

	Subject Code: KCE05							2051						
Roll No:														

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## B. TECH (SEM-V) THEORY EXAMINATION 2020-21 CONCRETE TECHNOLOGY

Time: 3 Hours Total Marks: 100

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

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Qno.         Question         Marks         CC           a.         Enlist the Bogue's composition of cement.         2         1           b.         What are supplementary cementitious materials.         2         2         3           c.         What is the Rheological representation of Creep?         2         4           e.         What is ferro-cement?         2         5           f.         What do you understand by Soundness of aggregate?         2         1           g.         Write down the advantages of accelerators.         2         2         1           h.         Define creep of concrete?         2         3         2         4           j.         Give the statement of Abram's law.         2         5         4           j.         Compare recycled aggregate and natural aggregate.         2         5           2.         Attempt any three of the following:         3x10=30           Attempt any three of the following:         3x10=30           a.         Write down the names of important compounds of cement and explain the influence of each on the properties of cement.         10         1           b.         Describe the mechanism of action of plasticizers with neat sketch. Mention any three Super plasticizers.         10         2	1	Attempt all questions in brief.	2 v 10	- 20
a. Enlist the Bogue's composition of cement. b. What are supplementary cementitious materials. c. What is the Rheological representation of Creep? d. What is the Rheological representation of Creep? e. What is ferro-cement? 2 5 f. What do you understand by Soundness of aggregate? g. Write down the advantages of accelerators. 2 17 g. Write down the advantages of accelerators. 2 2 3 h. Define creep of concrete? 1 2 3 i. Give the statement of Abram's law. j. Compare recycled aggregate and natural aggregate. 2 5  SECTION B  Attempt any three of the following:  a. Write down the names of important compounds of cement and explain the influence of each on the properties of cement. b. Describe the mechanism of action of plasticizers with neat sketch. Mention any three Super plasticizers. c. Describe in detail Vee-Bee consistemetr test to determine workability of concrete. d. Write the factors to be considered for a mix design. e. What is the need to study fiber reinforced concrete and explain briefly the factors effecting properties of fiber reinforced concrete and explain briefly the factors effecting properties of fiber reinforced concrete and explain briefly the factors effecting properties of fiber reinforced concrete and explain briefly the factors effecting properties of fiber reinforced concrete and explain briefly the factors effecting properties of fiber reinforced concrete and explain briefly the factors effecting properties of fiber reinforced concrete and explain briefly the factors effecting properties of fiber reinforced concrete and explain briefly the factors effecting properties of fiber reinforced concrete and explain briefly the factors effecting properties of fiber reinforced concrete and explain briefly the factors effecting properties of fiber reinforced concrete and explain briefly the factors effecting properties of fiber reinforced concrete and explain briefly the factors effecting properties of fiber reinforced concrete?  3. Attempt any one part of the following:  a. Explain manufacturing proc	Ono.			1
b. What are supplementary cementitious materials.  c. What are the different methods of curing?  d. What is the Rheological representation of Creep?  c. What is ferro-cement?  f. What do you understand by Soundness of aggregate?  g. Write down the advantages of accelerators.  h. Define creep of concrete?  i. Give the statement of Abram's law.  j. Compare recycled aggregate and natural aggregate.  SECTION B  Attempt any three of the following:  a. Write down the names of important compounds of cement and explain the influence of each on the properties of cement.  b. Describe the mechanism of action of plasticizers with neat sketch. Mention any three Super plasticizers.  c. Describe in detail Vee-Bee consistometer test to determine workability of concrete.  d. Write the factors to be considered for a mix design.  e. What is the need to study fiber reinforced concrete and explain briefly the factors effecting properties of fiber reinforced concrete?  3. Attempt any one part of the following:  a. Explain manufacturing processes of cement with neat diagram. Give comparison between wet and dry process of manufacturing.  b. Briefly describe the physical, mechanical, and thermal properties of aggregates in concrete.  4. Attempt any one part of the following:  a. Explain manufacture with their use. Also give advantage and disadvantage of fly ash.  b. What is admixture? Why is it used with concrete? Also give its type.  10 2  5. Attempt any one part of the following:  a. Write about segregation and its causes. How reduce segregation of concrete?  a. Write about segregation and its causes. How reduce segregation of concrete?  10 3  b. Define durability of concrete, Also discuss the factors affecting concrete?  10 4  Attempt any one part of the following:  a. Explain step by step the IS method of mix proportioning.  b. Define durability of concrete, Also discuss the factors affecting concrete?  10 4  Attempt any one part of the following:  a. Explain step by step the IS method of mix proportioning.  b. Describe the effect		`		
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Attempt any three of the following:   Question   Question   Marks   CC		· · · · · · · · · · · · · · · · · · ·		
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disadvantage of fly ash.  b. What is admixture? Why is it used with concrete? Also give its type.  5. Attempt any one part of the following:  a. Write about segregation and its causes. How reduce segregation of concrete?  b. Define durability of concrete. Also discuss the factors affecting concrete durability.  6. Attempt any one part of the following:  a. Explain step by step the IS method of mix proportioning.  b. Describe the effect of rheological properties on different types of concrete.  7. Attempt any one part of the following:  a. What is self-compacting concrete? What are the properties, advantages, and disadvantages of self-compacting concrete?	4.	Attempt any one part of the following:		10
5. Attempt any one part of the following:  a. Write about segregation and its causes. How reduce segregation of concrete? 10 3  b. Define durability of concrete. Also discuss the factors affecting concrete 10 3  durability.  6. Attempt any one part of the following: 1x10=10  a. Explain step by step the IS method of mix proportioning. 10 4  b. Describe the effect of rheological properties on different types of concrete. 10 4  7. Attempt any one part of the following: 1x10=10  a. What is self-compacting concrete? What are the properties, advantages, and disadvantages of self-compacting concrete?	a.		10	2
a. Write about segregation and its causes. How reduce segregation of concrete? 10 3  b. Define durability of concrete. Also discuss the factors affecting concrete durability.  6. Attempt any one part of the following: 1x10=10  a. Explain step by step the IS method of mix proportioning. 10 4  b. Describe the effect of rheological properties on different types of concrete. 10 4  7. Attempt any one part of the following: 1x10=10  a. What is self-compacting concrete? What are the properties, advantages, and disadvantages of self-compacting concrete?	b.	What is admixture? Why is it used with concrete? Also give its type.	10	2
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durability.  6. Attempt any one part of the following:  a. Explain step by step the IS method of mix proportioning.  b. Describe the effect of rheological properties on different types of concrete.  7. Attempt any one part of the following:  a. What is self-compacting concrete? What are the properties, advantages, and disadvantages of self-compacting concrete?	a.		10	3
a. Explain step by step the IS method of mix proportioning.  b. Describe the effect of rheological properties on different types of concrete.  7. Attempt any one part of the following:  a. What is self-compacting concrete? What are the properties, advantages, and disadvantages of self-compacting concrete?  10 4  1x10=10	b.		10	3
b. Describe the effect of rheological properties on different types of concrete. 10 4  7. Attempt any one part of the following: 1x10=10  a. What is self-compacting concrete? What are the properties, advantages, and disadvantages of self-compacting concrete?	6.			=10
7. Attempt any one part of the following:  a. What is self-compacting concrete? What are the properties, advantages, and disadvantages of self-compacting concrete?  5 disadvantages of self-compacting concrete?				4
a. What is self-compacting concrete? What are the properties, advantages, and disadvantages of self-compacting concrete?				
disadvantages of self-compacting concrete?	7.			
b. Difference between High performance concrete and high-density concrete. 10 5	a.	disadvantages of self-compacting concrete?	10	5
	b.	Difference between High performance concrete and high-density concrete.	10	5