

2019

Odisha OSSC JE 2019 CIVIL PAPER 3rd Shift With Answer Key

* Correct Answer is in Bold and slightly bigger
* Candidate selected option is Underlined

Civil

Q2722411 The Roof which slopes in two directions so that the end formed by the intersection of slopes is a vertical triangle, is

Score Obtained : 0.0

- A) Hip roof
B) Gambrel roof
C) Gable roof
D) Shed roof

Q2722566 For a steel construction as per CPWD specifications, Rivets shall be made from rivet bars of mild steel according to which of the following IS Codes?

Score Obtained : 0.0

- A) IS 1148**
B) IS 228
C) IS 814
D) IS 1367

Q2722506 The sewer pipes usually have to be designed and checked for

Score Obtained : 1.0

- A) only maximum flow
B) only minimum flow
C) both maximum and minimum flow
D) only average flow

Q2722463 The members of a pin-jointed truss are usually subjected to bending when

Score Obtained : 1.0

- A) the loads are applied at intermediate point on the member**
B) the supports of the truss are hinged
C) the material of the truss is brittle
D) the truss is of span less than 3m and loads are applied at the joints

Q2722592 Extra widening refers to the additional width of carriageway that is required on a curved section of a road over and above that required on a straight alignment. In this regard, the additional width required for a vehicle taking a horizontal curve is known as

Score Obtained : 1.0

- A) Mechanical Widening**
B) Motor Widening
C) Psychological Widening
D) Physical Widening

Q2722598 Match the following different Gauges adopted in India in List I with their corresponding Widths in List II.

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List I	List II
(a) Broad Gauge	(i) 1000 mm
(b) Meter Gauge	(ii) 1676 mm
(c) Narrow Gauge	(iii) 310 mm
	(iv) 762 mm

Score Obtained : 1.0

- A) (a) - (iii), (b) - (ii), (c) - (i)
 B) (a) - (i), (b) - (ii), (c) - (iii)
 C) (a) - (iv), (b) - (ii), (c) - (iii)
D) (a) - (ii), (b) - (i), (c) - (iv)

Q2722409 Which of the following options is a type of Reinforced Concrete Slab directly supported on columns without the use of beams?

Score Obtained : 1.0

- A) Flat slab**
 B) Block slab
 C) Tiled slab
 D) Ribbed slab

Q2722660 The total force on a curved surface submerged in liquid is the resultant of horizontal and vertical forces. In this regard, which force will be equal to the total pressure force on the projected area of the curved surface on the vertical plane?

Score Obtained : 1.0

- A) Vertical force on curved surface
B) Horizontal force on curved surface
 C) Neither Horizontal nor Vertical force on the curved surface
 D) Both Horizontal and Vertical forces on the curved surface

Q2722612 The irrigation capacity of a unit of water is usually known as Duty. In this regards, Duty on capacity is also called as

Score Obtained : 1.0

- A) outlet duty
 B) capacity coefficient
 C) quality duty
D) full supply coefficient

Q2722438 Which of the following general guidelines is INCORRECT while planning a Staircase for a building?

Score Obtained : -0.25

- A) The respective dimensions of tread and riser for all the parallel steps should be the same in consecutive floor of a building
B) The minimum vertical headroom above any step should be 2 m
 C) Generally, the number of risers in a flight should be restricted to twelve
D) The minimum width of stair should be 250 mm

Q2722722 Find the hypotenusal allowance per chain of 30 m length, if the slope is 1 in 4. (Given: value of $1/\cos\theta = 1.03077$)

Score Obtained : 1.0

- A) 0.34 m
 B) 0.30 m
 C) 0.16 m
D) 0.92 m

Q2744218 Normally, shortening of a project duration results in which of the following options?

- A) Direct and indirect cost both decreases
 - B) Direct cost decreases and there is no effect on indirect cost
 - C) Increase in the direct cost and decrease in the indirect cost**
 - D) Increase in the direct cost and also an increase in the indirect cost
-

Q2721608 Which of the following options is a raw material used in the manufacture of cement, that is responsible for the grey color of OPC (Ordinary Portland Cement)?

Score Obtained : 1.0

- A) Silica
 - B) Iron oxide**
 - C) Aluminium oxide
 - D) Sulphur trioxide
-

Q2722646 Which of the following options is NOT a type of dam classified on the basis of function?

Score Obtained : 1.0

- A) Diversion Dam
 - B) Buttress Dam**
 - C) Storage Dam
 - D) Flood Control Dam
-

Q2722721 The length of a survey line measured with a 20 m chain was found to be 520 m. When the chain was compared with a standard chain it was found to be 10 cm too long. The true length of the line in 'm' is

Score Obtained : 1.0

- A) 524.2 m
 - B) 522.6 m**
 - C) 532 m
 - D) 517.4 m
-

Q2744187 In the figure given below, the network of a small part of a project represents what among the following options?



Score Obtained : 1.0

- A) Excavation and sand filling & ramming may be start together
 - B) Event 3 will occur after 2 days after occurrence of event 2**
 - C) Excavation of a footing takes 2 days to complete
 - D) Event 3 will occur after 2 days after occurrence of event 1
-

Q2722396 A horizontal structural member provided above the doors and windows of a building to support load of the wall above it is known as

Score Obtained : 1.0

- A) Slab
 - B) Stair
 - C) Lintel**
 - D) Masonry
-

Q2722507 Read the following statements and choose the CORRECT option with respect to objectives of Sewage collection and disposal.

(i) An efficient sewerage scheme can provide a good sanitary environmental condition of city protecting public health.

(ii) An efficient sewerage scheme can also dispose of all liquid waste generated from community to a proper place to prevent a favorable condition for mosquito breeding, fly developing or bacteria growing.

Score Obtained : 1.0

A) (i) is FALSE and (ii) is FALSE

B) (i) is TRUE and (ii) is FALSE

C) (i) is TRUE and (ii) is TRUE

D) (i) is FALSE and (ii) is TRUE

Q2722599 Read the following statements and choose the CORRECT option with respect to the components of a railway track.

(i) The Granular bed resting on formation and supporting sleepers over it is known as Ballast.

(ii) The Steel sections laid along two parallel lines over sleepers are known as Rails.

Score Obtained : 1.0

A) (i) is TRUE and (ii) is TRUE

B) (i) is TRUE and (ii) is FALSE

C) (i) is FALSE and (ii) is TRUE

D) (i) is FALSE and (ii) is FALSE

Q2722568 While submitting the tender form, the contractor has to deposit a certain amount called Earnest Money. Usually this deposit can be approximately taken as

Score Obtained : 1.0

A) 20% to 30% of the estimated cost of work

B) 0.1% to 0.2% of the estimated cost of work

C) 1% to 2% of the estimated cost of work

D) 50% to 60% of the estimated cost of work

Q2722513 The process of 'lagooning' serves which of the following purposes in a wastewater treatment plant?

Score Obtained : 1.0

A) Helps in the disposal of sludge

B) Increases the capacity of storage reservoir

C) Increases flow of a sewage through imhoff tanks

D) Reduces the excessive flow in sewer

Q2722596 The reduction in gradient at the horizontal curve because of the additional tractive force required due to curve resistance is known as Grade Compensation. As per Indian Railway provision, the grade compensation per degree of curve for Broad Gauge track is

Score Obtained : 1.0

A) 0.03%

B) 0.05%

C) 0.04%

D) 0.02%

Q2721607 Which of the following types of lime usually slakes with difficulty and is mostly used in the constructions near damp places?

(i) Feebly Hydraulic Lime

(ii) Moderately Hydraulic Lime

(iii) Eminently Hydraulic Lime

Score Obtained : 1.0

A) only (ii)

- B) Only (i)
C) All (i), (ii), (iii)
D) Only (iii)
-

Q2722535 In long wall and short wall method of a building estimation, if "l" is the center to center length of wall "d" is the breadth of the wall, then length of long wall (out to out) is given by

Score Obtained : 1.0

- A) l+d**
B) l-d
C) l+2d
D) l-2d
-

Q2722679 For analysing two-dimensional irrotational flow problems, a flownet is required that is usually drawn using a series of lines. In this regard, a line along which the velocity potential is constant is known as

Score Obtained : -0.25

- A) Equipotential Line**
B) Stream Line
C) Streak Line
D) Di-potential Line
-

Q2722613 In an open channel flow of fluids, Hydraulic Jump usually occurs when the flow changes from

Score Obtained : 1.0

- A) sub-critical to super-critical state
B) super-critical to sub-critical state
C) laminar to turbulent state
D) critical to turbulent state
-

Q2722485 Which of the following types of arches is a statically determinate structure?

Score Obtained : 1.0

- A) Single Hinged Arch
B) Two Hinged Arch
C) Three Hinged Arch
D) Fixed Arch
-

Q2722421 Generally, in R.C.C sections, the depth of the neutral axis usually determines the type of section. For an under reinforced section, the actual neutral axis lies:

Score Obtained : -0.25

- A) below the critical neutral axis**
B) in the same line along the critical neutral axis
C) above the critical neutral axis
D) both above or below the critical neutral axis
-

Q2722746 Which of the following options is generally considered as the longest of the main survey lines in Chain Surveying?

Score Obtained : 1.0

- A) Base Line**
B) Oblique Offset
C) Tie Line
D) Check Line
-

Q2744234 Which of the following construction equipments is suitable for improving the strength, by decreasing the porosity and increasing the density of Soil?

Score Obtained : 1.0

- A)** Compaction Equipment
 - B) Hauling Equipment
 - C) Hoisting Equipment
 - D) Excavating Equipment
-

Q2744203 Gap graded aggregate is recommended for mixes of low workability since

Score Obtained : 1.0

- A) they have high tensile strength
 - B)** they show greater tendency to segregation in high workability mixes
 - C) they have less percentage of coarse aggregates and specific surface is more
 - D) they high compressive strength
-

Q2721622 Granite stone is a widely used building stone, mainly composed of quartz, feldspar and mica. Which of the following options is INCORRECT about this stone in general?

Score Obtained : 1.0

- A) Used as a sound reflecting material
 - B)** Used in the preparation of various types of wall putties
 - C) Used in the building walkways, driveways and pavements
 - D) Used in the preparation of tiles for floors and countertops of kitchens
-

Q2722631 For a crop, if the optimum depth of kor watering is 19 cms, then the outlet factor (outlet duty) for the crop for a four week period in hectares/cumec, is

Score Obtained : 1.0

- A) 1720.63 hectares/cumec
 - B) 1472.26 hectares/cumec
 - C)** 1273.26 hectares/cumec
 - D) 1372.26 hectares/cumec
-

Q2722729 Surveying is done to take measurements of objects in a horizontal plane for locating objects on the surface of the earth, before any construction of a structure is started. During this process the fundamental principle that is followed is to work from the

Score Obtained : 1.0

- A) Part to the whole
 - B) Lower level to higher level
 - C) Higher level to lower level
 - D)** Whole to the part
-

Q2721584 Identify the test to check the presence of poorly weathering calcium carbonate in sandstone as a building material among the given options.

- (i) Crushing Test
- (ii) Smith's Test
- (iii) Acid Test
- (iv) Slump Test

Score Obtained : 1.0

- A) Both (i) and (ii)
 - B) Both (iii) and (iv)
 - C)** only (iii)
 - D) only (iv)
-

Q2722570 For Stone Masonry or structural concrete, the categories for measurement of items, should be measured separately and the heights should be

described first from foundation to plinth level and then from

Score Obtained : 1.0

- A) plinth level to second floor
- B) plinth level to third floor
- C) second floor to fourth floor
- D) plinth level to first floor**

Q2722558 The percentage of estimated cost of building works for sanitary and water works are usually provided as

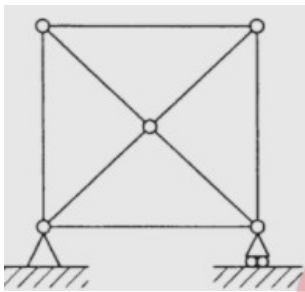
Score Obtained : -0.25

- A) 50% to 60%
- B) 22% to 42%
- C) 8% to 10 %**
- D) 4% to 6%

Q2722617 In weirs and barrages, for the oscillating jump of flows, the Froude number usually lies in the range of

Score Obtained : 1.0

- A) 10 to 11
- B) 4.6 to 9.0
- C) 1 to 2.0
- D) 2.5 to 4.5**



Q2722469

For the pin-jointed truss shown in the figure above, identify whether the truss is

- (i) Statically determinate
- (ii) Statically indeterminate
- (iii) Unstable

Score Obtained : 1.0

- A) Only (i)
- B) Only (iii)
- C) Only (ii)**
- D) Both (ii) and (iii)

Q2722483 When an inclined load is acting on a beam, then the inclined load is resolved into two components namely vertical and horizontal. Read the following statements and choose the CORRECT option with respect to effects of these components.

- i. The Vertical Component will cause axial thrust in the beam.
- ii. The Horizontal Component will cause Shear Force and Bending Moment in the beam.

Score Obtained : 1.0

- A) (i) is TRUE and (ii) is TRUE
- B) (i) is FALSE and (ii) is FALSE**
- C) (i) is FALSE and (ii) is TRUE
- D) (i) is TRUE and (ii) is FALSE

Q2722737 Which of the following instruments for chaining in surveying, is used as a centering aid in plane table, compass and theodolites?

Score Obtained : 1.0

- A) Offset Rod
 - B) Ranging Rod
 - C) Plumb Bob**
 - D) Tape
-

Q2722605 A track structure which permits movement of train from one track to another refers to which of the following options?

Score Obtained : 1.0

- A) Bearing Plate
 - B) Anchor
 - C) Stuart Key
 - D) Turnout**
-

Q2744231 The versatile equipment used for clearing the construction sites of debris and rubbish, and very efficient for short haul application up to 100 m is

Score Obtained : 0.0

- A) Dumper Truck
 - B) Tipper
 - C) Crane
 - D) Bulldozer**
-

Q2721591 Read the following statements and choose the CORRECT option.

- (i) A freshly cut stone carries some natural moisture known as Quarry Sap, which makes it soft and workable.
- (ii) To make the stone weather resistant and useful for constructions, a process called dressing is done that removes the Quarry Sap from the stone.

Score Obtained : -0.25

- A) (i) is TRUE and (ii) is FALSE**
 - B) (i) is TRUE and (ii) is TRUE
 - C) (i) is FALSE and (ii) is FALSE
 - D) (i) is FALSE and (ii) is TRUE
-

Q2721602 The average mass of a standard brick is approximately in the range of

Score Obtained : 1.0

- A) 1 to 1.5 kg
 - B) 7 to 7.5 kg
 - C) 5 to 5.5 kg
 - D) 3 to 3.5 kg**
-

Q2726549 Read the following statements and choose the CORRECT option with respect to the precautions taken against cavitation.

- (i) The pressure of the flowing liquid in any part of the hydraulic system should be above its vapour pressure.
- (ii) The cavitation resistant materials such as aluminium-bronze and stainless steel should be used for Centrifugal Pumps or components of the hydraulic system.

Score Obtained : -0.25

- A) (i) is FALSE and (ii) is TRUE**
 - B) (i) is TRUE and (ii) is TRUE
 - C) (i) is TRUE and (ii) is FALSE
 - D) (i) is FALSE and (ii) is FALSE
-

Q2722645 The general form of few empirical formulae for estimating flood discharge is $Q = CA^n$. If in this expression Q = Flood discharge and A = Catchment Area, then C and n respectively denotes

Score Obtained : 1.0

- A) Flood Index and Flood Coefficient
- B) Flood Coefficient and Flood Index**
- C) Water Coefficient and Water Index
- D) Flood Factor and Water Index

Q2722644 The ratio of the area irrigated in the Rabi season to the area irrigated in the Kharif season is known as

Score Obtained : 1.0

- A) Crop Ratio**
- B) Irrigated Ratio
- C) Season Ratio
- D) Overlap Ratio

Q2722424 If in a reinforced concrete column the cross sectional area of a steel bar is A_s and that of concrete is A_c , then the equivalent area of the section in terms of concrete is expressed as (Given m = modular ratio)

Score Obtained : 1.0

- A) $A_s - mA_c$
- B) $A_s + mA_c$
- C) $A_c - mA_s$
- D) $A_c + mA_s$**

Q2722429 In a RCC column, as per IS 456: 2000, the maximum pitch of the lateral ties (transverse reinforcement) should be equal to what among the following options?

- (i) Least lateral dimension of the compression members.
- (ii) sixteen times the smallest diameter of the longitudinal reinforcement bar to be tied.
- (iii) 300 mm.

Score Obtained : 1.0

- A) Least of (i), (ii) and (iii)**
- B) Always (i)
- C) Maximum of (i), (ii) and (iii)
- D) Always (iii)

Q2722745 Which of the following options is NOT an example of Instrumental errors in Plane Table Surveying?

Score Obtained : 1.0

- A) The needle of the trough compass may not be perfectly balanced
- B) The table may be loosely joined with the tripod stand
- C) The alidade may not be correctly centered on the station point**
- D) The fiducial edge of the alidade might not be straight

Q2744191 Read the following statements and choose the CORRECT option with respect to the rules for drawing a network for project management.

- (i) Each activity is represented by one and only one arrow in the network.
- (ii) All the arrows must run from right to left.
- (iii) For coding alphabets are used for all activities including the dummy activity and numbers for events.

Score Obtained : -0.25

- A) (i) and (iii) are FALSE and (ii) is TRUE

B) (i) and (iii) are TRUE and (ii) is FALSE

C) All (i), (ii) and (iii) are TRUE

D) All (i), (ii) and (iii) are FALSE

Q2744183 The minimum time in which activity can be finished but leads to the maximum cost of project is known as

Score Obtained : 1.0

A) Standard Time

B) Slow Time

C) Normal Time

D) Crash Time

Q2722557 The revised estimates are prepared when the expenditure on work exceeds or is likely to exceed the amount of administrative sanction by more than

Score Obtained : 1.0

A) 5%

B) 1.5%

C) 3.5%

D) 0.5%

Q2722567 With reference to CPWD specifications for formwork in general read the following statements and choose the CORRECT option.

(i) Centering, and shuttering where exceeding 1.5 metre height in one floor shall be measured and paid for separately.

(ii) No deductions from the shuttering due to the openings/ obstructions shall be made if the area of each openings/ obstructions does not exceed 0.1 square metre.

Score Obtained : 0.0

A) (i) is TRUE and (ii) is FALSE

B) (i) is TRUE and (ii) is TRUE

C) (i) is FALSE and (ii) is FALSE

D) (i) is FALSE and (ii) is TRUE

Q2722499 For the conveyance of water various types of valves are used for different purposes in a water distribution system. In this regard, the valve, which allows the flow of water only in one direction, is known as

Score Obtained : 1.0

A) Sluice valve

B) Butterfly valve

C) Check valve

D) Gate valve

Q2722476 Which of the following options is the CORRECT statement, according to Lami's Theorem?

Score Obtained : 0.0

A) If three forces acting at a point are in equilibrium, then each force is proportional to the sine of the angle between the other two

B) If three forces acting at a point are in equilibrium, then each force is proportional to the tangent of the angle between the other two

C) The three forces acting at a point kept in equilibrium must be equal to each other

D) If three forces acting at a point are in equilibrium, then each force is proportional to the cosine of the angle between the other two

Q2722589 The radius of the horizontal curve (R), for a design speed of (V) 100 kmph with the maximum values of (superelevation) $e = 0.07$ and (coefficient of friction) $f = 0.15$, can be calculated using which of the following equations?

Score Obtained : 1.0

A) $e + f = \frac{v^3}{127 R}$

B) $e + f = \frac{v^3}{137 R}$

C) $e + f = \frac{v^2}{12 R}$

D)
 $e + f = \frac{v^2}{127 R}$

Q2744204 An aggregate is termed as elongated when its greatest dimension (length) is greater than

Score Obtained : 1.0

- A) thrice its mean dimension
- B) four times its mean dimension
- C) one-third of its mean dimension
- D)** nine-fifth of its mean dimension

Q2726562 Gauge pressure is usually defined as a pressure which is measured using Atmospheric Pressure as Datum. Gauge pressure at a point in a fluid is equal to

Score Obtained : 1.0

- A) Absolute pressure + Vacuum pressure
- B) Absolute pressure + Atmospheric pressure
- C) Absolute pressure - Vacuum pressure
- D)** Absolute pressure - Atmospheric pressure

Q2722677 The depth of the centre of pressure on a vertical rectangular gate (4 m wide, 3 m deep) with water up to top surface, is

Score Obtained : 1.0

- A) 1.5 m
- B) 1.0 m
- C) 2.5 m
- D)** 2.0 m

Q2722447 Read the following statements and choose the CORRECT option with regards to Splicing of reinforcement bars.

- (i) For the constructional requirements at site, Splicing of reinforcing bars is done that transfers the axial force from the terminating bar to the connecting bar.
- (ii) Lap splices should not be used for bars larger than 12 mm and End-bearing splices shall be used only for bars in tension.

Score Obtained : 1.0

- A) (i) is TRUE and (ii) is TRUE
- B)** (i) is TRUE and (ii) is FALSE
- C) (i) is FALSE and (ii) is TRUE
- D) (i) is FALSE and (ii) is FALSE

Q2722443 In case of a Cantilever beam, as per IS:456-2000, what is the basic value of span to effective depth ratio for spans up to 10 m?

Score Obtained : 1.0

- A)** 7
- B) 20

- C) 26
 - D) 30
-

Q2744225 Under which of the following conditions needle scaffolding is usually adopted for construction?

Score Obtained : 0.0

- A)** When construction work is carried out at very high level in case of high-rise buildings
 - B) Construction of the lower part of the wall is to be carried out inside a room
 - C) When minor repairs or painting works are required inside the rooms
 - D) Enough space is available to provide bracings and ledgers
-

Q2744188 In a project network analysis, Forward Pass method is used to determine which aspect of various activities?

Score Obtained : 1.0

- A) Only the slack time
 - B) Latest Finish Time
 - C)** Earliest Finish Time
 - D) Only the total float
-

Q2721600 Select the CORRECT sequence of given steps in the manufacturing process of Bricks.

1. Moulding of Bricks
2. Preparation of Brick Earth
3. Burning of Bricks
4. Drying of Bricks

Score Obtained : 1.0

- A) 3 - 4 - 1 - 2
 - B) 1 - 2 - 4 - 3
 - C) 4 - 1 - 2 - 3
 - D)** 2 - 1 - 4 - 3
-

Q2722294 In a certain type of scaffolding the working platform is supported on movable tripods or ladders. This is generally used for work inside the room, such as paintings, and repairs up to a height of 5m. Identify this type of scaffolding among the following options.

Score Obtained : 0.0

- A)** Trestle Scaffolding
 - B) Patented Scaffolding
 - C) Cantilever Scaffolding
 - D) Double Scaffolding
-

Q2726660 Viscosity is a measure of the reluctance of the fluid to yield to shear when the fluid is in motion. The dimensions of dynamic viscosity and kinematic viscosity respectively are

(symbols/notations carry their usual meaning)

Score Obtained : 1.0

- A)** $FL^{-2}T, L^2 T^{-1}$
 - B) $FL^{-2}T, FL^{-1}$
 - C) $FL^{-1} T^{-1}, L^2 T^{-1}$
 - D) $L^2 T^{-1}, FL^{-2} T$
-

Q2722674 During a motion of fluid, the path traced by the fluid can be stream lines, streak lines or path lines. These three may coincide in the case of

Score Obtained : 1.0

- A)** steady flow
- B) turbulent flow only

- C) non-uniform flow
 - D) unsteady flow
-

Q2722508 Which of the following options is an example of Sub-surface raw water source?

Score Obtained : 1.0

- A) Streams
 - B) Rivers
 - C) Infiltration Wells**
 - D) Lakes
-

Q2722488 Which of the following options is a statically indeterminate structure?

Score Obtained : 1.0

- A) Three-Hinged Arch
 - B) Simply Supported Beam
 - C) Single Overhanging Beam
 - D) Fixed Beam**
-

Q2722437 For determining the strength of a structure, under the limit state of collapse as per IS 456: 2000, the partial safety factors for Concrete and Steel respectively are

Score Obtained : 1.0

- A) 1.15 and 1.5
 - B) 2.5 and 2.15
 - C) 2.15 and 2.5
 - D) 1.5 and 1.15**
-

Q2722736 The revenue chain is 33 feet long and divided into 16 links. It is used for

Score Obtained : 1.0

- A) Vertical angle measurement in a cadastral survey
 - B) Determining the magnetic bearing of a line in a cadastral survey
 - C) Horizontal angle measurement in a cadastral survey
 - D) Distance measurement in a cadastral survey**
-

Q2744199 The process of cutting off the excess wet concrete to bring the top surface of a slab to the proper grade and smoothness is known as

Score Obtained : 1.0

- A) screeding**
 - B) trowelling
 - C) floating
 - D) finishing
-

Q2744184 If t_o , t_p and t_m are optimistic, pessimistic and most likely time estimates of an activity respectively, the expected time t_e of the activity will be one sixth of

Score Obtained : 1.0

- A) $(t_m + 3t_o + t_p)$
 - B) $(3t_o + t_m + t_p)$
 - C) $(t_o + 4t_m + t_p)$**
 - D) $(t_m + 4t_o + t_p)$
-

Q2722404 As a general rule in India, the relation between height and width of a Door is given as:

Score Obtained : -0.25

- A) Height = (Width - 1.2) meters
B) Height = (Width x 1.2) meters
 C) Height = (Width + 1.2) meters
 D) Height = (Width /1.2) meters

Q2722654 A rectangular plane surface that lies in a vertical plane in water is 2 m wide and 3 m deep. Find the Total pressure if the upper edge is horizontal and 2 m below the free water surface.

Score Obtained : 1.0

- A) 106.01 kN
B) 206.01 kN
 C) 306.01 kN
 D) 406.01 kN

Q2722518 The surge tank in a water supply system is generally provided to

Score Obtained : -0.25

- A) remove impurities from water
B) increase velocity of flow in a pipe
 C) supply of chlorine alone required for disinfection process
D) relieve excess pressure caused by water hammer

Q2722440 The size of the fillet weld used as connection in steel structures is specified by

Score Obtained : 0.0

- A) thickness of the weld
 B) maximum leg length of weld
 C) total length of the weld
D) minimum leg length of weld

Q2722595 Standard gauge is the most widely used gauge in the World, for which the width is equal to

Score Obtained : -0.25

- A) 1435 mm
 B) 1676 mm
 C) 1365 mm
 D) 1525 mm

Q2744219 In CPM network analysis of a project, the disconnection of an activity before the completion of all activities in a network diagram is known as

(symbols and notations carry their usual meaning)

Score Obtained : 0.0

- A) Mathematical error
 B) Redunancy error
C) Dangling error
 D) Looping error

Q2722399 Which of the following statements is CORRECT for foundations in general?

Score Obtained : 1.0

- A) The bearing pressure at the base of foundation can exceed the allowable soil pressure
B) It prevents the differential settlement of a structure
 C) It transfers the load to the column directly

D) The foundations of residential building take the load of the Slab alone from the superstructure above it

Q2722288 Given below are statements with respect to the components of a Staircase in general.

- (a) A vertical member is placed at the ends of flights in a staircase to connect the ends of the Strings and Handrails.
 (b) A vertical member of wood or metal usually supports the Handrail in a Staircase.

Select the CORRECT option among the following options.

Score Obtained : 1.0

- A) Statement (a) refers to --> Nosing and Statement (b) refers to --> Soffit
 B) Statement (a) refers to --> Soffit and Statement (b) refers to --> Nosing
 C) Statement (a) refers to --> Baluster and Statement (b) refers to --> Newel Post
D) Statement (a) refers to --> Newel Post and Statement (b) refers to --> Baluster

Q2722562 The ground for the formation level of a Highway construction is of uniform gradient with longitudinal slope. Here the quantity of earthwork can be calculated using which of the following options?

- (a) Trapezoidal formula
 (b) Prismoidal formula
 (c) Mid-section formula

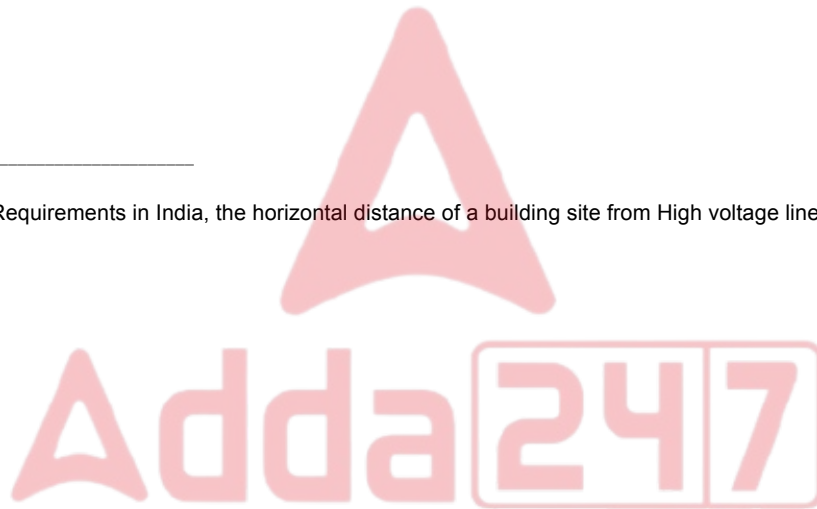
Score Obtained : 1.0

- A) Only a and c
 B) Only c
 C) Only b
D) All a, b and c

Q2722547 As per the General Building Requirements in India, the horizontal distance of a building site from High voltage lines upto and including 11,000 volts should be atleast

Score Obtained : 0.0

- A) 0.9 m
 B) 0.5 m
C) 1.2 m
 D) 0.2 m



Q2722498 The water is filtered through the beds of fine granular material, such as sand for removing or reducing impurities in water through the process of Filtration. The Rate of filtration (Litres/hour/m²) for Rapid Sand Filter is generally in the range of

Score Obtained : 1.0

- A) 10 to 100
 B) 8000 to 10000
C) 3000 to 6000
 D) 150 to 2000

Q2722520 A valve that is used to completely shut off fluid flow or, in the fully open position, provide full flow in a pipeline and generally NOT suitable for throttling applications, is known as

Score Obtained : 1.0

- A) Check valve
 B) Sluice valve
C) Gate valve
 D) Washout valve

Q2722489 Read the following statements and choose the CORRECT option with respect to the forces in a member of a Truss in general.

- i. The force in a member will be Compressive if the member pushes the joint to which it is connected.
 ii. The force in a member will be Tensile if the member pulls the joint to which it is connected.

Score Obtained : 1.0

- A) (i) is FALSE and (ii) is TRUE
B) (i) is TRUE and (ii) is TRUE
C) (i) is TRUE and (ii) is FALSE
D) (i) is FALSE and (ii) is FALSE
-

Q2722492 Read the following statements and choose the CORRECT option with respect to Moment Distribution Method of analysis of structures.

- i. Moment Distribution Method of analysis is a convenient way to analyze only the determinate beams and frames.
ii. In this method, the distributed moments in the ends of members meeting at a joint cause moments in the other ends, which are assumed to be fixed. These induced moments at the other ends are called carry-over moments.

Score Obtained : 1.0

- A) (i) is TRUE and (ii) is TRUE
B) (i) is TRUE and (ii) is FALSE
C) (i) is FALSE and (ii) is TRUE
D) (i) is FALSE and (ii) is FALSE
-

Q2722587 With regards to the shape test of aggregates for pavement construction, the elongation index of an aggregate is defined as the percentage by weight of particles whose greatest dimension (length) is

Score Obtained : 1.0

- A)** 1.8 times their mean dimension
B) 0.8 times their mean dimension
C) 3.8 times their mean dimension
D) 2.8 times their mean dimension
-

Q2722579 As per IRC recommendations, on a National Highway in rolling terrain, the ruling design speed should be

Score Obtained : 1.0

- A) 150 kmph
B) 70 kmph
C) 60 kmph
D) 80 kmph
-

Q2744202 The process of mixing some mortar in the mixer at the beginning of the first batch concrete mixing is called as

Score Obtained : 0.0

- A) accelerating
B) borrowing
C) buttering
D) initiating
-

Q2744237 The verticle plank which remains in contact with side of the trench and directly resist pressure from the side of a trench during excavation and trenching, is called as

Score Obtained : 0.0

- A) Bracings
B) Wale
C) Sheathing
D) Ledgers
-

Q2721609 According to ASTM standards, Coarse aggregates are identified when they are retained on

Score Obtained : 1.0

- A)** 4.75 mm sieve

- B) 6 mm sieve
 - C) 10 mm sieve
 - D) 8.75 mm sieve
-

Q2722287 Generally in a brickwork, the type of bond in which all bricks are laid as headers on the faces of the wall is known as

Score Obtained : 1.0

- A) Stretcher Bond
 - B) Header Bond**
 - C) Flemish Bond
 - D) English Bond
-

Q2722643 If base period for a particular crop is 50 days and the duty of the canal is 500 hectares per cumec, then the depth of water will be

Score Obtained : 1.0

- A) 8.64 cm
 - B) 0.864 cm
 - C) 864 cm
 - D) 86.4 cm**
-

Q2722521 The maximum daily demand at a water purification plant has been estimated as 12 million litres per day. Find the length of the sedimentation tank required if a detention period of 5 hours and the velocity of flow of 20 cm/minute is assumed.

Score Obtained : 0.0

- A) 50 m
 - B) 70 m
 - C) 60 m**
 - D) 80 m
-

Q2722446 As per IS:456-2000, the lap length including anchorage value of hooks for direct tension in bars shall be (Given: L_d = Development Length of bars and Φ is the nominal diameter of the bar.)

Score Obtained : 1.0

- A) L_d or 18Φ whichever is greater
 - B) $2L_d$ or 30Φ whichever is greater**
 - C) $0.50L_d$ or 16Φ whichever is greater
 - D) L_d or 16Φ whichever is greater
-

Q2722738 A line on a map joining points of equal elevation is a contour line. These lines intersect the ridge lines usually at what angle?

Score Obtained : 1.0

- A) 30°
 - B) 45°
 - C) 90°**
 - D) 0°
-

Q2744189 Which of the following options is a project planning technique that considers the uncertainty factor of various activities?

Score Obtained : 1.0

- A) CPM
 - B) Neither CPM nor PERT
 - C) Both CPM and PERT
 - D) PERT**
-

