

Code No: R05310103

**R05**

**Set No. 2**

**III B.Tech I Semester Examinations, December 2011**  
**CONCRETE TECHNOLOGY**  
**Civil Engineering**

**Time: 3 hours**

**Max Marks: 80**

**Answer any FIVE Questions**  
**All Questions carry equal marks**

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1. Design mix proportions with the following data using IS code method. Characteristic compressive strength of concrete 20Mpa. Use 20mm Maximum size crushed aggregate. with medium degree of workability. Specific gravity of concrete 3.15 specific gravity of coarse and fine aggregates 2.65. Zone III sand. Quality control is good. [16]
2. (a) Explain dynamic modulus of elasticity and its relationship with poisons ratio.  
(b) Explain procedure for determining poisons ratio from dynamic modulus of elasticity using Ultrasonic pulse velocity equipment. [6+10]
3. List out and explain factors on which the properties of hardened concrete depends upon. [16]
4. (a) Explain salient features of self-compacting concrete.  
(b) Explain various test methods for assessing workability properties of self-compacting concrete. [6+10]
5. (a) Define admixture.  
(b) Explain various purposes for which the admixtures are used in modifying the properties of concrete to suit specific need. [4+12]
6. List out and explain the significance of various types of tests on hardened concrete. [16]
7. Explain procedure for determination of workability of concrete using Vee Bee Consistometer test with neat diagram. [16]
8. (a) Define Bulking of fine aggregate. Explain its practical significance.  
(b) Explain procedure for determining of bulking chart of fine aggregate. [6+10]

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**R05**

**Set No. 4**

**III B.Tech I Semester Examinations, December 2011**  
**CONCRETE TECHNOLOGY**  
**Civil Engineering**

**Time: 3 hours**

**Max Marks: 80**

**Answer any FIVE Questions**  
**All Questions carry equal marks**

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1. Design mix proportions with the following data using IS code method. Characteristic compressive strength of concrete 20Mpa. Use 20mm Maximum size crushed aggregate. with medium degree of workability. Specific gravity of concrete 3.15 specific gravity of coarse and fine aggregates 2.65. Zone III sand. Quality control is good. [16]
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(b) Explain procedure for determining poisons ratio from dynamic modulus of elasticity using Ultrasonic pulse velocity equipment. [6+10]
3. List out and explain factors on which the properties of hardened concrete depends upon. [16]
4. Explain procedure for determination of workability of concrete using Vee Bee Consistometer test with neat diagram. [16]
5. List out and explain the significance of various types of tests on hardened concrete. [16]
6. (a) Define admixture.  
(b) Explain various purposes for which the admixtures are used in modifying the properties of concrete to suit specific need. [4+12]
7. (a) Explain salient features of self-compacting concrete.  
(b) Explain various test methods for assessing workability properties of self-compacting concrete. [6+10]
8. (a) Define Bulking of fine aggregate. Explain its practical significance.  
(b) Explain procedure for determining of bulking chart of fine aggregate. [6+10]

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**R05**

**Set No. 1**

**III B.Tech I Semester Examinations, December 2011**  
**CONCRETE TECHNOLOGY**  
**Civil Engineering**

**Time: 3 hours**

**Max Marks: 80**

**Answer any FIVE Questions**  
**All Questions carry equal marks**

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1. (a) Explain dynamic modulus of elasticity and its relationship with poisons ratio.  
(b) Explain procedure for determining poisons ratio from dynamic modulus of elasticity using Ultrasonic pulse velocity equipment. [6+10]
2. (a) Define Bulking of fine aggregate. Explain its practical significance.  
(b) Explain procedure for determining of bulking chart of fine aggregate. [6+10]
3. Explain procedure for determination of workability of concrete using Vee Bee Consistometer test with neat diagram. [16]
4. List out and explain factors on which the properties of hardened concrete depends upon. [16]
5. List out and explain the significance of various types of tests on hardened concrete. [16]
6. (a) Define admixture.  
(b) Explain various purposes for which the admixtures are used in modifying the properties of concrete to suit specific need. [4+12]
7. Design mix proportions with the following data using IS code method. Characteristic compressive strength of concrete 20Mpa. Use 20mm Maximum size crushed aggregate. with medium degree of workability. Specific gravity of concrete 3.15 specific gravity of coarse and fine aggregates 2.65. Zone III sand. Quality control is good. [16]
8. (a) Explain salient features of self-compacting concrete.  
(b) Explain various test methods for assessing workability properties of self-compacting concrete. [6+10]

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**R05**

**Set No. 3**

**III B.Tech I Semester Examinations, December 2011**  
**CONCRETE TECHNOLOGY**  
**Civil Engineering**

**Time: 3 hours**

**Max Marks: 80**

**Answer any FIVE Questions**  
**All Questions carry equal marks**

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1. (a) Define admixture.  
(b) Explain various purposes for which the admixtures are used in modifying the properties of concrete to suit specific need. [4+12]
2. (a) Explain salient features of self-compacting concrete.  
(b) Explain various test methods for assessing workability properties of self-compacting concrete. [6+10]
3. List out and explain factors on which the properties of hardened concrete depends upon. [16]
4. (a) Define Bulking of fine aggregate. Explain its practical significance.  
(b) Explain procedure for determining of bulking chart of fine aggregate. [6+10]
5. Design mix proportions with the following data using IS code method. Characteristic compressive strength of concrete 20Mpa. Use 20mm Maximum size crushed aggregate. with medium degree of workability. Specific gravity of concrete 3.15 specific gravity of coarse and fine aggregates 2.65. Zone III sand. Quality control is good. [16]
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