

**UPPCL JE**

**Previous Year Paper**  
**Civil 22 June 2022**  
**Shift 2**





# Uttar Pradesh Power Corporation Limited

Electricity Service Commission, Uttar Pradesh Power Corporation Ltd. S.L.D.C campus, near Mantri Awas, Vibhuti Khand Phase-2, Gomti Nagar, Lucknow-226010

Participants Id	
Participant Name	
Test Center Name	
Test Date	22/06/2022
Test Time	2:30 PM - 5:30 PM
Subject	Junior Engineer(Trainee) Civil

## Section : Domain Knowledge

Q.1 The solid waste called \_\_\_\_\_ can include a variety of materials which may either be combustible or incombustible.

- Ans
- A. effluent
  - B. garbage
  - C. rubbish
  - D. ashes

Question ID : 10343511565  
Status : Answered  
Chosen Option : B

Q.2 The Westergaard analysis is used for which type of soils?

- Ans
- A. Isotropic soils
  - B. Homogenous soils
  - C. Stratified soils
  - D. Sandy soils

Question ID : 10343511485  
Status : Answered  
Chosen Option : C

Q.3 According to IS: 800-2007, the distance between the centres of any two adjacent fasteners shall not exceed \_\_\_\_\_, whichever is less, where t is the thickness of the thinner plate.

- Ans
- A.  $8t$  or 50 mm
  - B.  $24t$  or 200 mm
  - C.  $32t$  or 300 mm
  - D.  $16t$  or 100 mm

Question ID : 10343511550  
Status : Answered  
Chosen Option : D

Q.4 What is the short term modulus of concrete for M25 grade concrete, according to IS : 456-2000?

- Ans
- A. 250 N/ mm<sup>2</sup>
  - B. 25000 N/ mm<sup>2</sup>
  - C. 25 N/ mm<sup>2</sup>
  - D. 2500 N/ mm<sup>2</sup>

Question ID : 10343511543  
Status : Answered  
Chosen Option : B

Q.5 The total cost of a new building is ₹200000.00. What is the depreciation cost of the building after 20 years by straight line method if the scrap value is ₹20000.00 assuming the life of the building is 80 years?

- Ans
- A. ₹125000.00
  - B. ₹95650.00
  - C. ₹155000.00
  - D. ₹1356500.00

Question ID : 10343511556  
Status : Not Answered  
Chosen Option : --

Q.6 Amortisation is nothing but:

- Ans
- A. the capital sum required to be invested in order to receive a net annual income as an annuity of ₹1 at certain rate of interest
  - B. the net instalment of annual or periodical payment for repayment of the capital amount invested in a property for a specific period
  - C. the loss of property due to its use, life wear and tear
  - D. the accumulation of sinking fund at compound interest for payment of debt

Question ID : 10343511555  
Status : Not Answered  
Chosen Option : --

Q.7 The hard ceramic material (usually grey or brownish in colour) that is made from refractory clay, mixed with crushed pottery, stones and sand, burnt at high temperatures and then cooled slowly is called:

- Ans
- A. earthenware
  - B. terracotta
  - C. encaustic tiles
  - D. stoneware

Question ID : 10343511430  
Status : Answered  
Chosen Option : A

Q.8 If  $t_o$  is the optimistic time,  $t_l$  is the most likely time and  $t_p$  is the most pessimistic time, then the expected time  $t_e$  is:

Ans

A.  $t_e = \frac{t_o - 4t_l - t_p}{6}$

B.  $t_e = \frac{t_o + 4t_l + t_p}{6}$

C.  $t_e = \frac{4t_o + t_l + 2t_p}{6}$

D.  $t_e = \frac{2t_o + 4t_l + 2t_p}{6}$

Question ID : 10343511521

Status : Answered

Chosen Option : C

Q.9 For an aquifer, the sum of specific yield and specific retention is equal to:

Ans

A. Density

B. Degree of saturation

C. Void ratio

D. Porosity

Question ID : 10343511576

Status : Not Answered

Chosen Option : --

Q.10 Respiratory disease and chronic bronchitis are caused due to the presence of \_\_\_\_\_ in the air.

Ans

A. particulate matter

B. carbon monoxide

C. carbon dioxide

D. lead

Question ID : 10343511562

Status : Answered

Chosen Option : C

Q.11 The method of analysis of determinate beam is:

Ans

A. theorem of three moment method

B. unit load method

C. moment distribution method

D. column analogy method

Question ID : 10343511508

Status : Answered

Chosen Option : B

Q.12 The given statements are related to trigonometric surveying.

Statements:

1. Base accessible: The base of the object to which the vertical height required above a reference line is accessible to the surveyor.

2. Base inaccessible: The horizontal distance between the instrument and the object cannot be measured due to obstacles. Two instrument stations are used so that they are in the same vertical plane as the elevated object.

Identify whether the statements are correct or incorrect.

- Ans  A. Both statements are incorrect  
 B. Both statements are correct  
 C. Statement 1 is incorrect and statement 2 is correct  
 D. Statement 1 is correct and statement 2 is incorrect

Question ID : 10343511459  
Status : Answered  
Chosen Option : B

Q.13 What is the function of a shifting head in theodolite?

- Ans  A. It is used to provide a means for levelling the instrument.  
 B. It is used for exact centering of the instrument after levelling has been completed.  
 C. It provides the main scale reading of a horizontal angle and a means to fix/unfix the whole of the instrument.  
 D. It is used to make the horizontal axis truly horizontal.

Question ID : 10343511452  
Status : Answered  
Chosen Option : D

Q.14 The normal consistency of ordinary Portland cement is tested using:

- Ans  A. Vicat apparatus  
 B. Blaine's air permeability apparatus  
 C. Le Hoteliers apparatus  
 D. slump cone

Question ID : 10343511435  
Status : Answered  
Chosen Option : A

Q.15 According to IS 456 - 2000, the minimum period before striking formwork for props to beams spanning up to 6 m is:

- Ans  A. 7 days  
 B. 14 days  
 C. 21 days  
 D. 3 days

Question ID : 10343511536  
Status : Answered  
Chosen Option : C

Q.16 According to IS:456-2000, what is the nominal cover for concrete exposed to mild exposure condition?

- Ans
- A. 50 mm
  - B. 25 mm
  - C. 40 mm
  - D. 20 mm

Question ID : 10343511446  
Status : Answered  
Chosen Option : B

Q.17 The degree of indeterminacy in a statically determinate beam is equal to:

- Ans
- A. infinity
  - B. greater than equations static equilibrium
  - C. unity
  - D. zero

Question ID : 10343511504  
Status : Answered  
Chosen Option : B

Q.18 In case of a column of actual length  $l$  with both ends fixed, equivalent length,  $L$  is equal to:

- Ans
- A.  $\frac{l}{2}$
  - B.  $l$
  - C.  $\frac{2l}{\sqrt{2}}$
  - D.  $\frac{l}{\sqrt{2}}$

Question ID : 10343511513  
Status : Answered  
Chosen Option : D

Q.19 Identify the option that arranges the given process of manufacture of concrete in a sequential order.

Mixing, batching, transporting, placing, compacting, finishing, curing

- Ans
- A. Mixing, placing, batching, transporting, compacting, finishing, curing
  - B. Mixing, batching, transporting, placing, compacting, curing, finishing
  - C. Batching, mixing, transporting, placing, compacting, curing, finishing
  - D. Mixing, transporting, batching, placing, compacting, finishing, curing

Question ID : 10343511476  
Status : Answered  
Chosen Option : C

Q.20 The function of an anallactic lens in a tacheometer is to reduce the stadia constant to:

- Ans  A. unity  
 B. infinity  
 C. constant  
 D. zero

Question ID : 10343511449  
Status : Not Answered  
Chosen Option : --

Q.21 A canal fall in which an improvement in energy dissipation could be achieved by replacing straight glacis by parabolic glacis is

- Ans  A. Ogee type  
 B. Trapezoidal type  
 C. Rapid type  
 D. Montague type

Question ID : 10343511579  
Status : Answered  
Chosen Option : A

Q.22 If stone quarrying is done by the blasting method with a length of line of least resistance of 2 m, what is the rough estimate of gun powder required?

- Ans  A. 300 g  
 B. 500 g  
 C. 400 g  
 D. 600 g

Question ID : 10343511433  
Status : Not Answered  
Chosen Option : --

Q.23 Which of the following is a secondary air pollutant?

- Ans  A. Oxides of carbon ( $\text{CO}_2$ )  
 B. Oxides of nitrogen ( $\text{NO}_x$ )  
 C. Oxides of sulphur ( $\text{SO}_x$ )  
 D. Sulphuric acid ( $\text{H}_2\text{SO}_4$ )

Question ID : 10343511566  
Status : Answered  
Chosen Option : C



Q.24 As per IS 800-2007, angle purlins should be designed for \_\_\_\_\_.

- Ans  A. uniaxial shear  
 B. biaxial bending  
 C. triaxial bending  
 D. uniaxial bending

Question ID : 10343511537  
Status : Answered  
Chosen Option : A

Q.25 \_\_\_\_\_ is a common thinning agent used as a solvent in paint.

- Ans  A. White lead  
 B. Linseed oil  
 C. Naphtha  
 D. Lithophone

Question ID : 10343511438  
Status : Answered  
Chosen Option : B

Q.26 Which of the following is a critical flow flume used to measure discharge in open channel?

- Ans  A. Trapezoidal flume  
 B. Modified San Dimas flume  
 C. Parshall flume  
 D. San Dimas flume

Question ID : 10343511495  
Status : Answered  
Chosen Option : A

Q.27 The traffic manoeuvre at which a vehicle moves obliquely across the path of another vehicle moving in the same direction at relatively small angle of crossing is known as:

- Ans  A. crossing  
 B. diverging  
 C. merging  
 D. weaving

Question ID : 10343511529  
Status : Answered  
Chosen Option : D



Q.28 The percentage reduction in area is computed by conducting which type of test on mild steel?

- Ans  A. Tensile test  
 B. Compression test  
 C. Torsion test  
 D. Shear test

Question ID : 10343511467  
Status : Answered  
Chosen Option : A

Q.29 Soils are classified into \_\_\_\_\_ groups under Indian standard soil classification system.

- Ans  A. 15  
 B. 18  
 C. 3  
 D. 7

Question ID : 10343511483  
Status : Answered  
Chosen Option : D

Q.30 The fresh detailed estimate prepared in addition to the original sanctioned estimate is called:

- Ans  A. unit rate estimate  
 B. supplementary estimate  
 C. maintenance estimate  
 D. repair estimate

Question ID : 10343511551  
Status : Answered  
Chosen Option : B

Q.31 In surveying, the repetition method is used to improve precision and accuracy of measurements of:

- Ans  A. both, vertical and horizontal angles  
 B. horizontal angles  
 C. distance between points  
 D. vertical angles

Question ID : 10343511458  
Status : Answered  
Chosen Option : C

Q.32 Which of the following assumptions is NOT applicable to Terzaghi's theory of consolidation?

- Ans  A. The solid particles and water in voids are compressible.  
 B. Darcy's law is valid throughout the consolidation process.  
 C. The soil is homogeneous and isotropic.  
 D. The soil is fully saturated.

Question ID : 10343511486

Status : Answered

Chosen Option : B

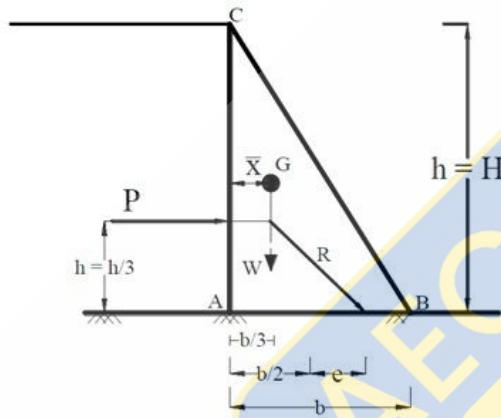
Q.33 Consider a triangular section masonry dam of bottom width 'b' and height 'H' which stores water on its vertical face to full depth ( $h = H$ ) as shown in the figure. The minimum base width of elementary profile for no tension considering no uplift pressure is given by:

where,

$\gamma$  = Specific weight of masonry

$\omega$  = Specific weight of water

S = Relative density of dam material



- Ans  A.  $b = \frac{H}{2\sqrt{S}}$   
 B.  $b = \frac{H^2}{\sqrt{S}}$   
 C.  $b = \frac{H}{\sqrt{S}}$   
 D.  $b = \frac{H}{S}$

Question ID : 10343511515

Status : Answered

Chosen Option : B

Q.34 A hyetograph is defined as a plot of:

- Ans  A. daily volume of rainfall against the time interval, represented as a scatter plot  
 B. cumulative depth of rainfall against the time, represented as a smooth curve  
 C. intensity of rainfall against the time interval, represented as a bar chart  
 D. intensity of temperature against the time interval, represented as a bar chart

Question ID : 10343511575  
Status : Answered  
Chosen Option : C

Q.35 The difference between critical path method and PERT is that:

- Ans  A. CPM is activities oriented while PERT is events oriented  
 B. time estimates for competition are not accurate in CPM while they are accurate in PERT  
 C. CPM is events oriented while PERT is activities oriented  
 D. cost is not directly proportional to time in CPM while it is directly proportional to time in PERT

Question ID : 10343511518  
Status : Answered  
Chosen Option : A

Q.36 The two-point and three-point problems in plane table survey are related to:

- Ans  A. resection  
 B. radiation  
 C. intersection  
 D. traversing

Question ID : 10343511457  
Status : Answered  
Chosen Option : B

Q.37 'Plaster of Paris' is carried out before painting for:

- Ans  A. flooring  
 B. outside walls  
 C. terrace  
 D. inside walls

Question ID : 10343511447  
Status : Answered  
Chosen Option : B

Q.38 Slope and maximum deflection for simply supported beam subjected to a uniformly distributed load of  $w$  per unit length, over the entire span ( $l$ ) using area moment method is:  
(Where  $EI$  is the flexural rigidity)

Ans

A.  $\text{slope} = \frac{wl^2}{2EI}$  and  $\text{deflection} = \frac{wl^3}{3EI}$

B.  $\text{slope} = \frac{wl^3}{24EI}$  and  $\text{deflection} = \frac{5wl^4}{384EI}$

C.  $\text{slope} = \frac{wl^2}{16EI}$  and  $\text{deflection} = \frac{wl^3}{48EI}$

D.  $\text{slope} = \frac{wl^3}{6EI}$  and  $\text{deflection} = \frac{wl^4}{8EI}$

Question ID : 10343511506

Status : Answered

Chosen Option : C

Q.39 What type of cement is used for lining chemical apparatus and for building towers, tanks, and other installations for the chemical industry?

Ans

A. White cement

B. Expanding cement

C. Acid resisting cement

D. Oil-well cement

Question ID : 10343511554

Status : Answered

Chosen Option : C

Q.40 Which of the following is NOT a characteristic of ashlar stone masonry?

Ans

A. Every stone must be cut to the required size and shape to give truly vertical and horizontal joints.

B. No point on the faces should vary more than about 1 mm when tested with a 60 cm straight edge.

C. No portion of the dressed surface should be more than 10 mm from a straight edge placed on it.

D. Horizontal and vertical lines should not vary more than 3 mm and 6 mm, respectively.

Question ID : 10343511442

Status : Not Answered

Chosen Option : --

Q.41 If free dissolved oxygen is not available to the sewage, then the resulting anaerobic decomposition is called:

Ans

A. putrefaction

B. purification

C. aeration

D. oxidation

Question ID : 10343511564

Status : Answered

Chosen Option : C

Q.42 In a pipe network, the algebraic sum of head losses around each loop must be:

- Ans  A. zero  
 B. one  
 C. negative  
 D. positive

Question ID : 10343511492  
Status : Answered  
Chosen Option : A

Q.43 One point method test is used to find the approximate value of \_\_\_\_\_.

- Ans  A. shrinkage index  
 B. liquid limit  
 C. shrinkage limit  
 D. plastic limit

Question ID : 10343511482  
Status : Not Answered  
Chosen Option : --

Q.44 The components of a typical flexible pavement are:

- Ans  A. Surface course, base course and sub-base course  
 B. Surface course, base course, sub-base course and soil subgrade  
 C. Surface course and base course  
 D. Surface course, base course and soil subgrade

Question ID : 10343511531  
Status : Answered  
Chosen Option : B

Q.45 In the case of a gravity dam, identify the force which does NOT try to destabilise the dam.

- Ans  A. Water standing against the upstream face of the dam  
 B. Water standing against the downstream face of the dam  
 C. Generation of waves by high winds  
 D. Deposition of silt in dead storage zone of the reservoir

Question ID : 10343511572  
Status : Answered  
Chosen Option : D

**Q.46** In which of the following condition, Kennedy's theory of canal design is different from Lacy's theory:

- Ans**
- A. the sediment is kept in suspension due to eddies generated from bottom as well as sides of the channel
  - B. silt factor is introduced as a measure of the grain size of the material forming the channel
  - C. velocity is sufficient to generate eddies from the bottom of the channel to keep the sediment just in suspension
  - D. Kennedy has proposed initial, true and final regime condition in the channel to study the silt

Question ID : 10343511570  
Status : Answered  
Chosen Option : D

**Q.47** As per IS: 456-2000, the maximum shear stress for M25 grade concrete in limit state design is:

- Ans**
- A. 2.8 N/ mm<sup>2</sup>
  - B. 2.5 N/mm<sup>2</sup>
  - C. 3.5 N/ mm<sup>2</sup>
  - D. 3.1 N/ mm<sup>2</sup>

Question ID : 10343511539  
Status : Answered  
Chosen Option : B

**Q.48** Which of the following irrigation systems leads to reduced evaporation?

- Ans**
- A. Drip irrigation
  - B. Basin flooding
  - C. Sprinkler irrigation
  - D. Furrow irrigation

Question ID : 10343511569  
Status : Answered  
Chosen Option : A

**Q.49** When the Full Supply Level of the canal is sufficiently below the bottom of the drain trough, so that the canal water flows freely under gravity, the structure is known as:

- Ans**
- A. aqueduct
  - B. super passage
  - C. syphon aqueduct
  - D. level crossing

Question ID : 10343511573  
Status : Answered  
Chosen Option : A

Q.50 To make timber more fire resistant than it is, the wood is first impregnated with a fire retarding chemical solution such as \_\_\_\_\_.

- Ans
- A. butane
  - B. turpentine
  - C. gasoline
  - D. ammonium phosphate

Question ID : 10343511432  
Status : Answered  
Chosen Option : B

Q.51 Determine the mechanical widening required for a two-lane pavement of width 7 m on a horizontal curve of radius 490 m, if the longest base of vehicle expected on the road is 7 m.

- Ans
- A. 0.1 m
  - B. 0.7 m
  - C. 0.3 m
  - D. 0.5 m

Question ID : 10343511533  
Status : Not Answered  
Chosen Option : --

Q.52 Identify whether the given statements are true or false.

Statements:

- 1) Damp proof courses are built in masonry wall to prevent dampness penetrating through the walls from foundation upwards or from the roof downwards.
- 2) Waterproofing of basements should be carried out wherever there is a possibility of groundwater rising above the basement level.

- Ans
- A. Statement 1 is false and statement 2 is true
  - B. Both statements are false
  - C. Statement 1 is true and statement 2 is false
  - D. Both statements are true

Question ID : 10343511444  
Status : Answered  
Chosen Option : D

Q.53 To counter balance the effect of hydraulic jump, baffle walls are provided in:

- Ans
- A. Sarda type fall
  - B. Inglis type fall
  - C. Rapid type fall
  - D. Montague type fall

Question ID : 10343511489  
Status : Answered  
Chosen Option : A



**Q.54** What permissible limit of fluorides present in water causes diseases like dental fluorosis and skeletal fluorosis?

- Ans  A. Less than 1.0 mg/litre  
 B. Greater than 2.0 mg/litre  
 C. Greater than 1.5 mg/litre  
 D. Greater than 2.5 mg/litre

Question ID : 10343511558  
Status : Answered  
Chosen Option : C

**Q.55** Which of the following is an advantage of English bond in brick masonry?

- Ans  A. English bond provides greater economy compared to a Flemish bond.  
 B. English bond requires more facing bricks than other bonds.  
 C. English bond gives greater strength than any other bond.  
 D. English bond gives more aesthetic appearance than Flemish bond.

Question ID : 10343511441  
Status : Answered  
Chosen Option : C

**Q.56** Which of the following types of project management starts when actual work starts?

- Ans  A. Project marketing  
 B. Project planning  
 C. Project scheduling  
 D. Project controlling

Question ID : 10343511517  
Status : Answered  
Chosen Option : B

**Q.57** Which of the following statements is applicable to movable hair method of stadia system in tachometer?

- Ans  A. The staff interval is kept constant by changing the distance between the stadia hairs.  
 B. Stadia hairs are kept at fixed intervals and the staff interval or intercept on the levelling staff varies.  
 C. Stadia hairs are kept at fixed intervals and the staff interval or intercept on the levelling staff is also fixed.  
 D. Readings at two different points on a staff are taken against the horizontal cross hair and corresponding vertical angles are noted.

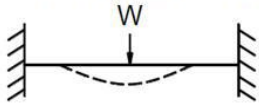
Question ID : 10343511454  
Status : Answered  
Chosen Option : D

Q.58 \_\_\_\_\_ is a method of levelling to accurately determine the difference in elevation between two points that are at considerable distance apart with an intervening obstacle between the points.

- Ans  A. Reciprocal levelling  
 B. Differential levelling  
 C. Fly levelling  
 D. Precise levelling

Question ID : 10343511460  
 Status : Answered  
 Chosen Option : B

Q.59 The degree of static indeterminacy for a fixed beam subjected to the loading as shown in the figure is:



- Ans  A. 2  
 B. 1  
 C. 3  
 D. 0

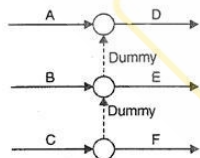
Question ID : 10343511507  
 Status : Answered  
 Chosen Option : C

Q.60 According to IS: 4111 (part-1) - 1964, the spacing of manholes that can be adopted on straight reaches of sewer line to be cleaned manually, for a sewer of diameter 0.9 m is:

- Ans  A. 250 m  
 B. 90 m  
 C. 75 m  
 D. 45 m

Question ID : 10343511563  
 Status : Not Answered  
 Chosen Option : --

Q.61 Select the correct explanation from the following options for the network diagram shown in the given figure.



- Ans  A. Activity A controls C and D, while activity B controls D and E. Thus, D is controlled by both A and B  
 B. Activity B is controlled by A and C. However, activity D is controlled by activity C only  
 C. Activity D is controlled by A and B, while activity E is controlled by activity B and C  
 D. Activity D is controlled by A,B and C. However, activity E is controlled by B and C

Question ID : 10343511522  
 Status : Answered  
 Chosen Option : D

Q.62 Identify whether the following statements related to network diagram in project management are correct or incorrect.

Statements:

- 1.A portion of a project having a definite beginning and an end is called as activity.
- 2.An activity is the actual performance of a task

- Ans
- A. Statement 1 is correct and statement 2 is incorrect
  - B. Both statements are correct
  - C. Both statements are incorrect
  - D. Statement 1 is incorrect and statement 2 is correct

Question ID : 10343511523  
Status : Answered  
Chosen Option : B

Q.63 A course of stones placed immediately below the cornice along the external face of the wall to improve appearance is called:

- Ans
- A. freeze
  - B. quoins
  - C. corbels
  - D. copings

Question ID : 10343511440  
Status : Not Answered  
Chosen Option : --

Q.64 Which of the following assumptions is NOT made in the derivation of shear stress produced in a circular shaft subjected to torsion?

- Ans
- A. All radii which are straight before twist remain straight after twist.
  - B. The shaft is uniform circular section throughout.
  - C. The material of the shaft is non-homogeneous.
  - D. Cross sections of the shaft, which are plane before twist remain plain after twist.

Question ID : 10343511463  
Status : Not Answered  
Chosen Option : --

Q.65 The Clapeyron's theorem is used to analyse:

- Ans
- A. propped cantilever
  - B. continuous beam
  - C. portal frames
  - D. fixed beam

Question ID : 10343511511  
Status : Not Answered  
Chosen Option : --

Q.66 The device used in chain survey for ranging out a line when crossing a depression from which the forward rod is invisible or when it is hidden by obstacles is:

- Ans  A. plumb bob  
 B. pegs  
 C. tapes  
 D. plasterer's laths

Question ID : 10343511456  
Status : Answered  
Chosen Option : B

Q.67 The traffic island used to separate opposing flow traffic on a highway with four or more lanes is achieved through:

- Ans  A. divisional islands  
 B. pedestrian loading island  
 C. channelising island  
 D. rotary

Question ID : 10343511530  
Status : Answered  
Chosen Option : D

Q.68 What is the function of a surge tank in a hydroelectric power plant?

- Ans  A. To provide additional pressures to the turbine  
 B. To absorb sudden pressure rise in the turbine  
 C. To provide constant head of water  
 D. To reduce the pressure in the draft tube of turbine

Question ID : 10343511499  
Status : Answered  
Chosen Option : C

Q.69 Identify the characteristics of standard sand, used for testing cement.

- Ans  A. The sand shall be of quartz of light grey or whitish variety and free from silt.  
 B. The sand shall pass through IS:476 micrometre sieve.  
 C. The sand grains shall be circular in shape.  
 D. The sand shall be free from inorganic impurities.

Question ID : 10343511472  
Status : Not Answered  
Chosen Option : --

Q.70 Which of the following is NOT a type of transition curve?

- Ans  A. Lemniscate  
 B. Hyperbola  
 C. Spiral  
 D. Cubic parabola

Question ID : 10343511455  
Status : Answered  
Chosen Option : C

Q.71 The phenomenon when the sand loses its shear strength due to oscillatory motion is known as:

- Ans  A. shrinkage of sand  
 B. boiling of sand  
 C. liquefaction of sand  
 D. bulking of sand

Question ID : 10343511487  
Status : Answered  
Chosen Option : D

Q.72 Identify the equipment which does NOT make use of the practical application of Bernoulli's equation.

- Ans  A. Hydraulic ram  
 B. Venturi meter  
 C. Orifice meter  
 D. Pitot tube

Question ID : 10343511491  
Status : Answered  
Chosen Option : A

Q.73 The correct sequence of the components in a pumping mechanism with centrifugal pump through which the fluid flows from the sump is:

- Ans  A. suction pipe, delivery pipe, impeller, foot valve and strainer  
 B. foot valve and strainer, suction pipe, impeller, delivery pipe  
 C. impeller, suction pipe, foot valve and strainer, delivery pipe  
 D. impeller, suction pipe, delivery pipe, foot valve and strainer

Question ID : 10343511500  
Status : Answered  
Chosen Option : A

Q.74 To measure which of the following quantities is a triangular notch a more accurate measuring device than the rectangular notch?

- Ans  A. Medium flow rates  
 B. All flow rates  
 C. Low flow rates  
 D. High flow rates

Question ID : 10343511494  
Status : Answered  
Chosen Option : B

Q.75 When does Cant deficiency occur in railways?

- Ans  A. When a train travels over the transition at the maximum permissible speed  
 B. When a train travels around a curve at a speed higher than the equilibrium speed  
 C. When a train travels over the transition at the minimum permissible speed  
 D. When a train travels around a curve at a speed lower than the equilibrium speed

Question ID : 10343511534  
Status : Answered  
Chosen Option : B

Q.76 The setting time of concrete is found in laboratory by:

- Ans  A. Vicat apparatus  
 B. Kelly Ball test  
 C. penetrometer test  
 D. flow test

Question ID : 10343511475  
Status : Answered  
Chosen Option : A

Q.77 The following offsets were taken at 30 m interval from a survey line to an irregular boundary line: 4m, 6m, 5m, 7m. Calculate the area by Simpson's rule.

- Ans  A. 950 m<sup>2</sup>  
 B. 410 m<sup>2</sup>  
 C. 715 m<sup>2</sup>  
 D. 590 m<sup>2</sup>

Question ID : 10343511557  
Status : Not Answered  
Chosen Option : --

Q.78 The concrete that is conveyed through a hose and pneumatically projected at a high velocity on a surface is called:

- Ans  A. shotcrete  
 B. smart concrete  
 C. ready mix concrete  
 D. green concrete

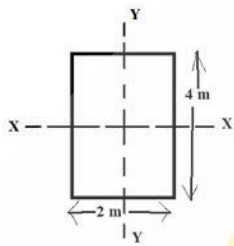
Question ID : 10343511436  
Status : Answered  
Chosen Option : C

Q.79 What is the purpose of horizontal stiffeners in a plate girder?

- Ans  A. To safeguard the web against temperature buckling stress  
 B. To safeguard the flange against shearing buckling stress  
 C. To safeguard the flange against bending buckling stress  
 D. To safeguard the web against bending buckling stress

Question ID : 10343511548  
Status : Answered  
Chosen Option : B

Q.80 Find the moment of inertia of a rectangle about centroidal YY axis shown in the given figure.



- Ans  A. 2.67 m<sup>4</sup>  
 B. 6.67 m<sup>4</sup>  
 C. 14.67 m<sup>4</sup>  
 D. 10.67 m<sup>4</sup>

Question ID : 10343511464  
Status : Answered  
Chosen Option : A

Q.81 Which of the following is an example of a statically indeterminate beam?

- Ans  A. Overhanging beam  
 B. Cantilever beam  
 C. Simply supported beam  
 D. Propped cantilever beam

Question ID : 10343511503  
Status : Answered  
Chosen Option : D



Q.82 The first area of moment for a triangle having base B and height H with respect base is:

- Ans
- A.  $\frac{H}{2}$
  - B.  $\frac{2H}{3}$
  - C.  $\frac{H}{4}$
  - D.  $\frac{H}{3}$

Question ID : 10343511505  
Status : Answered  
Chosen Option : B

Q.83 The capacity factor of a canal is:

- Ans
- A. the ratio of mean supply (discharge) to the design capacity of the canal
  - B. the ratio of the number of days the canal has actually run to the number of days of the irrigation period
  - C. the ratio of quantity of flow in kharif season and rabi season
  - D. the duty based on the discharge at the canal headworks

Question ID : 10343511574  
Status : Answered  
Chosen Option : A

Q.84 Which of the following content is responsible for reducing the heat of hydration during the setting action of low heat cement?

- Ans
- A. Phosphorous aluminium silicate
  - B. Tricalcium aluminate
  - C. Dicalcium aluminate
  - D. Gypsum silicate

Question ID : 10343511431  
Status : Answered  
Chosen Option : D

Q.85 The weight of one litre of a liquid is 9N. The approximate specific gravity of this liquid would be:

- Ans
- A. 0.72
  - B. 0.64
  - C. 0.92
  - D. 0.87

Question ID : 10343511488  
Status : Answered  
Chosen Option : C

Q.86 Identify the traffic warning sign shown here.



- Ans
- A. No stopping no standing
  - B. Cross road
  - C. No parking
  - D. Width limit

Question ID : 10343511525  
Status : Answered  
Chosen Option : A

Q.87 What is the minimum nominal cover required for reinforced concrete footing under very severe exposure conditions, as per IS: 456-2000?

- Ans
- A. 20 mm
  - B. 50 mm
  - C. 30 mm
  - D. 40 mm

Question ID : 10343511538  
Status : Answered  
Chosen Option : B

Q.88 Construction project management involves all the following stages EXCEPT:

- Ans
- A. project planning
  - B. project controlling
  - C. project marketing
  - D. project scheduling

Question ID : 10343511516  
Status : Answered  
Chosen Option : C

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Q.89 Stiffness factor (k) for a fixed end beam of length L with a flexural rigidity EI is given by:

Ans

A.  $k = \frac{4EI}{l}$

B.  $k = \frac{2EI}{l}$

C.  $k = \frac{EI}{l}$

D.  $k = \frac{3EI}{l}$

Question ID : 10343511502

Status : Not Answered

Chosen Option : --

Q.90 Match the columns.

Highway materials	Test apparatus
1. Aggregate hardness	A. Pensky–Martens test
2. Bitumen adhesion	B. Float test
3. Consistency of bitumen	C. Dynamic immersion test
4. Flash point of bitumen	D. Los Angeles apparatus

Ans  A. 1-C, 2-D, 3-B, 4-A

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

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

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

Question ID : 10343511535

Status : Answered

Chosen Option : B

Q.91 Select the noise induced disease from the following.

Ans  A. Fluorosis

B. High blood pressure

C. Hepatitis

D. Bronchiolitis

Question ID : 10343511561

Status : Answered

Chosen Option : B

Q.92 The Delta for a crop having a base of period 120 days is 80 cm. What is the duty of crop?

- Ans  A. 1296 hectare/cumec  
 B. 2480 hectare/cumec  
 C. 1.296 hectare/cumec  
 D. 2.480 hectare/cumec

Question ID : 10343511568  
Status : Answered  
Chosen Option : C

Q.93 According to IS 456-2000, for limit state of design, design strength of the material is given by:

- Ans  A.  $\frac{\text{characteristic strength of the material}}{\text{working factor appropriate to the material}}$   
 B.  $\frac{\text{partial safety factor appropriate to the material}}{\text{Compressive strength of the material}}$   
 C.  $\frac{\text{partial safety factor appropriate to the material}}{\text{characteristic strength of the material}}$   
 D.  $\frac{\text{characteristic strength of the material}}{\text{partial safety factor appropriate to the material}}$

Question ID : 10343511544  
Status : Answered  
Chosen Option : B

Q.94 The mass of hammer and drop of hammer used in standard compaction test are \_\_\_\_\_ and \_\_\_\_\_, respectively.

- Ans  A. 4.8 kg ; 310 mm  
 B. 4.89 kg ; 450 mm  
 C. 2.6 kg ; 310 mm  
 D. 2.6 kg ; 450 mm

Question ID : 10343511479  
Status : Answered  
Chosen Option : B

Q.95 The flow in open channel is said to be laminar when the value of Reynold's number is:

- Ans  A. less than 500  
 B. greater than 500  
 C. greater than 2000  
 D. less than 1000

Question ID : 10343511493  
Status : Answered  
Chosen Option : C

Q.96 'Putlogs' is one of the parts of scaffolding which is described as:

- Ans  A. horizontal members normal to the wall  
 B. planks on which workmen stand  
 C. members used to bridge opening  
 D. horizontal members parallel to the wall

Question ID : 10343511445  
Status : Not Answered  
Chosen Option : --

Q.97 According to IS 456-2000, the walls shall be assumed to be braced if they are laterally supported by a structure, satisfying certain conditions. Identify the condition for which the above assumption CANNOT be applied.

- Ans  A. Connections between the wall and the lateral supports are designed to resist a horizontal force not less than the simple static reactions to the total applied horizontal forces at the level of lateral support.  
 B. Lateral forces are resisted by shear in the planes of these walls or by braced elements.  
 C. Floor and roof systems are designed to transfer lateral forces.  
 D. Walls or vertical braced elements are arranged in one directions so as to provide lateral stability to the structure as a whole.

Question ID : 10343511501  
Status : Not Answered  
Chosen Option : --

Q.98 Which of the following type of irrigation methods is suitable in hilly areas?

- Ans  A. Basin method  
 B. Border strip method  
 C. Flooding method  
 D. Contour method

Question ID : 10343511571  
Status : Answered  
Chosen Option : B

Q.99 Identify whether the given statements related to rain gauges are correct or incorrect.

Statements:

- 1: Tipping bucket type rain gauge is a non-recording gauge and when one bucket receives a small amount of rain (say 0.1 mm), it tips.  
2: Weighing bucket rain gauge is a self-recording gauge and the increase in weight of bucket due to small amount of rain (say 1 mm<sup>3</sup>) is done through a weighing mechanism.

- Ans  A. Both statements are incorrect  
 B. Both statements are correct  
 C. Statement 1 is correct and statement 2 is incorrect  
 D. Statement 1 is incorrect and statement 2 is correct

Question ID : 10343511577  
Status : Answered  
Chosen Option : A

Q.100 Diagonal scale is used to measure:

- Ans  A. metre and angles  
 B. metre, decimetre, centimetre and angle  
 C. metre, decimetre and centimetre  
 D. metre and decimetre only

Question ID : 10343511451  
Status : Answered  
Chosen Option : B

Q.101 The stress is directly proportional strain within the elastic limit is called:

- Ans  A. Young's modulus  
 B. Rigidity modulus  
 C. Hook's law  
 D. Lami's law

Question ID : 10343511462  
Status : Answered  
Chosen Option : A

Q.102 The moment of inertia of a plate girder is calculated with respect to \_\_\_\_\_ determined by gross-section of the girder.

- Ans  A. neutral axis  
 B. lower edge of bottom flange  
 C. upper edge of top flange  
 D. reference axis

Question ID : 10343511547  
Status : Answered  
Chosen Option : A

Q.103 According to IS:1199-1959, the dimensions of the mould for conducting the slump test on concrete are:

- Ans  A. bottom diameter = 25 cm; top diameter 17 cm and height = 12 cm  
 B. bottom diameter = 10 cm; top diameter 2 cm and height = 20 cm  
 C. bottom diameter = 20 cm; top diameter 10 cm and height = 30 cm  
 D. bottom diameter = 20 cm; top diameter 10 cm and height = 20 cm

Question ID : 10343511474  
Status : Answered  
Chosen Option : B

Q.104 The main purpose of adding plasticizer in concrete is to:

- Ans  A. improve the workability of concrete  
 B. reduce air entrainment in the concrete  
 C. solidify the concrete mix  
 D. reduce the surface tension of water

Question ID : 10343511473  
Status : Answered  
Chosen Option : A

Q.105 Which of the following concrete grades is suitable for lean concrete bases?

- Ans  A. M 30  
 B. M 20  
 C. M 7.5  
 D. M 15

Question ID : 10343511470  
Status : Answered  
Chosen Option : A

Q.106 The ratio of stiffness of a member meeting at a structural joint to the sum of the stiffness of all members meeting at that joint is known as:

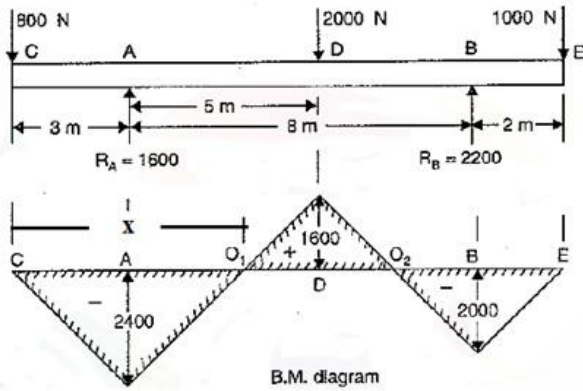
- Ans  A. distribution moment  
 B. carryover moment  
 C. carry over factor  
 D. distribution factor

Question ID : 10343511512  
Status : Not Answered  
Chosen Option : --

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Q.107 Find the value of  $X$  (contraflexure point  $O_1$  from  $C$ ) from the given loading and bending moment diagram.



- Ans
- A. 3 m
  - B. 4 m
  - C. 6 m
  - D. 5 m

Question ID : 10343511468

Status : Answered

Chosen Option : C

Q.108 In traverse surveying, while balancing the traverse process for a closed traverse, the total error in latitudes and in departures is distributed in proportion to the latitudes and departures of the sides. Identify the method.

- Ans
- A. Graphical method
  - B. Axis method
  - C. Transit method
  - D. Bowditch's method

Question ID : 10343511453

Status : Not Answered

Chosen Option : --

Q.109 According to Euler's theory, the buckling load ( $P$ ) for column of unsupported length ( $L$ ) with both ends hinged is given by:  
(Where  $EI$  – flexural rigidity)

- Ans
- A.  $P = \frac{4\pi^2 EI}{L^2}$
  - B.  $P = \frac{\pi^2 EI}{L^2}$
  - C.  $P = \frac{\pi^2 EI}{4L^2}$
  - D.  $P = \frac{2\pi^2 EI}{L^2}$

Question ID : 10343511469

Status : Answered

Chosen Option : C

Q.110 According to IS:456-2000, the maximum limit of suspended solid present in the water used for making concrete is:

- Ans  A. 1500 mg/l  
 B. 500 mg/l  
 C. 1000 mg/l  
 D. 2000 mg/l

Question ID : 10343511471  
Status : Answered  
Chosen Option : A

Q.111 How are roads under the Nagpur road plan classified?

- Ans  A. National highways  
 B. National highways, state highways, major district roads, other district roads and village roads  
 C. National highways, state highways and major district roads  
 D. National highways and state highways

Question ID : 10343511524  
Status : Answered  
Chosen Option : B

Q.112 According to IS: 456-2000 for bundled bars, bars larger than 32 mm diameter shall:

- Ans  A. be bundled both in columns and beams  
 B. be bundled except in beams  
 C. not be bundled both in beam and column  
 D. not be bundled except in columns

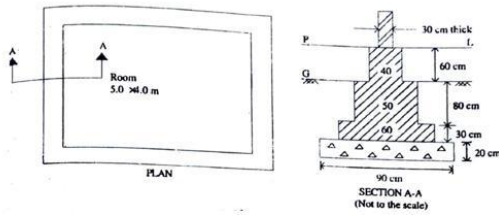
Question ID : 10343511546  
Status : Answered  
Chosen Option : A

Q.113 The type of ceramic material that is capable of withstanding high temperature, resists chemical action, and does not lose its physical shape is:

- Ans  A. tiles  
 B. glass  
 C. clay bricks  
 D. refractory

Question ID : 10343511578  
Status : Answered  
Chosen Option : A

**Q.114** Calculate the quantity of earthwork excavation in the foundation for the building plan in the given figure using long wall and short wall method.



- Ans
- A. 24.658 m<sup>3</sup>
  - B. 22.464 m<sup>3</sup>
  - C. 24.125 m<sup>3</sup>
  - D. 20.325 m<sup>3</sup>

Question ID : 10343511553  
 Status : Answered  
 Chosen Option : A

**Q.115** A canal fall which consists of a combination of convex curve and concave curve for carrying the canal water from higher level to lower level is

- Ans
- A. Ogee fall
  - B. Inglis fall
  - C. Stepped fall
  - D. Rapid fall

Question ID : 10343511567  
 Status : Answered  
 Chosen Option : A

**Q.116** Using the arc definition with arc length of 30 m, the relationship between the radius  $R$  and the degree of curve  $D$  of a simple circular curve is given by:

- Ans
- A.  $R = \frac{1519}{D}$
  - B.  $R = \frac{1419}{D}$
  - C.  $R = \frac{1319}{D}$
  - D.  $R = \frac{1719}{D}$

Question ID : 10343511450  
 Status : Answered  
 Chosen Option : D

Q.117 Identify the approach used in work breakdown structure in project planning, which ensures that the total project is fully planned and that all derivative plans contribute directly to the desired end objectives.

- Ans
- A. lumpsum approach
  - B. bottom-up approach
  - C. outsourcing approach
  - D. top-down approach

Question ID : 10343511520  
Status : Not Answered  
Chosen Option : --

Q.118 The process in which suspended solids such as clay, silt and sand are made to settle by gravity under still water conditions is called:

- Ans
- A. aeration
  - B. softening
  - C. sedimentation
  - D. disinfection

Question ID : 10343511560  
Status : Answered  
Chosen Option : C

Q.119 On which type gradient there are no obstacles provided in the form of signals, etc., which may bring the train to a critical juncture?

- Ans
- A. Pusher gradient
  - B. Ruling gradient
  - C. Gradients in station yards
  - D. Momentum gradient

Question ID : 10343511532  
Status : Answered  
Chosen Option : D

Q.120 In project management, bar charts were introduced by:

- Ans
- A. Gunter
  - B. Rankine
  - C. Euler
  - D. Henry Gantt

Question ID : 10343511519  
Status : Answered  
Chosen Option : A

Q.121 In which theodolite can the telescope be revolved through a complete revolution about the horizontal axis?

- Ans  A. Electronic theodolite  
 B. Transit theodolite  
 C. Micrometre theodolite  
 D. Vernier theodolite

Question ID : 10343511448  
Status : Answered  
Chosen Option : B

Q.122 If the specific speed of a pump is  $N_s$  for discharge 'Q', what would be the specific speed for half discharge with the same head?

- Ans  A.  $2 N_s$   
 B.  $\sqrt{2} N_s$   
 C.  $N_s$   
 D.  $\frac{N_s}{\sqrt{2}}$

Question ID : 10343511496  
Status : Answered  
Chosen Option : D

Q.123 A fixed beam of span (L) carries a uniformly distributed load of w per unit length over the entire span. The deflection at the centre is:

- Ans  A. one-fifth of the central deflection for a simply supported beam  
 B. one-fourth of the central deflection for a simply supported beam  
 C. equal to the central deflection of a simply supported beam  
 D. half of the central deflection for a simply supported beam

Question ID : 10343511466  
Status : Not Answered  
Chosen Option : --

Q.124 \_\_\_\_\_ is the dividing beam between the substructure and super structure of a building.

- Ans  A. Lintel beam  
 B. Plinth beam  
 C. Sill beam  
 D. Strap beam

Question ID : 10343511439  
Status : Answered  
Chosen Option : B

Q.125 Which of the following conditions is valid for an over-reinforced beam?

- Ans  A. The depth of actual neutral axis is equal to the geometrical neutral axis  
 B. The depth of actual neutral axis is less than the depth of critical neutral axis  
 C. The depth of actual neutral axis is more than the depth of critical neutral axis  
 D. The depth of actual neutral axis coincides with the depth of critical neutral axis

Question ID : 10343511542  
Status : Not Answered  
Chosen Option : --

Q.126 What would be the hydraulic efficiency of a Pelton turbine if its overall efficiency is 60% and mechanical efficiency is 80%?

- Ans  A. 72.3%  
 B. 75%  
 C. 81%  
 D. 82.5%

Question ID : 10343511497  
Status : Not Answered  
Chosen Option : --

Q.127 For the purpose of computing the stopping sight distance on highways, Indian Road Congress has suggested the height of eye level of driver as \_\_\_\_\_ and the height of the object as \_\_\_\_\_ above the road surface.

- Ans  A. 1.0 m, 0.10 m  
 B. 1.2 m, 0.15 m  
 C. 1.5 m, 0.18 m  
 D. 1.75 m, 0.2 m

Question ID : 10343511527  
Status : Not Answered  
Chosen Option : --

Q.128 Identify the option that arranges the given steps involved in the manufacture of earthen bricks in correct sequential order.

Digging, unsoiling, weathering, tempering, blending

- Ans  A. Unsoiling, digging, weathering, blending, tempering  
 B. Weathering, unsoiling, digging, blending, tempering  
 C. Digging, unsoiling, tempering, weathering, blending  
 D. Digging, unsoiling, weathering, tempering, blending

Question ID : 10343511434  
Status : Not Answered  
Chosen Option : --

Q.129 If the characteristic strength of concrete  $f_{ck}$  is 400 N/mm<sup>2</sup>, then the modulus of rupture  $f_{cr}$  is:

- Ans
- A. 14 N/mm<sup>2</sup>
  - B. 12 N/mm<sup>2</sup>
  - C. 16 N/mm<sup>2</sup>
  - D. 10 N/mm<sup>2</sup>

Question ID : 10343511540  
Status : Not Answered  
Chosen Option : --

Q.130 According to \_\_\_\_\_, creep is developed due to the impact of wheels at the rail end ahead of a joint.

- Ans
- A. percussion theory
  - B. drag theory
  - C. wave motion theory
  - D. crippling load theory

Question ID : 10343511526  
Status : Not Answered  
Chosen Option : --

Q.131 The arch that is built around triangles and formed of segments meeting at the apex is called:

- Ans
- A. flat arch
  - B. relieving arch
  - C. corbel arch
  - D. gothic arch

Question ID : 10343511443  
Status : Not Answered  
Chosen Option : --

Q.132 The second area of moment of a semicircle of diameter 2 m about the diameter axis is:

- Ans
- A.  $\frac{\pi}{6} m^4$
  - B.  $\frac{\pi}{4} m^4$
  - C.  $\frac{\pi}{2} m^4$
  - D.  $\frac{\pi}{8} m^4$

Question ID : 10343511509  
Status : Not Answered  
Chosen Option : --



Q.133 Match the columns.

Building materials	Characteristics and uses
1. Glass	A. An organic material prepared from resin with or without fillers such as plasticizer solvents
2. Plastic	B. A fibrous mineral substance, composed of hydrous silicate of calcium and magnesium with small amounts of iron oxide and alumina
3. Gypsum	C. Obtained by melting at a high temperature a mixture of pure sand, soda and chalk
4. Asbestos	D. A white crystalline substance in the hydrated sulphate of calcium

- Ans
- A. 1-C, 2-D, 3-A, 4-B
  - B. 1-B, 2-C, 3-D, 4-A
  - C. 1-D, 2-A, 3-C, 4-B
  - D. 1-C, 2-A, 3-D, 4-B

Question ID : 10343511437  
Status : Not Answered  
Chosen Option : --

Q.134 For brittle materials, factor of safety is defined as:

- Ans
- A. the ratio of ultimate stress to breaking stress
  - B. the ratio of permissible stress to ultimate stress
  - C. the ratio of ultimate stress to permissible stress
  - D. the ratio of yield stress to breaking stress

Question ID : 10343511541  
Status : Not Answered  
Chosen Option : --

Q.135 Mass density of soil is determined using:

- Ans
- A. gas jar method
  - B. pycnometer method
  - C. sand replacement method
  - D. density bottle method

Question ID : 10343511480  
Status : Not Answered  
Chosen Option : --

Q.136 The quantity of 9 cm thick honeycomb brick work in cement mortar 1 : 4 for a length of 2 m and a height of 3 m is:

- Ans
- A.  $0.18 \text{ m}^3$
  - B.  $0.54 \text{ m}^3$
  - C.  $6 \text{ m}^2$
  - D.  $2.6 \text{ m}^2$

Question ID : 10343511552

Status : Not Answered

Chosen Option : --

Q.137 What type of cement is normally used in constructions that are subject to high temperatures such as workshops, refractories and foundries?

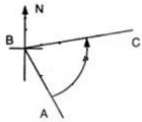
- Ans
- A. High alumina cement
  - B. Ordinary Portland Cement
  - C. Quick setting cement
  - D. Rapid hardening cement

Question ID : 10343511478

Status : Not Answered

Chosen Option : --

Q.138 The bearings of AB and BC are  $330^\circ$  and  $70^\circ$ , respectively. Find the included angle ABC as shown in the given figure.



- Ans
- A.  $120^\circ$
  - B.  $80^\circ$
  - C.  $70^\circ$
  - D.  $60^\circ$

Question ID : 10343511461

Status : Not Answered

Chosen Option : --

**Q.139** According to IS 456 - 2000, match the degree of end restraint of compression members (columns) with the theoretical value of effective length of column, where L is the unsupported length of column.

Degree of end restraint of compression member	Theoretical effective length
A. Effectively held in position and restrained against rotation in both ends	I. 2.0 L
B. Effectively held in position at both ends. restrained against rotation at one end	II. 1.0 L
C. Effectively held in position at both ends. But not restrained against rotation	III. 0.5 L
D. Effectively held in position and restrained against rotation at one end but not held in position nor restrained against rotation at the other end	IV. 0.7 L

- Ans**
- A. A-II, B-III, C-IV, D-I
  - B. A-III, B-I, C-IV, D-II
  - C. A-III, B-IV, C-II, D-I
  - D. A-II, B-I, C-III, D-IV

Question ID : 10343511545  
Status : Not Answered  
Chosen Option : --

**Q.140** For the purpose of checking the requirements of highway geometric design, which of the following percentile speeds is used from the cumulative speed distribution curve plotted against spot speed data?

- Ans**
- A. 15th percentile
  - B. 85th percentile
  - C. 50th percentile
  - D. 98th percentile

Question ID : 10343511528  
Status : Not Answered  
Chosen Option : --

**Q.141** The power dissipated by a 1 : 10 model of a spillway is 0.5 hp. Calculate the corresponding prototype horsepower dissipated.

- Ans**
- A. 2342 hp
  - B. 3452 hp
  - C. 1581 hp
  - D. 4632 hp

Question ID : 10343511498  
Status : Not Answered  
Chosen Option : --

**Q.142** Which of the following is a sources of surface water supply?

- Ans**
- A. Borewells
  - B. Springs
  - C. Streams
  - D. Infiltration Wells

Question ID : 10343511559  
Status : Not Answered  
Chosen Option : --

Q.143 A fixed beam of length  $L$  is subjected to a point load  $W$  at the centre. What is the shape of the fixed end bending moment diagram?

- Ans  A. Rectangle  
 B. Trapezium  
 C. Square  
 D. Triangle

Question ID : 10343511510  
Status : Not Answered  
Chosen Option : --

Q.144 Which of the following flow measuring devices contains converging and diverging sections?

- Ans  A. Magnetic flow meter  
 B. Venturimeter  
 C. Rotameter  
 D. Bend meter

Question ID : 10343511490  
Status : Not Answered  
Chosen Option : --

Q.145 Coefficient of curvature for well-graded soil should be:

- Ans  A. infinity  
 B. between 1 and 3  
 C. more than 3  
 D. zero

Question ID : 10343511481  
Status : Not Answered  
Chosen Option : --

Q.146 Which of the following IS codes provides the guidelines for design of steel structures?

- Ans  A. IS: 1077-1997  
 B. IS: 456-2000  
 C. IS: 10500-2012  
 D. IS: 800-2007

Question ID : 10343511549  
Status : Not Answered  
Chosen Option : --

Q.147 Which of the following methods is used for transporting concrete vertically up for multistorey building construction?

- Ans  A. Chute  
 B. Belt conveyer  
 C. Skip and hoist  
 D. Wheel barrow

Question ID : 10343511477  
Status : Not Answered  
Chosen Option : --

Q.148 Flexural rigidity of a structure is defined as:

- Ans  A. the product of values of Young's modulus of elasticity and first area of moment about neutral axis  
 B. the product of values of rigidity modulus and second area of moment about neutral axis  
 C. the product of values of Young's modulus of elasticity and second area of moment about neutral axis  
 D. the product of values of bulk modulus and second area of moment about neutral axis

Question ID : 10343511514  
Status : Not Answered  
Chosen Option : --

Q.149 A material has Young's modulus of 120 GPa and shear modulus of 50 GPa. Then what is the Poisson's ratio of the material?

- Ans  A. 0.2  
 B. 0.4  
 C. 0.1  
 D. 0.3

Question ID : 10343511465  
Status : Not Answered  
Chosen Option : --

Q.150 The given data was obtained from a constant permeability test:

distance between piezometer tappings =100mm,  
difference of water level in piezometer =60 mm;  
cross-sectional area of the test sample= 100 mm<sup>2</sup>,  
quantity of water collected = 300 ml and  
duration of the test= 150 seconds.  
Find coefficient of permeability.

- Ans  A. 4.5 cm/s  
 B. 3.3 cm/s  
 C. 5.8 cm/s  
 D. 5.3 cm/s

Question ID : 10343511484  
Status : Not Answered  
Chosen Option : --

Q.1 There are 11 schemes that are part of the Umbrella Schemes under the Green Revolution. Which of the following is NOT one of them?

- Ans  A. Scheme on Fisheries Training and Extension  
 B. Integrated Scheme on Agricultural Cooperation  
 C. Sub-Mission on Agricultural Mechanisation  
 D. National e-Governance Plan

Question ID : 10343511587  
Status : Answered  
Chosen Option : D

Q.2 On the tributary of which of the following rivers, is the Kishanganga Hydroelectric Project located?

- Ans  A. Jhelum  
 B. Yamuna  
 C. Brahmaputra  
 D. Indus

Question ID : 10343511591  
Status : Not Answered  
Chosen Option : --

Q.3 Vitamin B2, which is naturally present in foods and available as a food supplement, is known as:

- Ans  A. niacin  
 B. riboflavin  
 C. tocopherol  
 D. cobalamin

Question ID : 10343511594  
Status : Not Answered  
Chosen Option : --

Q.4 Centriole is an organelle which is \_\_\_\_\_ in shape.

- Ans  A. conical  
 B. cubical  
 C. spherical  
 D. cylindrical

Question ID : 10343511595  
Status : Not Answered  
Chosen Option : --

Q.5 In which of the following Indian states are the Tabo caves situated?

Ans  A. Himachal Pradesh

B. Uttar Pradesh

C. Bihar

D. Karnataka

Question ID : 10343511583

Status : Answered

Chosen Option : D

Q.6 A Company's dividends were restricted to \_\_\_\_\_ under the Regulating Act, 1773, by the Parliament of Great Britain.

Ans  A. 6%

B. 4%

C. 5%

D. 7%

Question ID : 10343511581

Status : Answered

Chosen Option : B

Q.7 Which of the following stupas is situated in Bihar?

Ans  A. Dhamek Stupa

B. Maha Stupa

C. Shanti Stupa

D. Kesariya Stupa

Question ID : 10343511584

Status : Not Answered

Chosen Option : --

Q.8 In which of the following years did Nagaland become the 13th State of the Indian Union?

Ans  A. 1970

B. 1965

C. 1963

D. 1971

Question ID : 10343511599

Status : Not Answered

Chosen Option : --



**Q.9** The battle of Plassey was fought between the East India Company and the Nawab of Bengal. Who was leading the East India Company at that time?

- Ans
- A. Charles Watson
  - B. Warren Hastings
  - C. Robert Clive
  - D. Margaret Maskelyne

Question ID : 10343511580  
Status : **Not Answered**  
Chosen Option : --

**Q.10** Which of the following festivals is celebrated mainly in Rajasthan?

- Ans
- A. Gangaur
  - B. Navreh
  - C. Ugadi
  - D. Magha Saptami

Question ID : 10343511585  
Status : **Answered**  
Chosen Option : **A**

**Q.11** Which of the following states is the Bathudi tribe mainly associated with?

- Ans
- A. Arunachal Pradesh
  - B. Tripura
  - C. Uttar Pradesh
  - D. Odisha

Question ID : 10343511593  
Status : **Answered**  
Chosen Option : **D**

**Q.12** The average depth of alluvial deposits in the Indo-Ganga-Brahmaputra Plains ranges from:

- Ans
- A. 2700-3000 m
  - B. 2000-2700 m
  - C. 1000-2000 m
  - D. 2000-3000 m

Question ID : 10343511590  
Status : **Answered**  
Chosen Option : **D**

Q.13 Gulzarilal Nanda was the first Vice-Chairman of which of the following Commissions of India?

- Ans  A. Competition Commission of India  
 B. Space Commission  
 C. Finance Commission  
 D. Planning Commission

Question ID : 10343511586  
Status : Not Answered  
Chosen Option : --

Q.14 Which of the following nuclear power plants is located in Gujarat, India?

- Ans  A. Kakrapar Atomic Power Plant  
 B. Tarapur Nuclear Reactor  
 C. Kudankulam Nuclear Power Plant  
 D. Kaiga Atomic Power Plant

Question ID : 10343511592  
Status : Not Answered  
Chosen Option : --

Q.15 Who among the following rulers introduced 'Gaz-i-Sikandari' of 39 digits or 32 inches, for the measurement of agricultural land?

- Ans  A. Bahlol Lodhi  
 B. Sikandar Lodhi  
 C. Mubarak Shah  
 D. Razia Begum

Question ID : 10343511582  
Status : Not Answered  
Chosen Option : --

Q.16 Which of the following digital payments networks is NOT involved in launching the 'Mahila Money Prepaid Card' to help women entrepreneurs?

- Ans  A. Visa  
 B. Mahila Money  
 C. Rupay  
 D. Transcorp Prepaid Payment Instruments

Question ID : 10343511589  
Status : Answered  
Chosen Option : D

Q.17 Which of the following is called a dark funnel shaped cloud that reaches from the sky to the ground?

- Ans  A. Tornado  
 B. Whirlpool  
 C. Thunderstorm  
 D. Hurricane

Question ID : 10343511596  
Status : Answered  
Chosen Option : C

Q.18 Which of the following Articles of the Indian Constitution talks about 'Freedom as to payment of taxes for promotion of any particular religion'?

- Ans  A. Article 20  
 B. Article 27  
 C. Article 31  
 D. Article 35

Question ID : 10343511598  
Status : Answered  
Chosen Option : B

Q.19 The Panch Prayag, where river Alaknanda meets river Nandakini, is known as:

- Ans  A. Rudraprayag  
 B. Vishnuprayag  
 C. Devprayag  
 D. Nandprayag

Question ID : 10343511597  
Status : Not Answered  
Chosen Option : --

Q.20 Zeta has partnered with which of the following financial services systems to power banks' credit processing?

- Ans  A. Visa  
 B. American Express  
 C. Mastercard  
 D. Rupay

Question ID : 10343511588  
Status : Answered  
Chosen Option : A

Section : Reasoning

Q.1 In a certain code language, 'STUMP' is written as 'SKXRV' and 'CLOSE' is written as 'HQRJF'. How will 'PITCH' be written in that language?

- Ans  A. KAWGS  
 B. SLFWK  
 C. SGWAK  
 D. KFWLS

Question ID : 10343511609

Status : Not Answered

Chosen Option : --

Q.2 Select the correct mirror image of the given combination when the mirror is placed at 'AB' as shown.

REPLACEMENT  
↑ A  
|  
↓ B

- Ans  A. REBГVCEMENI  
 B. TIEMDIAIЧЯ  
 C. REBГVCEMENI  
 D. TIEMDIAIЧЯ

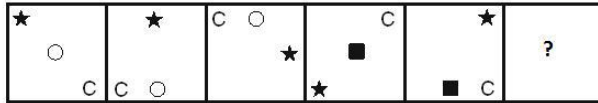
Question ID : 10343511618

Status : Answered

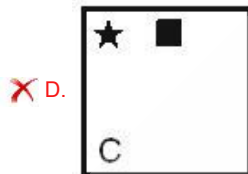
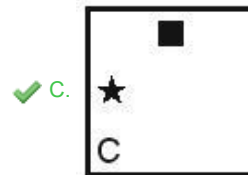
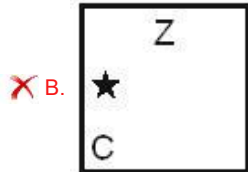
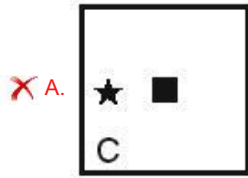
Chosen Option : D

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Q.3 Select the figure from among the given options that can replace the question mark (?) in the following series.



Ans



Question ID : 10343511616

Status : Answered

Chosen Option : C

Q.4 Kashyap started from his hostel for shopping and travelled 8 km towards the east to reach a shoe mart. Then he turned to his left and travelled 3 km to reach a cloth store, and then turned right and travelled 4 km. From there he further travelled 8 km straight towards the south and reached the gold shop. How far (shortest distance) and in which direction is he from the starting point?

Ans  A. 13 km, North West

B. 13 km, North East

C. 23 km, South East

D. 13 km, South East

Question ID : 10343511611

Status : Answered

Chosen Option : B

**Q.5** Pavani, Viplav, Riya, Suchi, Taman, Umesh, Kishore and Wasim are sitting around a circular table, facing the centre. Pavani sits third to the right of Wasim and third to the left of Kishore. Suchi sits second to the right of Taman. Viplav sits second to the left of Riya. Taman is not the immediate neighbour of Kishore while Umesh is neither an immediate neighbour of Taman nor of Wasim. If Umesh and Taman interchange their positions then what is the position of Umesh with respect to Riya?

- Ans**
- A. Immediate left
  - B. Immediate right
  - C. Third to the right
  - D. Fifth to the left

Question ID : 10343511601

Status : Not Answered

Chosen Option : --

**Q.6** Four word-pairs have been given, out of which three are alike in some manner and one is different. Select the one that is different.

- Ans**
- A. Sparrow : Bleat
  - B. Camel : Grunt
  - C. Duck : Quack
  - D. Horse : Neigh

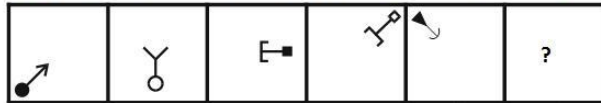
Question ID : 10343511615

Status : Answered

Chosen Option : A

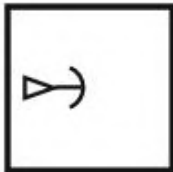
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Q.7 Select the figure from among the given options that can replace the question mark (?) in the following series.

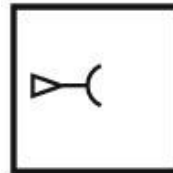


Ans

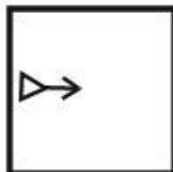
A.



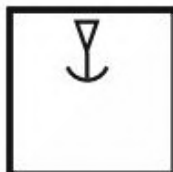
B.



C.



D.



Question ID : 10343511617

Status : Answered

Chosen Option : B

Q.8 Select the option that is related to the third term in the same way as the second term is related to the first term.

WATCH : AWAHC :: SOLVE : \_\_\_\_\_.

A. VKRZZ

B. VRKZX

C. WKS AZ

D. WSKZA

Question ID : 10343511614

Status : Not Answered

Chosen Option : --



Q.9 Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

Only a few lemons are wells.

Some lemons are vans.

All vans are cisterns.

Conclusions:

I. Some cisterns are lemons.

II. All wells being cisterns is a possibility.

III. None of the van can be well.

Ans  A. Both conclusions I and II follow.

B. Conclusions I, II and III follow.

C. Both conclusions II and III follow.

D. Both conclusions I and III follow.

Question ID : 10343511604

Status : Not Answered

Chosen Option : --

Q.10 In this question, the statement is followed by four conclusions. Find which conclusion is true based on the given statement.

Statement:  $P \leq Q < O \geq T, U > W \geq T$

Conclusions:

I.  $U \geq O$

II.  $W \leq Q$

III.  $O > P$

IV.  $T \geq U$

Ans  A. Only conclusion III is true.

B. Conclusions I, II, III and IV are true.

C. Both conclusions I and IV are true.

D. Both conclusions III and IV are true.

Question ID : 10343511605

Status : Answered

Chosen Option : A

Q.11 This question is based on the following 4-letter words.

TRIP CART NOTE JUST

If in each of the words, each letter is changed to the next letter in the English alphabetical order, how many words thus formed will have no vowel?

Ans  A. One

B. None

C. Two

D. Three

Question ID : 10343511607

Status : Answered

Chosen Option : B

Q.12 In a certain code language, 'GLOVES' is coded as '328' and 'MAGIC' is coded as '306'. How will 'FLOWER' be coded in that language?

- Ans  A. 294  
 B. 249  
 C. 332  
 D. 166

Question ID : 10343511610  
Status : Answered  
Chosen Option : C

Q.13 Refer to the following letter, number, symbol series and answer the question.

(Left) A D ÷ U ∇ 7 H 4 ∨ 6 M ∅ 2 Q B # 3 5 G \* N 1 & Z @ 9 ! (Right)

If all the numbers are dropped from the series, which of the following will be the tenth from the right?

- Ans  A. Q  
 B. #  
 C. ∨  
 D. ∅

Question ID : 10343511608  
Status : Answered  
Chosen Option : A

Q.14 Seven friends Anisha, Vinita, Govind, Rakul, Suvida, Guna and Manyak are watching a film. They are sitting in a row and facing North. Anisha is at one end of the row. Rakul is sitting fourth to the right of Anisha. Govind is sitting second to the right of Rakul, who is an immediate neighbour of Vinita and Suvida. Guna is sitting fifth to the left of Govind. If Guna and Manyak interchange their positions then what is the position of Guna with respect to Rakul?

- Ans  A. Second to the right  
 B. Second to the left  
 C. Third to the right  
 D. Third to the left

Question ID : 10343511600  
Status : Answered  
Chosen Option : B

Q.15 Padma is the mother of Vinamra who is the sister of Manvita. Vinamra is married to Bharath who is the son of Rajan. Karuna is the sister of Bharath who is the son of Sucheta. Karuna is married to Raghava and they have one son Deep and one daughter Niha. How is Niha related to Sucheta?

- Ans  A. Paternal granddaughter  
 B. Daughter  
 C. Daughter-in-law  
 D. Maternal granddaughter

Question ID : 10343511612  
Status : Answered  
Chosen Option : D

Q.16 Select the combination of letters that when sequentially placed in the blanks of the given series will complete the series.

P \_ T \_ P \_ T Q \_ T \_ Q P L T \_ P T \_ Q.

- Ans  A. TQTQLPT  
 B. TQLPTQT  
 C. PLTQQTT  
 D. TTTQLPQ

Question ID : 10343511606

Status : Answered

Chosen Option : A

Q.17 At a bookstall, the shopkeeper has arranged seven different boxes K, L, M, N, O, P and Q one over the other but not necessarily in the same order. Each box contains some different articles pens, erasers, highlighters, sharpeners, pencils, markers and staplers but not necessarily in the same order. N is kept fifth from the top. Only one box is kept between N and K. Only two boxes are kept between P and Q. O is kept on one of the positions below Q. L is kept immediately below M. Q is kept fourth from the below. How many boxes are kept between M and O?

- Ans  A. 4  
 B. 3  
 C. 1  
 D. 2

Question ID : 10343511603

Status : Answered

Chosen Option : B

Q.18 Select the number from among the given options that can replace the question mark (?) in the following series.

17, 30, 48, 73, 107, 152, ?

- Ans  A. 179  
 B. 201  
 C. 197  
 D. 210

Question ID : 10343511619

Status : Answered

Chosen Option : B

Q.19 A certain number of scientists are seated in a row in a press conference, facing north. Raghu sits eighth to the left of Tiwari. Only two scientists sit between Raghu and Viplav. Manju sits third to the right of Raghu. Only one scientist sits between Pritam and Sayod. Sayod sits to the immediate left of Tiwari. If no other scientist is sitting in the row, what is the total number of scientists seated in the row?

- Ans  A. 11  
 B. 16  
 C. 14  
 D. 12

Question ID : 10343511602

Status : Not Answered

Chosen Option : --

Q.20 In a certain code language,

Y \$ Z means 'Y is the father of Z'.

Y † Z means 'Y is Z's son'.

Y ∅ Z means 'Y is the sister of Z'.

Y ∃ Z means 'Y is Z's brother'.

If V \$ S ∃ U ∅ N \$ P † L, then how is L related to V?

- Ans
- A. Grand daughter
  - B. Niece
  - C. Daughter
  - D. Daughter-in-law

Question ID : 10343511613

Status : Answered

Chosen Option : D

Section : General Hindi

Q.1 'सूखा' किस प्रकार का विशेषण है?

- Ans
- A. परिमाणबोधक
  - B. संख्यावाचक
  - C. गुणवाचक
  - D. सार्वनामिक

Question ID : 10343511621

Status : Answered

Chosen Option : A

Q.2 'तीव्र' का विलोम शब्द कौन सा है?

- Ans
- A. मन्द
  - B. क्षिप्र
  - C. तीक्ष्ण
  - D. तम

Question ID : 10343511623

Status : Answered

Chosen Option : A

Q.3 'चोरी का धन मोरी में' लोकोक्ति का उपयुक्त अर्थ कौन सा है?

- Ans
- A. हराम की कमाई बेकार जाती है
  - B. पवित्र काम के लिए चोरी की जा सकती है
  - C. काले धन को सफेद करना
  - D. चोरी के धन से ऐश करना

Question ID : 10343511626

Status : Answered

Chosen Option : A

Q.4 भौरा \_\_\_\_\_ है। वाक्य के रिक्त स्थान के लिए उपयुक्त शब्द है-

- Ans  A. कूजता  
 B. झंकारता  
 C. गुँजारता  
 D. गरजता

Question ID : 10343511629  
Status : Answered  
Chosen Option : C

Q.5 'श्रेयस खेलता होगा।' वाक्य का काल है-

- Ans  A. संदिग्ध भूत  
 B. संभाव्य भविष्य  
 C. संदिग्ध वर्तमान  
 D. सामान्य भविष्य

Question ID : 10343511627  
Status : Answered  
Chosen Option : C

Q.6 'नृप' किसका पर्यायवाची है?

- Ans  A. राजा  
 B. पर्वत  
 C. स्वर्ण  
 D. हिरण

Question ID : 10343511625  
Status : Not Answered  
Chosen Option : --

Q.7 'पवन - पावन' शब्द युग्म का सही अर्थ कौन सा है?

- Ans  A. पवित्र - अग्नि  
 B. वायु - पवित्र  
 C. पवित्र - वायु  
 D. वायु - अग्नि

Question ID : 10343511624  
Status : Answered  
Chosen Option : D

Q.8 कबीर ने कहा कि मैं पढ़ूँगा। वाक्य का रेखांकित अंश है -

- Ans  A. उपवाक्य  
 B. संयुक्त वाक्य  
 C. प्रधान वाक्य  
 D. सरल वाक्य

Question ID : 10343511628  
Status : Answered  
Chosen Option : B

Q.9 'न्यून' का संधि-विच्छेद होगा-

- Ans  A. नि + उन  
 B. नी + ऊन  
 C. नी + उन  
 D. नि + ऊन

Question ID : 10343511622

Status : Answered

Chosen Option : A

Q.10 'गुरु शिष्य को ज्ञान देता है।' वाक्य के रेखांकित अंश में किस कारक का प्रयोग है?

- Ans  A. कर्ता  
 B. कर्म  
 C. संप्रदान  
 D. अपादान

Question ID : 10343511620

Status : Answered

Chosen Option : A

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