PRESIDENCY UNIVERSITY, BENGALURU
SCHOOL OF ENGINEERING

Max Marks: 30   Max Time: 55Mins   Weightage: 15%   **Set A**

TEST 3

II Semester 2016-2017   Course: **CE A 204 Concrete Technology**   18 April 2017

Instructions:
  i.   Write legibly
  ii. Scientific and non programmable calculators are permitted

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Part A

(5Q x 3M= 15 Marks)

1. What are the factors effecting modulus of elasticity?

2. Does unsound material effects concrete. If yes Why?

3. How to calculate penetration of concrete?

4. Why concrete is non-elastic material?

5. Explain Relation between Modulus of Elasticity and Strength.

Part B

(2Q x 4M= 8 Marks)

6. Explain shrinkage and types of shrinkage.

7. Explain creep and measurement of creep.

Part C

(1Q x 7M= 7 Marks)

8. The maximum stresses developed in concrete is 90 mpa and maximum stain at maximum stress 1mm. (i) Draw the stress strain curve and find out Secant modulus and modulus, (ii) Modulus at 60 Mpa.

Max Marks: 30   Max Time: 55Mins   Weightage: 15%   **Set A**

TEST 2

II Semester 2016-2017   Course: **CE A 204 Concrete Technology**   21 March 2017

Instructions:

   i.   Write legibly
   ii. Scientific and non programmable calculators are permitted

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Part A

(4Q x 3M= 12 Marks)

1. Why Abram's law has changed to the Abram's rule?
2. Explain thermal diffusivity.
3. Calculate Gel/space ratio of sample of 500gms of cement with 0.4 W/C ratio on fully hydrated and at 40% hydration.
4. Explain Strength and durability relation.

Part B

(2Q x 5M= 10 Marks)

5. Explain briefly need of curing for concrete structures and methods of curing.
6. Explain Propagation of Micro-cracking and transition zone.

Part C

(1Q x 8M= 8 Marks)

7. Laboratory experiment conducted at on particular mix showed strength of 32.5 Mpa for fully matured concrete. (i) Find whether formwork can be removed for identical concrete placed at the age of 10 days. (ii) Find out at what age concrete formwork can be removed (iii) Find out no of days required for maximum maturity. when average temperature is 5°c if the concrete is likely to be subjected to stripping stress 22 Mpa. (A=32 , B=54)

PRESIDENCY UNIVERSITY, BENGALURU
SCHOOL OF ENGINEERING

Max Marks: 30   Max Time: 55Mins   Weightage: 15%   **Set A**

TEST 1

II Semester 2016-2017   Course: **CE A 204 Concrete Technology**   21 February 2017

Instructions:

   i.   Write legibly

   ii.   Scientific and non programmable calculators are permitted

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Part A

(4Q x 3M= 12 Marks)

1. How does the presence of sugar and High pH in water affect the concrete?
2. List any three factors influencing the Workability of concrete.
3. Explain the classification of aggregates based on size and shape.
4. What is meant by compaction factor value?

Part B

(3Q x 4M= 12 Marks)

5. Discuss the difference between the wet and dry process of manufacturing of Portland cement.
6. Explain step by step Production process of concrete?
7. Explain the term super plasticizers. How are they useful in concrete production?

Part C

(1Q x 6M= 6 Marks)

8. Enlist the tests which are commonly employed to measure the workability of concrete. Describe the slump test with neat sketch.