Assignment 8

Due on 30-09-2019, 23:59 IST.

1. A required to design a fresh MIC concrete with the gradation of granular materials. If the mixture design model is used for the purpose of grading the gradation, the upper size of the coarse should have a value of:
   - around 0.2 - 0.24
   - greater than 0.30
   - lesser than 0.35
   - Greater than 0.40
   - No, the answer is incorrect.
   - Score: 0.00
   - Accepted Answers:
     - around 0.2 - 0.24

2. Compared to conventional mix design procedures, the particle packing method can be used to design concrete with some strength and workability with:
   - Substantially lower cement content
   - Substantially higher cement content
   - Lower number of trials required for mix design
   - Both (a) and (c)
   - No, the answer is incorrect.
   - Score: 0.00
   - Accepted Answers:
     - Both (a) and (c)

3. The compressive strength test for concrete is called a single point test because:
   - It only gives a measure of the viscosity of concrete
   - It gives a measure of both yield stress and viscosity of concrete
   - It only gives a measure of the yield stress of concrete
   - None of the above
   - No, the answer is incorrect.
   - Score: 0.00
   - Accepted Answers:
     - None of the above

4. Using a rheometer, the steady state stress at different strain rates was measured for a cement paste with 0.5 w/c ratio. If the steady state stress varied nonlinearly with the strain rate, then the more suitable model to describe the rheological behaviour is:
   - Bingham model
   - Herschel-Bulkley model
   - Newtonian model
   - None of the above
   - No, the answer is incorrect.
   - Score: 0.00
   - Accepted Answers:
     - Herschel-Bulkley model

5. Among the following, which of the geometry can be used as an attachment to a rheometer for assessing the rheological behaviour of a cement paste?
   - Parallel plate
   - Cusp-on-cylinder
   - Cylindrical cylinder
   - Both (a) and (b)
   - No, the answer is incorrect.
   - Score: 0.00
   - Accepted Answers:
     - Both (a) and (b)

6. Increasing the paste content in concrete causes an:
   - Increase in the viscosity
   - Decrease in the viscosity
   - Increase in the static yield stress
   - Both (b) and (c)
   - No, the answer is incorrect.
   - Score: 0.00
   - Accepted Answers:
     - Both (b) and (c)

7. The passing ability of SCC can be assessed by:
   - Slump flow test
   - Penetration test
   - L-box test
   - V-funnel test
   - No, the answer is incorrect.
   - Score: 0.00
   - Accepted Answers:
     - L-box test

8. A thread of Portland cement, fly ash and silica-fume is to be proportioned such that for a maximum packing density. Among the following, which test can be used for this:
   - Proctor test
   - Modified Proctor test
   - Slump cone test
   - Both (a) and (c)
   - No, the answer is incorrect.
   - Score: 0.00
   - Accepted Answers:
     - Proctor test

9. The optimum dosage of superplasticizer with a given binder depends upon:
   - Water/binder ratio
   - Type of superplasticizer used
   - Binder composition
   - All of the above
   - No, the answer is incorrect.
   - Score: 0.00
   - Accepted Answers:
     - All of the above

10. With regard to pumping of concrete, identify the incorrect statement:
    - Pipe diameter should be at least 3 times maximum aggregate size
    - High cement content is beneficial for pumping
    - A slump of 180-200 mm is recommended
    - Aluminium pipes can be used
    - No, the answer is incorrect.
    - Score: 0.00
    - Accepted Answers:
      - Aluminium pipes can be used