- Q 1 To make one cubic metre of 1:2:4 by volume of concrete, the volume of coarse aggregates required is
- (a) 0.95 m³
- (b) 0.85 m³
- (c) 0.75 m^3
- (d) 0.65 m³
- The carbon content structural steel is
- (a) Less than 0.1 %
- (b) 0.10 to 0.25%
- (c) 0.25 to 0.60%
- (d) 0.60 to 1.00%
- Q3 Batching refers to
- total of Mercel (a) Controlling quantity at each batch
 - (b) Weighing accurately, quantity of each material for a job before mixing
 - (c) Controlling the quantity of each material into each batch
 - (d) Adjusting water to be added in each batch according to the moisture content of the materials being mixed in the batch
- Consider the following strengths of concrete:
 - 1. Cube strength
 - 2. Cylinder strength
 - 3. Split-tensile strength
 - 4. Modulus of rupture

The correct sequence in increasing

these strengths



- (a) 3, 4, 2, 1
- (b) 3, 4, 1, 2
- (c) 4, 3, 2, 1
- (d) 4, 3, 1, 2
- Q 5 Consider the following statements:

Shrinkage of concrete depends upon the

- 1. Relative humidity of the atmosphere.
- 2. Passage of time.
- 3. Applied stress.

Which of these statements is/are correct?

- (a) 1 and 2
- (b) 1 and 3
- (c) 1 alone
- (d) 1, 2 and 3
- Q 6 Consider the following statement:

The effect of air entrainment in concrete is to

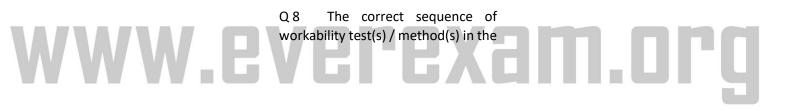
- Increase resistance to freezing and thawing.
- 2. Improve workability
- 3. Decrease strength

Which of these statements are correct?

- (a) 2 and 3
- (b) 1 and 3
- (c) 1 alone
- (d) 1, 2 and 3

Q 7 As per I.S. Code of Practice, concrete should be cured at

- (a) 5°C
- (b) 10°C
- (c) 27°C
- (d) 45°C



order of their application from low to high workability is

- (a) Slump test, Compacting factor test and Vee-bee consistometer.
- (b) Compacting factor test, Veebee consistometer and Siumptest
- (c) Vee-bee consistometer, Slump test and Compacting factor test.
- (d) Vee-bee consistometer,Compacting factor test andSlump test
- Q 9 Which one of the 'following' statements is correct?
 - (a) Bulking of sand always decreases with increase in the quantity of water
 - (b) The quantity of water in ordinary concrete should be5% by weight of cement and25% by weight of aggregate
 - (c) While mixing by weight, bulking effect of sand is not taken into account
 - (d) sand is also known as standard sand

Q 10 The ratio of direct tensile strength to that of modulus of rupture of concrete is

- a. 0.25
- b. 0.5
- c. 0.75
- d. 1.0

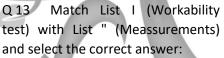
Q 11 Assertion (A): Calcium chloride addition in concrete proves more effective in slow- hardening portland cement than in rapid-hardening cement

Reason (R): Calcium chloride acts as an effective accelerator thereby increasing rate of reaction



Q 12 Which one of the following types of concrete is most suitable in extreme cold climates?

- (a) Air-entrained concrete
- (b) Ready mix concrete
- (c) Vacuum concrete
- (d) Coarse concrete



factor

C-Vee bee test 3. 0.80 to 0.98

D-Flow test 4. Zero to 10 sec

Codes:

a.
$$A-2$$
, $B-4$, $C-3$, $D-1$

b.
$$A-1$$
, $B-3$, $C-4$, $D-2$

c.
$$A-1$$
, $B-4$, $C-3$, $D-2$

d.
$$A-2$$
, $B-3$, $C-4$, $D-1$

Q 14 Consider the following statements:

Curing of concrete by steam under pressure

- 1. Increases the compressive strength of concrete
- 2. Reduces the shear strength of concrete
- 3. Increases the speed of chemical reaction.

Select the correct answer using the codes given below:

(a) 1, 2 and 3



(d) 3 alone

- Q 15 Which one of the following aggregate gives maximum strength in concrete?
- (a) Rounded aggregate
- (b) Elongated aggregate
- (c) Flaky aggregate
- (d) Cubical aggregate

Q 16 Consider the following statements:

Ultrasonic pulse velocity test to measure the strength of concrete is

- 1. Used to measure the strength of wet concrete
- Used to obtain estimate of concrete strength of finished concrete elements
- 3. A non-destructive test.

Of these statements

- (a) 1, 2 and 3 are correct
- (b) 2 and 3 are correct
- (c) 1 and 2 are correct
- (d) 1 and 3 are correct

Q 17 In building construction, the place for providing damp proof course is at the

- (a) Basement level
- (b) Window sill level

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(d) Roof level

Q 18 Consider the following statements:

Pozzolana used as an admixture in concrete has the following advantages

- 1. It improves workability with lesser amount of water
- increases heat of hydration and so sets the concrete quickly
- It increases resistance to attack by salts and sulphates quickly
- It leaches calcium hydroxide Select the correct answer using the codes given below:
- (a) 1, 2, 3 and 4
- (b) 1, 2 and 4
- (c) 1 and 3
- (d) 2, 3 and 4



List - II

A-Calcium

1. Anti bleede

lignosulphonate

B-Aluminium

2. Retarder

powders

C-Tartaric Acid

3. Air

entrainer

D-Aluminium

4. Water

reducer

sulphate

Codes:

- a. A-3, B-2, C-1, D-4
- b. A-4, B-3, C-2, D-1
- c. A-3, B-4, C-1, D-2
- d. A-4, B-2, C-3, D-1



Q 20 Bleeding of concrete leads to which of the following?

- 1. Drying up of concrete surface
- 2. Formation of pores inside
- 3. Segregation of aggregate
- 4. Decrease in strength

Select the correct answer using the codes given below

- (a) 1 only
- (b) 1 and 2
- (c) 1 and 3
- (d) 2 and 4

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