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# **CIVIL ENGINEERING**

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**Q : 1) More water should not be added in the concrete mix, as to increase**

**A : Strength**

**B : Durability**

**C : Water-cement ratio**

**D : All of these**

**Q : 2) The test conducted in the laboratory on the specimen made out of trial concrete mix is called**

**A : Preliminary test**

**B : Slump test**

**C : Works test**

**D : None of these**

**Q : 3) The ratio of different ingredients (cement, sand and aggregate) in concrete mix of grade M 20 is**

**A : 1 : 1 : 2**

**B : 1 : 1.5 : 3**

**C : 1 : 2 : 4**

**D : 1 : 3 : 6**



**Q : 4) If the proportions of different ingredients (cement, sand and aggregate) are in the ratio of 1 : 2 : 4, then the grade of concrete is**

**A : M 10**

**B : M 15**

**C : M 20**

**D : M 25**

**Q : 5) The factor which effects the design of concrete mix is**

**A : Fineness modulus**

**B : Water-cement ratio**

**C : Slump**

**D : All of these**



**Q : 6) The process of mixing, transporting, placing and compacting the cement concrete should not take more than**

**A : 30 minutes**

**B : 60 minutes**

**C : 90 minutes**

**D : 120 minutes**

**Q : 7) For continuous transportation of concrete, the method used is**

**A : Transport of concrete by pans**

**B : Transport of concrete by wheel barrows**

**C : Transport of concrete by belt concrete conveyors**

**D : Transport of concrete by pumps**



**Q : 8) The fineness modulus of an aggregate is roughly proportional to**

- A : Specific gravity of the aggregate**
- B : Shape of the aggregate**
- C : Average size of particles in the aggregate**
- D : Grading of the aggregate**

**Q : 9) The value of fineness modulus for fine sand may range between**

**A : 1.1 to 1.3**

**B : 1.3 to 1.6**

**C : 1.6 to 2.2**

**D : 2.2 to 2.6**



**Q : 10) The admixtures are added in concrete to**

**A : Accelerate the rate of setting and hardening of cement**

**B : Make the concrete water proof etc**

**C : Reduce the bleeding and segregation of concrete mix**

**D : All of the above**

**Q : 11) If sea water is used for preparing concrete mix, it**

**A : Reduces strength**

**B : Corrodes steel reinforcement**

**C : causes efflorescence**

**D : All of these**

**Q : 12) The standard sand now used in India is obtained from**

**A : Endore (Chennai)**

**B : Mumbai**

**C : Orissa**

**D : Jaipur**



**Q : 13) During field test, the cement is said to be pure and of good quality when**

**A : The colour of cement is uniformly greenish grey**

**B : A handful of cement, thrown into a bucket of water, floats**

**C : Hand is thrust into a bag of cement, it feels cool**

**D : All of the above**

**Q : 14) For reinforced concrete, the aggregate used is**

**A : Sand**

**B : Gravel**

**C : Crushed rock**

**D : All of these**

**Q : 15) The minimum particle size of coarse aggregate is**

**A : 2.5 mm**

**B : 4.75 mm**

**C : 5.85 mm**

**D : 6.5 mm**

**Q : 16) The minimum particle size of fine aggregate is**

**A : 0.0075 mm**

**B : 0.075 mm**

**C : 0.75 mm**

**D : 0.95 mm**



**Q : 17) The removal of excess air after placing concrete helps in increasing the strength of concrete by**

**A : 15 to 20%**

**B : 20 to 30%**

**C : 30 to 50%**

**D : 50 to 70%**

**Q : 18) The cement concrete prepared by mixing Aluminium in it, is called**

**A : Air-entrained concrete**

**B : Cellular concrete**

**C : Aerated concrete**

**D : Any one of these**

**Q : 19) The material used as an ingredient of concrete is usually**

**A : cement**

**B : Aggregate**

**C : Water**

**D : All of these**

**Q : 20) A suitable admixture added at the time of preparing the concrete mix, makes the concrete**

**A : Water-proof**

**B : Acid proof**

**C : Highly strong**

**D : All of these**



**Q : 21) Calcareous material used in the manufacture of cement consists of**

**A : Lime stone**

**B : Chalk**

**C : Shells**

**D : All of these**

**Q : 22) The chemical ingredient of cement which provides quick setting property to the cement is**

**A : Lime**

**B : Silica**

**C : Alumina**

**D : Iron oxide**

**Q : 23) Which of the following ingredient of cement when added in excess quantity, causes the cement to set slowly?**

**A : Lime**

**B : Silica**

**C : Alumina**

**D : Iron oxide**

**Q : 24) Lime when added in excess quantity**

**A : makes the cement unsound**

**B : Causes the cement to expand and disintegrate**

**C : Lowers the clinkering temperature of cement**

**D : Both (a) and (b)**



**Q : 25) In order to provide colour, hardness and strength to the cement, the ingredient used is**

**A : Lime**

**B : Silica**

**C : Alumina**

**D : Iron oxide**

**Q : 26) The presence of tricalcium silicate in cement**

**A : Hydrates the cement slowly**

**B : Generates less heat of hydration**

**C : Has more resistance to sulphate attack**

**D : All of these**

- Q : 27) The tricalcium aluminate in cement has the property of**
- A : Reacting fast with water**
  - B : Causing initial setting of cement**
  - C : Generating large amount of heat hydration**
  - D : All of these**

**Q : 28) High percentage of tricalcium silicate and low percentage of dicalcium silicate in cement results in**

**A : Rapid hardening**

**B : High early strength**

**C : High heat generation**

**D : All of these**

**Q : 29) Low percentage of tricalcium silicate and high percentage of dicalcium silicate in cement results in**

**A : rapid hardening**

**B : High early strength**

**C : High heat generation**

**D : None of these**



**Q : 30) Rapid hardening cement is used**

**A : where high early strength is desired**

**B : Where form work is to be removed as early as possible**

**C : For constructing road pavements**

**D : All of the above**

**Q : 31) The cement, widely used in retaining walls, is**

**A : rapid hardening cement**

**B : Low heat cement**

**C : Sulphate resisting cement**

**D : Ordinary Portland cement**

**Q : 32) The strength of timber is maximum in a direction**

**A : Parallel to the grains**

**B : Perpendicular to the grains**

**C :  $45^\circ$  to the grains**

**D :  $30^\circ$  to the grains**

**Q : 33) The liquid medium used in enamel paints is**

**A : Thinner**

**B : Alcohol**

**C : Turpentine**

**D : Varnish**

**Q : 34) Which one of the following is the most preferred wood for high quality and durable furniture?**

**A : Sandal wood**

**B : Deodar wood**

**C : Teak wood**

**D : Shisham wood**



**Q : 35) The metallic oxide used in the form of powder in a paint is called**

**A : Extender**

**B : Base**

**C : Vehicle**

**D : Drier**

**Q : 36) As a natural material, timber is which one of the following?**

**A : Isotropic**

**B : Anisotropic**

**C : Homogeneous**

**D : Heterogeneous**

**Q : 37) Shear strength of timber depends on which one of the following?**

**A : Lignin with fibres**

**B : Meduilarays**

**C : Heart wood**

**D : Sapwood**

**Q : 38) Match List-I with List-II and select the correct answer using the codes given below the lists:**

**Codes :**

**A : 2, 5, 3, 4**

**B : 5, 1, 2, 3**

**C : 4, 3, 2, 1**

**D : 5, 1, 4, 3**

List-I	List-II
A. The innermost part or core of the stem of a tree	1. Transverse septa (medullary rays)
B. The vascular tissue which encloses the pith	2. Annual rings
C. A cellular tissue and woody fibre arranged in distinct concentric circles	3. The outermost cover or skin of the stem
D. The thin layer below the bark not converted into sapwood as yet	4. Medulla (pith)

**Q : 39) The expansion and shrinkage of plywood's are comparatively very low as**

**A : They are held in position by adhesives**

**B : hey are glued under pressure**

**C : plies are placed at right angles to each other**

**D : They are prepared from veneers**

**Q : 40) According to Indian standard specifications, the full strength of concrete is achieved after**

**A : 7 days**

**B : 14 days**

**C : 21 days**

**D : 28 days**



**Q : 41) Seasoning of timber is required to**

**A : Soften the timber**

**B : Harden the timber**

**C : Straighten the timber**

**D : Remove sap from the timber**

**Q : 42) match List-I with List-II and select the correct answer using the codes given below the lists :**

**Codes :**

**A : 1, 2, 3, 4**

**B : 2, 1, 3, 4**

**C : 2, 1, 4, 3**

**D : 1, 2, 4, 3**

List-I	List-II
A. Deciduous	1. Softwood
B. Conifer	2. Hardwood
C. Endogenous	3. Eucalyptus
D. Exogenous	4. Bamboo

**Q : 43) The modulus of elasticity of timber is about**

**A :  $0.5 \text{ to } 1.0 \times 10^4 \text{ N/mm}^2$**

**A :  $1.0 \text{ to } 1.5 \times 10^4 \text{ N/mm}^2$**

**A :  $1.5 \text{ to } 2.0 \times 10^4 \text{ N/mm}^2$**

**A :  $2.0 \text{ to } 2.5 \times 10^4 \text{ N/mm}^2$**

**Q : 44) When a column is supported throughout its length either by masonry walls or by construction on all the sides, then its slenderness ratio is**

**A : Infinite**

**B : Zero**

**C : Reasonably high**

**D : Low**

**Q : 45) Consolidation of concrete should proceed**

**A : before mixing**

**B : Before placing**

**C : Immediately after placing**

**D : Immediately after placing**

**Q : 46) The sand is mixed with lime mortar to**

**A : Reduce cost**

**B : Reduce setting time**

**C : Improve strength time**

**D : Prevent shrinkage and cracking**



**Q : 47) The workability of cement concrete can be improved by**

**A : Increasing the quantity of cement**

**B : Increasing the proportion of coarse aggregate**

**C : Increasing the quantity of sand**

**D : All of the above**

**Q : 48) The durability of concrete is proportional to**

**A : Sand content**

**B : Water-cement ratio**

**C : Cement-aggregate ratio**

**D : Aggregate-water ratio**

**Q : 49) When provided with alternating courses of (a) all headers and (b) all stretchers, the front elevation of such brick masonry is designated as**

**A : English bond**

**B : Single Flemish bond**

**C : Double Flemish bond**

**D : rat-trap bond**

**Q : 50) In lime concrete, lime is used as**

**A : Coarse aggregate**

**B : Fine aggregate**

**C : Binding material**

**D : Admixture**

**Q : 51) Ferro-concrete Is another name  
Given to**

**a : Plain cement concrete**

**B : Reinforced cement concrete**

**C : Prestressed cement concrete**

**D : None of these**

**Q : 52) Reinforced cement concrete is equally strong in taking**

**A : tensile and compressive stresses**

**B : Compressive and shear stresses**

**C : Tensile, compressive and shear stresses**

**D : Tensile and shear stresses**

**Q : 53) The shrinkage to concrete**

**A : Is proportional to contents of cement**

**B : Is directly proportional to water contents at the time of mixing**

**C : Increases with increases in the percentage of concrete**

**D : All of the above**



**Q : 54) Which type of brick masonry bond is provided for heavy loads on masonry?**

**A : English bond**

**B : Zigzag bond**

**C : Single Flemish bond**

**D : Double Flemish bond**

**Q : 55) The rate of hydration and hydrolysis of cement depends upon its**

**A : Soundness**

**B : Fineness**

**C : Setting time**

**D : Tensile strength**

**Q : 56) For high class brick masonry,  
which are the proper bricks?**

**A : Refractory bricks**

**B : Jhumb bricks**

**C : Bull nose bricks**

**D : Modular bricks**

**Q : 57) Which one of the following procedure is applied to determine the soundness of bricks?**

**A : Immersing the brick under water for 16 hours and determining the quantity of water absorbed by the brick.**

**B : Immersing the brick under water for 24 hours and determining its expansion using Le Chatelier apparatus.**

**C : taking two bricks, hitting one against the other and observing whether they break or not and the type of sound produced while hitting.**

**D : Scratching the brick by finger nail and noting whether any impression is made or not.**

**Q : 58) Why are bricks soaked in water before using the brick masonry?**

**A : For removing dust**

**B : For reducing air voids**

**C : For preventing depletion of moisture from mortar**

**D : For reducing efflorescence**

**Q : 59) The addition of pozzolana to Portland cement causes**

**A : Less heat of hydration**

**B : Increase in shrinkage**

**C : decrease in permeability**

**D : All of these**

**Q : 60) Answer using the codes given below the lists :**

**Codes :**

**A : 1, 2, 3, 4**

**B : 3, 1, 2, 4**

**C : 3, 1, 4, 2**

**D : 4, 3, 2, 1**

List-I	List-II
A. Normal brick work	1. 1 : 4
B. Plastering works	2. 1 : 3
C. Grouting the cavernous	3. 1 : 6
D. Geniting	4. 1 : 1.5



**Q : 61) Match List-I (grade of cement and age) with List-II (Compressive strength in  $\text{N/mm}^2$ ) and select the correct answer using the code given below the lists:**

**Codes :**

**A : 4, 2, 1, 3**

**B : 3, 2, 1, 4**

**C : 4, 1, 2, 3**

**D : 3, 1, 2, 4**

List-I	List-II
A. Grade 33 (7 days)	1. 27
B. Grade 43 (28 days)	2. 43
C. Grade 53 (3 days)	3. 22
D. Grade 43 (7 days)	4. 33



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