Unit - Week 7 - Mineral admixtures - 2

Assignment 7

The due date for submitting this assignment has passed.
As per our records, you have not submitted this assignment.

1) Identify the correct statement.
- The addition of class F fly ash or slag decreases the chloride permeability.
- The addition of class F fly ash increases the chloride permeability, but the addition of slag decreases the chloride permeability.
- The addition of slag increases the chloride permeability, but the addition of class F fly ash decreases the chloride permeability.
- The addition of class F fly ash or slag increases the chloride permeability.

No, the answer is incorrect. Score 0.

Accepted Answers:
- The addition of class F fly ash or slag decreases the chloride permeability.

2) Identify the correct statement.
- Red brick ash is obtained by controlled calcination.
- Field-burned brick is a weak pozzolan.
- High amount of reactive silica (> 90 %) are present in rice husk ash.
- All of the above.

No, the answer is incorrect. Score 0.

Accepted Answers:
- All of the above.

3) With regard to a tertiary system of limestone, calcined clay and Meta Arcolite, identify the correct statement.
- In the tertiary system, there is less conversion of ettringite to monosulfate as compared to plain Portland cement.
- The limestone in the tertiary system can act as an accelerator.
- There is loose OH in the tertiary system due to the pozzolanic reaction with the Meta Arcolite.
- Both (b) and (c).
- Both (a) and (c).

No, the answer is incorrect. Score 0.

Accepted Answers:
- (a), (b), and (c).

4) As per Indian standards, the permissible amount of limestone that can be added in ordinary Portland cement is:
- Up to 5 %
- Up to 7.5 %
- Up to 10 %
- Up to 15 %

No, the answer is incorrect. Score 0.

Accepted Answers:
- Up to 7.5 %

5) During manufacture of special aggregate base as a mineral admixture for concrete, the temperature must be strictly maintained in the range of 500 - 800 °C. This is because:
- More amorphous silica is formed at higher temperature.
- More amorphous silicate phases are formed at higher temperature.
- Recrystallization of silica may occur at higher temperatures.
- None of the above.

No, the answer is incorrect. Score 0.

Accepted Answers:
- Recrystallization of silica may occur at higher temperatures.

6) Which of the following materials can be activated using alkaline solution to form geopolymer concrete?
- Class F fly ash.
- Calcined clay.
- Silica fume.
- Both (a) and (b).

No, the answer is incorrect. Score 0.

Accepted Answers:
- Both (a) and (b).

7) In geopolymer concrete, the hardening occurs due to the formation of:
- CSH.
- Calcium carbonate.
- Prisulite network.
- None of the above.

No, the answer is incorrect. Score 0.

Accepted Answers:
- Polysulite network.

8) Identify the correct statement.
- Geopolymer concrete has good fire resistance.
- Geopolymer concrete has high chloride and acid resistance.
- Geopolymer has high early strength.
- All of the above.

No, the answer is incorrect. Score 0.

Accepted Answers:
- All of the above.

9) The Frattini test is used for measuring:
- Workability of concrete.
- Pozzolanic activity.
- Reactivity of cement.
- Heat of hydration in cement.

No, the answer is incorrect. Score 0.

Accepted Answers:
- Pozzolanic activity.

10) The electrical conductivity method was used to compare the pozzolanic activity of two different pozzolans A and B. The pozzolan A showed a higher rate of change in conductivity as compared to pozzolan B. Identify the two statements from the following:
- A has higher pozzolanic activity as compared to B.
- B has higher pozzolanic activity as compared to A.
- Both A and B has similar pozzolanic activity.
- Electrical conductivity cannot be used for assessing pozzolanic activity.

No, the answer is incorrect. Score 0.

Accepted Answers:
- A has higher pozzolanic activity as compared to B.