**(14)**	**5**	**2**

PART- C (1 x 10 = 10 Marks)

(Q.No.16 is compulsory)

		Marks	CO	RBT LEVEL
16.	Differentiate high strength and high performance concrete.	**(10)**	**5**	**4**

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