Course outline

How does an NPTEL online course work?

Assignment 0

Week 1: Review of Normal Concrete - I

Week 2: Review of Normal Concrete - II

Week 3: Topics in Special Concrete

Week 4: Topics in Special Concrete

Week 5: Special Concretes

- Lecture 18: Self Compacting Concrete - I
- Lecture 19: Self Compacting Concrete - II
- Lecture 20: Self Compacting Concrete - III
- Quiz : Assignment 5
- Feedback For Week-5
- Assignment 5 Solution

Week 6: Special Concretes

Week 7: Special Concretes

Week 8: Special Topics

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Assignment 5

The due date for submitting this assignment has passed.

As per our records you have not submitted this assignment.

Due on 2021-02-24, 23:59 IST.

1) In the context of materials in concrete, consider the following statements: *1 point*

Statement – 1: The properties of mortar are related to the characteristics of sand and the sand content.
Statement – 2: The properties of concrete are related to the characteristics and content of coarse aggregates.

Choose the best alternative among the following:

- Both the statements are TRUE
- Statement-1 is TRUE and Statement-2 is FALSE
- Statement-1 is FALSE and Statement-2 is TRUE
- Both the statements are FALSE

No, the answer is incorrect.
Score: 0
Accepted Answers:
Both the statements are TRUE

2) In the context of self-compacting concrete, consider the following statements: *1 point*

Statement – 1: J-ring test measures the ability of SCC to pass through the reinforcing steel.
Statement – 2: L-box test is used to determine the flowing ability of concrete.

Choose the best alternative among the following:

- Both the statements are TRUE
- Statement-1 is TRUE and Statement-2 is FALSE
- Statement-1 is FALSE and Statement-2 is TRUE
- Both the statements are FALSE

No, the answer is incorrect.
Score: 0
Accepted Answers:
Statement-1 is TRUE and Statement-2 is FALSE

3) In the context of filling ability of concrete, consider the following statements: *1 point*

Statement – 1: It is the ability of fresh concrete to fill the spaces within the formwork with no external work.
Statement – 2: It can be assessed using J-ring test.

Choose the best alternative among the following:

- Both the statements are TRUE
- Statement-1 is TRUE and Statement-2 is FALSE
- Statement-1 is FALSE and Statement-2 is TRUE
- Both the statements are FALSE

No, the answer is incorrect.
Score: 0
Accepted Answers:
Both the statements are TRUE

4) In the context of viscosity of concrete, consider the following statements: *1 point*

Statement – 1: Concrete with a low viscosity will have a quick initial flow and may continue to creep forward over an extended time.
Statement – 2: The viscosity of SCC is assessed by the V-funnel test.

Choose the best alternative among the following:

- Both the statements are TRUE
- Statement-1 is TRUE and Statement-2 is FALSE
- Statement-1 is FALSE and Statement-2 is TRUE
- Both the statements are FALSE

No, the answer is incorrect.
Score: 0
Accepted Answers:
Statement-1 is FALSE and Statement-2 is TRUE

5) Which of the following is NOT a basic characteristic of self-compacting concrete? *1 point*

- The concrete flows under its own weight
- The concrete flows through heavily congested reinforcement
- The concrete retains homogeneity without segregation
- The concrete sets very quickly

No, the answer is incorrect.
Score: 0
Accepted Answers:
The concrete sets very quickly

6) Consider the following combinations of yield stress and viscosity of a fresh concrete mix. *1 point*
Which of the combinations is most favorable for self-compacting concrete?

- Low yield stress and moderate viscosity
- High yield stress and high viscosity
- Low yield stress and low viscosity
- High yield stress and moderate viscosity

No, the answer is incorrect.
Score: 0
Accepted Answers:
Low yield stress and moderate viscosity

7) In the context of a given volume of self-compacting concrete, consider the following statements: *1 point*

Statement – 1: It has similar water content compared to conventional concrete.
Statement – 2: It has relatively low water to powder ratio compared to conventional concrete.

Choose the best alternative among the following:

- Both the statements are TRUE
- Statement-1 is TRUE and Statement-2 is FALSE
- Statement-1 is FALSE and Statement-2 is TRUE
- Both the statements are FALSE

No, the answer is incorrect.
Score: 0
Accepted Answers:
Both the statements are TRUE

8) Consider the following parameters in the context of concrete flowing through an opening. *1 point*

1. Grading of coarse aggregate
2. The volume fraction of aggregates
3. Maximum size of aggregates

Which of the following correctly identifies factors that affect the susceptibly for aggregate interlock?

- Only (1) and (2)
- Only (1) and (2)
- Only (2) and (3)
- (1), (2) and (3)

No, the answer is incorrect.
Score: 0
Accepted Answers:
(1), (2) and (3)

9) Consider the following parameters in the context of particulate material caried in a fluid medium: *1 point*

1. Shape and size of particulate matter
2. Density of particulate matter
3. Viscosity of fluid medium

Which of the following correctly identifies factors that affect the volume of particulate material that can be carried?

- (3) alone
- Only (2) and (3)
- Only (1) and (3)
- (1), (2) and (3)

No, the answer is incorrect.
Score: 0
Accepted Answers:
(1), (2) and (3)

10) As per IS 10262: 2019, powder content in self-compacting concrete mixes refer to the materials of particle size smaller than _____ *1 point*

- 0.150 mm
- 0.125 mm
- 2.36 mm
- 4.75 mm

No, the answer is incorrect.
Score: 0
Accepted Answers:
0.125 mm