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# **UPPCL JE CE 2015 Official Paper**



Q.1 Contour interval, within the limits of a map:

- Ans
- ☒ 1. may be kept constant
  - ☒ 2. must be kept constant
  - ☒ 3. may not be kept constant
  - ☒ 4. may vary according to the configuration

Question ID : 6978

Chosen Option : 2

Q.2 What is the tendency of sand to expand by applying the shearing load called?

- Ans
- ☒ 1. Thixotropy
  - ☒ 2. Degree of sensitivity
  - ☒ 3. Dilatancy
  - ☒ 4. Remoulding loss

Question ID : 6888

Chosen Option : 3

Q.3 What is partly or completely treated sewage flowing out of a sewage treatment tank or plant called?

- Ans
- ☒ 1. Treated sewage
  - ☒ 2. Discharged sewage
  - ☒ 3. Sewage water
  - ☒ 4. Effluent

Question ID : 6935

Chosen Option : 2

Q.4 Assertion A: Alum is the most commonly used coagulant in water treatment.

Reason R: Alum is very effective in killing pathogens present in the water.

Which of the following is correct?

- ☒ 1.

Ans

Question ID : 6961

Chosen Option : 2

Both A and R are true, but R is not a correct explanation of A.

☒ 2. A is true but R is false.

☒ 3.

Both A and R are true, and R is the correct explanation of A.

☒ 4. A is false but R is true.

Q.5 Sludge volume index is defined as the ratio of:

Question ID : 6952

Chosen Answer : --

Ans ☒ 1. Percentage of sludge by volume to the percentage of total solids by weight

☒ 2.

Percentage of sludge by volume to the percentage of suspended solids by weight

☒ 3.

Percentage of suspended solids by weight to the percentage of sludge by volume

☒ 4.

Percentage of total solids by weight to the percentage of sludge by volume

Q.6 What does rapid hardening cement contain?

Question ID : 6992

Chosen Option : 4

Ans ☒ 1. Tetra-calcium alumino-ferrite

☒ 2. Tri-calcium aluminate

☒ 3. Dicalcium silicate

☒ 4. Tri-calcium silicate

Q.7 When used in road work, the coefficient of hardness of a stone should be greater than:

Question ID : 6990

Chosen Answer : --

Ans ☒ 1. 17

☒ 2. 10

☒ 3. 15

☒ 4. 12

Q.8 A sewer is commonly designed to attain self-cleaning velocity at:

Question ID : 6964

Chosen Option : 1

Ans ☒ 1. average hourly rate of flow

☒ 2. minimum hourly rate of flow

☒ 3. sewer running half full

☒ 4. peak hourly rate of flow

Q.9 Which of the following statements is correct?

Question ID : 6882

Chosen Option : 3

Ans ☒ 1. A soil containing chemicals is preferred for manufacturing portland cement.

☒ 2.

A soil having pH value more than 7 is an acidic soil.

☒ 3.

A soil having pH value less than 7 is an acidic soil.

☒ 4.

A soil having pH value more than 7 is an alkaline soil.

Q.10 A good building stone should not absorb water more than:

Question ID : 6845

Chosen Option : 4

Ans ☒ 1. 20%

☒ 2. 15%

☒ 3. 10%

☒ 4. 5%

Q.11 Which of the following soils has the finest grains?

Question ID : 6876

Chosen Option : 2

Ans ☒ 1. Silts

☒ 2. Clays

☒ 3. Sands

☒ 4. Fine sands

Q.12 What is the presence of original rounded surface on the manufactured piece of timber called?

Question ID : 6994

Chosen Option : 4

Ans ☒ 1. Chipmark

☒ 2. Torn grain

☒ 3. Wane

☒ 4. Diagonal grain

Q.13 Assertion A: The consumption of water increases with increase in the distribution pressure.

Question ID : 6947

Chosen Option : 4

Reason R: Higher distribution pressure causes more loss and waste of water.

Which of the following is correct?

Ans ☒ 1. Both A and R are true, but R is not a correct explanation of A.

☒ 2. A is true but R is false.

☒ 3. A is false but R is true.

☒ 4.

Both A and R are true, and R is the correct explanation of A.

Q.14 How high should a helicopter pilot rise at a point A just to see the horizon at point B, if the distance AB is 40 km?

Question ID : 6869

Chosen Answer : --

Ans ☒ 1. 101.75 m

☒ 2. 110.50 m

☒ 3. 107.68 m

✗ 4. 105.50 m

Q.15 Consider the following statements.

- A. Avoid building up of sewer gases.
- B. Ensure atmospheric pressure in the waste water surface.
- C. Ensure the safety of sewer maintenance people.
- D. Provide oxidation facility to sewage.

Which of these statements correctly suggest why ventilation of sewer lines is necessary?

Ans ✓ 1. Only A, B and C

✗ 2. Only A, C and D

✗ 3. Only B, C and D

✗ 4. Only A, B and D

Question ID : 6956  
Chosen Answer : --

Q.16 The daily per capita consumption of water apparently increases with:

- A. Higher standard of living of people
- B. Availability of sewerage in the city
- C. Metered water supply
- D. Wholesome and potable quality of water

Choose the correct answer below.

Ans ✓ 1. A, B and D

✗ 2. B, C and D

✗ 3. A, C and D

✗ 4. A, B and C

Question ID : 6957  
Chosen Option : 1

Q.17 Which of the following statements is not correct?

Ans ✗ 1. A trough compass is an accessory to a plane table.

✗ 2. A surveyor's compass has two sight vanes.

✓ 3. In a prismatic compass, the graduations on the aluminium disc rotate and the index remains stationary.

✗ 4. A prismatic compass has an object vane and an eye vane.

Question ID : 6969  
Chosen Option : 3

Q.18 The area of any irregular figure of the plotted map is measured with

Ans ✓ 1. Planimeter

✗ 2. Optical square

✗ 3. Clinometer

✗ 4. Pentagraph

Question ID : 6872  
Chosen Option : 1



Q.19 Match List-I with List-II and choose the correct answer from the options below.

Question ID : 6925  
Chosen Option : 3

List-I (Fluid property)	List-II (Flow Phenomenon)
A. Compressibility	a. Flow of real fluid past a tiny sphere
B. Gravity	b. Cavitation
C. Viscosity	c. Hydraulic jump
D. Vapour pressure	d. Flight of supersonic aircraft

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

Q.20 When sewage enters a flowing river, the rapid depletion of dissolved oxygen is due to:

Question ID : 6965  
Chosen Option : 4

- Ans
- ☒ 1. the respiratory activity of aquatic plants in the river.
  - ☒ 2. the suspended particles in the river and the waste.
  - ☒ 3. the change in temperature of the river water.
  - ☒ 4. the microbial activity.

Q.21 A fast centrifugal pump impeller has which of the following?

Question ID : 6923  
Chosen Answer : --

- Ans
- ☒ 1. Radial blades
  - ☒ 2. Backward facing blades
  - ☒ 3. Propeller type blades
  - ☒ 4. Forward facing blades

Q.22 Liquefaction of foundation soil during an earthquake shall not be the reason for cracking of:

Question ID : 6903  
Chosen Answer : --

- Ans
- ☒ 1. only balcony in the building
  - ☒ 2. only floors in the building
  - ☒ 3. beams and columns in the building
  - ☒ 4. walls and roof in the building

Q.23 Match List-I with List-II and choose the correct answer from the options given below.

Question ID : 6852  
Chosen Option : 2

List-I	List-II
A. Water and Cement	a. Fast in Reaction
B. Tri Calcium Silicate	b. Slow in Reaction
C. Di Calcium silicate	c. Slowest in Reaction
D. Tri Calcium Aluminate	d. Hydrates

Ans

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

Q.24 What is the ratio of volume of air voids to the volume of total voids known as?

Ans ☐ 1. Percentage voids

☒ 2. Air content

☐ 3. Porosity

☐ 4. Percentage air voids

Question ID : 6880

Chosen Option : 2

Q.25 Match List-I with List-II and choose the correct answer from the options given below.

List-I	List-II
A. Porosity	a. Volume of air voids/volume of voids
B. Air content	b. Weight of water/weight of solids
C. Water content	c. Unit weight of Soil solids/unit weight of water
D. Specific gravity	d. Volume of voids/total volume of Soil mass

Ans ☐ 1. A-a, B-b, C-c, D-d

☐ 2. A-d, B-c, C-a, D-b

☐ 3. A-c, B-b, C-a, D-d

☒ 4. A-d, B-a, C-b, D-c

Question ID : 6885

Chosen Option : 4

Q.26 Hydraulically, the economical section of drains for large flow is:

Ans ☐ 1. V-shaped

☐ 2. Rectangular

☐ 3. Oval shaped

☒ 4. Circular

Question ID : 6937

Chosen Option : 4

Q.27 Hydraulic coupling belongs to the category of:

Ans ☐ 1. Power developing machine

☒ 2. Energy transfer machine

☐ 3. Power absorbing machine

☐ 4. Energy generating machine

Question ID : 6908

Chosen Answer : --

Q.28 What is the trap used for a water closet called?

Question ID : 6959

Chosen Option : 2



Ans

- ☒ 1. Gully trap
- ☒ 2. P-trap
- ☒ 3. Intercepting trap
- ☒ 4. Anti-siphon trap

Q.29 Assuming specific gravity of soil solids to be 2.5 and dry unit weight of soil to be  $19.62 \text{ kN/m}^3$ , what is the shrinkage limit?

Ans ☒ 1. 5%

☒ 2. 15%

☒ 3. 12.5%

☒ 4. 10%

Question ID : 6887

Chosen Option : 4

Q.30 For accurate flow measurement in open channels, an arrangement for aeration under the nappe is necessary when the weir used is:

Ans ☒ 1. Contracted rectangular

☒ 2. Triangular

☒ 3. Submerged contracted rectangular

☒ 4. Suppressed rectangular

Question ID : 6917

Chosen Answer : --

Q.31 If the hydraulic gradient is unity, then what is the ratio of flow across unit area of soil called?

Ans ☒ 1. Coefficient of discharge

☒ 2. Coefficient of viscosity

☒ 3. Coefficient of seepage

☒ 4. Coefficient of permeability

Question ID : 6877

Chosen Option : 4

Q.32 Which of the following methods are used for locating the plane table station?

- A. Radiation
- B. Traversing
- C. Intersection
- D. Resection

Choose the correct answer below.

Ans ☒ 1. Only B and D

☒ 2. Only A and C

☒ 3. Only A and B

☒ 4. Only C and D

Question ID : 6862

Chosen Option : 1

Q.33 What are wicket gates?

Question ID : 6933

Chosen Answer : --

Ans

- ☒ 1. Gate valve in a penstock
- ☐ 2. Guide vanes of reaction turbine
- ☐ 3. Runner vanes of a reaction turbine
- ☐ 4. Sluice gates of the dam

Q.34 In fluid flow, the line of constant piezometric head passes through two points which have the same:

Question ID : 6914

Chosen Option : 4

Ans

- ☐ 1. Elevation
- ☐ 2. Pressure
- ☒ 3. Velocity
- ☐ 4. Velocity potential

Q.35 The two point problem and three point problem are methods of:

Question ID : 6976

Chosen Option : 2

Ans

- ☐ 1. Orientation
- ☐ 2. Resection
- ☒ 3. Resection and orientation
- ☐ 4. Traversing

Q.36 What is ranging?

Question ID : 6973

Chosen Option : 1

Ans

- ☒ 1. It is the process of aligning the chain in a straight line between two extremities.
- ☐ 2. It is the process of chaining over a range of mountains.
- ☐ 3. It is the process of fixing ranging rods on the extremities of the area.
- ☐ 4. It is the process of taking offsets from a chain line.

Q.37 Loess' is silty clay formed by the action of:

Question ID : 6875

Chosen Option : 2

Ans

- ☐ 1. Gravitational force
- ☒ 2. Wind
- ☐ 3. Glacier
- ☐ 4. Water

Q.38 If the water content of fully saturated soil mass is 100%, then the void ratio of the sample is:

Question ID : 6889

Chosen Option : 2

Ans

- ☐ 1. independent of the specific gravity of soil.
- ☒ 2. equal to the specific gravity of soil.

☒ 3. greater than the specific gravity of soil.

☒ 4. less than the specific gravity of soil.

Q.39 When does the shear failure of soils take place?

Question ID : 6897

Chosen Answer : --

Ans ☒ 1. When the residual strength of the soil is exhausted.

☒ 2. When  $\phi$  reaches its maximum value in cohesionless soils.

☒ 3. When the maximum cohesion is reached in cohesion soils.

☒ 4. When the angle of obliquity is maximum.

Q.40 A scale of 1 inch = 50 ft is mentioned on an old map. What is the corresponding equivalent scale?

Question ID : 6967

Chosen Option : 3

Ans ☒ 1. 1 cm = 12 cm

☒ 2. 1 cm = 10 cm

☒ 3. 1 cm = 6 cm

☒ 4. 1 cm = 5 cm

Q.41 Though Manning's formula is dimensionally non-homogeneous, it is commonly used in practice because:

Question ID : 6918

Chosen Option : 4

Ans ☒ 1. it can be related to Chezy's coefficient or Darcy-Weisbach's friction factor.

☒ 2. it is in simple form.

☒ 3. it was derived from extensive field data.

☒ 4. it can be made dimensionally homogeneous.

Q.42 Consider the following measuring structures.

- A. Submerged broad-crested weir
- B. Free broad-crested weir
- C. Free sharp-crested weir
- D. Free ogee spillway

Which is the correct sequence of the discharge coefficient of these structures in increasing order?

Question ID : 6916

Chosen Option : 4

Ans ☒ 1. B, A, C, D

☒ 2. B, A, D, C

☒ 3. A, B, D, C

☒ 4. A, B, C, D

Q.43 Metric chains are generally available in:

Question ID : 6871

Chosen Option : 4

Ans ☒ 1. 10 m and 20 m length

- ☒ 2. 15 m and 20 m length
- ☒ 3. 25 m and 100 m length
- ☒ 4. 20 m and 30 m length

Q.44 Which of the following is true about diurnal variation?

Question ID : 6968

Chosen Option : 3

Ans ☒ 1. It is greater in summer than in winter.

☒ 2.

It is greater at smaller latitudes than at higher latitudes.

☒ 3. It is greater at magnetic equator points.

☒ 4. It is greater in winter than in summer.

Q.45 Which of the following soil types is most likely to be subjected to liquefaction under seismic forces?

Question ID : 6902

Chosen Answer : --

Ans ☒ 1. Fractured rocky strata

☒ 2. Soft saturated clays

☒ 3. Murum

☒ 4. Loose saturated sands

Q.46 A rural water supply scheme serves a population of 10,000 at the rate of 50 litres per capita per day. For the chlorine dose of 2 ppm, what will be the required amount of bleaching with 20% available chlorine?

Question ID : 6963

Chosen Option : 2

Ans ☒ 1. 15 kg

☒ 2. 5 kg

☒ 3. 10 kg

☒ 4. 0.5 kg

Q.47 During the conversion of timber by sawing to obtain strong timber pieces, the cuts should be made by:

Question ID : 6982

Chosen Option : 3

Ans ☒ 1. Tangential sawing

☒ 2. Quarter sawing

☒ 3. Radial sawing

☒ 4. Ordinary sawing

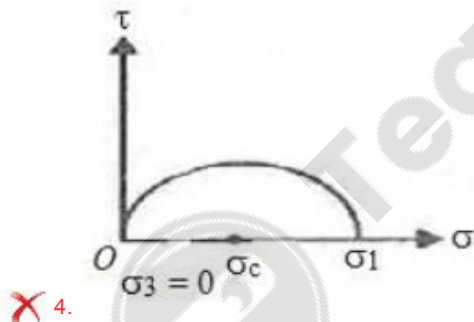
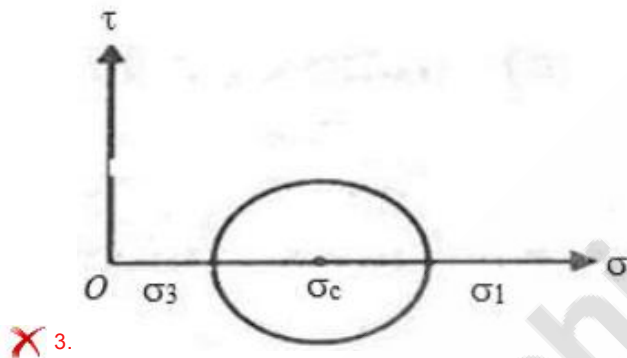
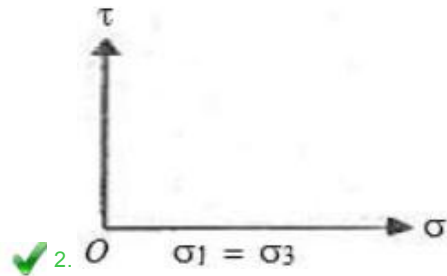
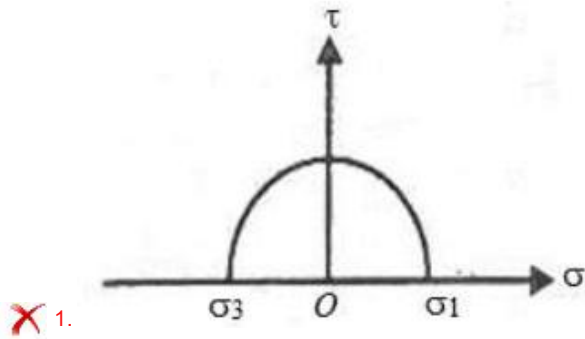
Q.48 In a triaxial compression test, when a soil sample is subjected to a uniformly distributed fluid pressure only, the Mohr's representation of the state of stress on sample is:

Question ID : 6891

Chosen Option : 4



Ans



Q.49 Which of the following sewers collects the discharge from a collecting system and delivers it to a treatment plant?

- Ans ✓ 1. Outfall sewer
- ✗ 2. Branch sewer
- ✗ 3. House sewer
- ✗ 4. Lateral sewer

Question ID : 6941  
Chosen Option : 2

Q.50 Which of the following statements is true for trickling filter sludge?

- Ans ✗ 1.
- It is more difficult to dewater than activated sludge.

Question ID : 6953  
Chosen Answer : --



☒ 2. It is bulky.

☒ 3.

It has a comparatively low concentration of sludge solids.

☒ 4.

It has a comparatively low sludge volume index.

**Q.51** What is the process of turning the telescope about the vertical axis in horizontal plane known as?

Question ID : 6861

Chosen Option : 1

Ans ☒ 1. Swinging

☒ 2. Plunging

☒ 3. Reversing

☒ 4. Transiting

**Q.52** With an increase in moisture content, the bulking of sand:

Question ID : 6855

Chosen Option : 3

Ans ☒ 1. Decreases

☒ 2.

First decreases to a certain minimum value and then increases

☒ 3.

First increases to a certain maximum value and then decreases

☒ 4. Increases

**Q.53** Which of the following is carried out by two theodolite method?

Question ID : 6867

Chosen Option : 4

Ans ☒ 1. Astronomical survey

☒ 2. Geodetic survey

☒ 3. Tacheometric survey

☒ 4. Circular curve ranging

**Q.54** Which of the following sedimentary rocks changes into quartzite by metamorphic action?

Question ID : 6853

Chosen Option : 4

Ans ☒ 1. Shale

☒ 2. Lime stone

☒ 3. Gypsum

☒ 4. Sand stone

**Q.55** What is the reduction in volume of soil primarily due to squeezing out of water from the voids called?

Question ID : 6901

Chosen Option : 2

Ans ☒ 1. Creep

☒ 2. Primary consolidation

☒ 3. Plastic flow

☒ 4. Secondary consolidation

Q.56 What is the most efficient channel section?

Question ID : 6906

Chosen Option : 2

Ans ☒ 1. Semi-circular

☒ 2. Half hexagon in the form of a trapezoid

☒ 3. Rectangular

☒ 4. Triangular

Q.57 Disposal of sewage in large cities, is done in:

Question ID : 6943

Chosen Answer : --

Ans ☒ 1. Irrigation

☒ 2. Dilution

☒ 3. Oxidation

☒ 4. Putrifaction

Q.58 What does the addition of pozzolana to ordinary portland cement increase?

Question ID : 6988

Chosen Option : 2

Ans ☒ 1. Permeability

☒ 2. Shrinkage

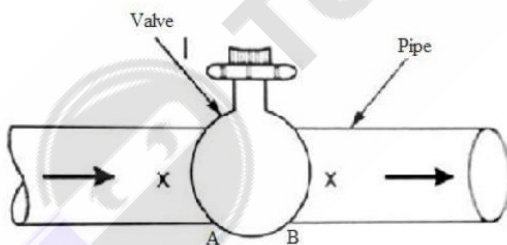
☒ 3. Heat of hydration

☒ 4. Bleeding

Q.59 A and B are at the same elevation of 2.5 m above datum in the valve and pipe line as shown in the given figure. The velocity head of 0.5 m, head loss in the valve of 0.2 m and pressure head of 2.5 m are the parameters at A. The piezometric head at B is equal to:

Question ID : 6915

Chosen Answer : --



Ans ☒ 1. 5.0 m

☒ 2. 5.5 m

☒ 3. 5.3 m

☒ 4. 4.8 m

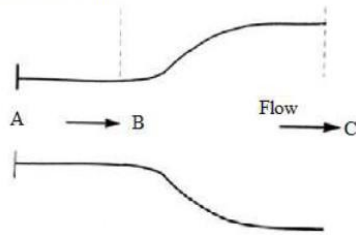
**Q.60** Which type of flooring is suitable for use in churches, theatres, public libraries and other places where noiseless floor covering is desired?

Question ID : **6858**  
Chosen Answer : --

- Ans ☒ 1. Cork flooring  
☒ 2. Wooden flooring  
☒ 3. Linoleum flooring  
☒ 4. Glass flooring

**Q.61** The given figure shows a subcritical open channel flow expansion (BC in the figure) of rectangular cross-section. With respect to the water level in the flume (A in the figure), the water level in expansion BC will:

Question ID : **6924**  
Chosen Answer : --



- Ans ☒ 1. Rise  
☒ 2. Not change  
☒ 3. Fall  
☒ 4. First rise and then fall

**Q.62** A detritus tank is provided in the primary treatment of sewage to remove:

Question ID : **6938**  
Chosen Answer : --

- Ans ☒ 1. suspended solids  
☒ 2. stones  
☒ 3. grit  
☒ 4. oil and greases

**Q.63** Assertion A: Pozzolana is added to cement to increase early strength.

Reason R: It reduces the heat of hydration.

Which of the following is correct?

Question ID : **6980**  
Chosen Option : 4

- Ans ☒ 1. A is true but R is false.  
☒ 2. Both A and R are true, and R is the correct explanation of A.  
☒ 3. A is false but R is true.  
☒ 4. Both A and R are true, but R is not a correct explanation of A.

**Q.64** Which of the following types of cement is used for canal linings?

Question ID : **6993**  
Chosen Option : 3

- Ans ☒ 1. Rapid hardening cement

- ☒ 2. Pozzolana cement
- ☒ 3. Sulphate resisting cement
- ☒ 4. Quick setting cement

**Q.65** The true length of a line is known to be 200 m. When this is measured with a 20 m tape, the length is 200.80 m. What is the correct length of the 20 m tape?

Question ID : 6865  
Chosen Option : 4

- Ans
- ☒ 1. 19.98 m
  - ☒ 2. 20.08 m
  - ☒ 3. 20.04 m
  - ☒ 4. 19.92 m

**Q.66** Discharge over an ogee weir remains the same as that of:

Question ID : 6931  
Chosen Option : 3

- Ans
- ☒ 1. Drowned weir
  - ☒ 2. Triangular weir
  - ☒ 3. Sharp crested weir
  - ☒ 4. Cipoletti weir

**Q.67** Which of the following is used to measure the discharge?

Question ID : 6927  
Chosen Option : 4

- Ans
- ☒ 1. Current meter
  - ☒ 2. Hotwire anemometer
  - ☒ 3. Pitot tube
  - ☒ 4. Venturimeter

**Q.68** Which of the following quantities are each equal to one acre?

Question ID : 6866  
Chosen Answer : --

- A. 43560 sq ft
- B. 40 gunthas
- C. 10 sq gunter's chain
- D. 4850 sq yds

Choose the correct answer below.

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

**Q.69** Anti siphonage pipe is fitted:

Question ID : 6944  
Chosen Answer : --

- Ans
- ☒ 1. at the beginning of sewer line



- ☒ 2. with a W.C. trap.
- ☐ 3. at the end of septic tanks.
- ☐ 4. on manholes.

**Q.70** What is the range of the ideal residual pressure at the farthest consumer's tap in a properly designed water distribution system?

Question ID : **6954**  
Chosen Answer : --

- Ans
- ☐ 1. 0.021 to 0.025 N/mm<sup>2</sup>
  - ☐ 2. 0.016 to 0.020 N/mm<sup>2</sup>
  - ☒ 3. 0.031 to 0.035 N/mm<sup>2</sup>
  - ☐ 4. 0.026 to 0.030 N/mm<sup>2</sup>

**Q.71** Assertion A: Normally turpentine oil is recommended as thinner for indoor painting  
Reason R: Turpentine oil is costlier than other thinners.  
Which of the following is correct?

Question ID : **6857**  
Chosen Option : 2

- Ans
- ☐ 1. A is false but R is true.
  - ☐ 2. A is true but R is false.
  - ☒ 3. Both A and R are true, but R is not a correct explanation of A.
  - ☐ 4. Both A and R are true, and R is the correct explanation of A.

**Q.72** Which of the following is the correct dimension of surface tension?

Question ID : **6905**  
Chosen Option : 2

- Ans
- ☐ 1. W/m
  - ☒ 2. J/m<sup>2</sup>
  - ☐ 3. J/m
  - ☐ 4. N/m<sup>2</sup>

**Q.73** Which of the following surveys employs alidade?

Question ID : **6972**  
Chosen Option : 1

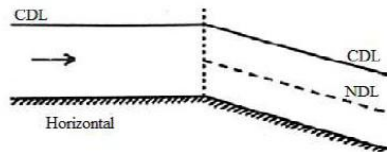
- Ans
- ☒ 1. Plane table survey
  - ☐ 2. Contour survey
  - ☐ 3. Reconnaissance survey
  - ☐ 4. Archaeological survey

**Q.74**

Question ID : **6930**  
Chosen Answer : --



The figure below shows gradually varied flow in an open channel with a break in bed slope.



The types of water surface profiles occurring from left to right are:

- Ans ☒ 1.  $H_2, S_2$   
☒ 2.  $H_3, M_2$   
☒ 3.  $H_2, M_2$   
☒ 4.  $H_3, S_3$

Q.75 What is a Pantagraph used for?

- Ans ☒ 1. For measuring distances  
☒ 2. For setting out right angles  
☒ 3. For enlarging or reducing plans  
☒ 4. For measuring areas

Question ID : 6979

Chosen Option : 3

Q.76 A soil mass is said to be in plastic equilibrium, if:

- Ans ☒ 1. it is in plastic stage.  
☒ 2. it is stressed to maximum.  
☒ 3. it starts flowing.  
☒ 4. it is on the verge of failure.

Question ID : 6884

Chosen Option : 4

Q.77 In which of the following directions is the strength of the timber maximum?

- Ans ☒ 1. Parallel to grains  
☒ 2.  $45^\circ$  to grains  
☒ 3. Perpendicular to grains  
☒ 4. Same in all directions

Question ID : 6854

Chosen Option : 3

Q.78 In a water wheel, when water enters the bucket mounted on the periphery of a wheel at its top, it will be known as:

- Ans ☒ 1. Breast water wheel  
☒ 2. Under shot wheel  
☒ 3. Over shot wheel  
☒ 4. Pelton wheel

Question ID : 6934

Chosen Answer : --

Q.79 What are the devices that are installed for drawing water from the sources called?

Question ID : 6948

Chosen Option : 3

- Ans
- ☒ 1. Filters
  - ☒ 2. Aquifers
  - ☒ 3. Intakes
  - ☒ 4. Aquicludes

Q.80 Rapid hardening cement attains early strength due to:

Question ID : 6849

Chosen Option : 4

- Ans
- ☒ 1. lesser proportion of lime grounded finer than normal cement.
  - ☒ 2. larger proportion of lime grounded coarser than normal cement.
  - ☒ 3. lesser proportion of lime grounded coarser than normal cement.
  - ☒ 4. larger proportion of lime grounded finer than normal cement.

Q.81 A soil has a discharge velocity of  $6 \times 10^{-7}$  m/s and a void ratio of 0.5. What is its seepage velocity?

Question ID : 6896

Chosen Option : 3

- Ans
- ☒ 1.  $3 \times 10^{-7}$  m/s
  - ☒ 2.  $6 \times 10^{-7}$  m/s
  - ☒ 3.  $12 \times 10^{-7}$  m/s
  - ☒ 4.  $18 \times 10^{-7}$  m/s

Q.82 The rate of flow of sewage is generally assumed to be:

Question ID : 6942

Chosen Answer : --

- Ans
- ☒ 1. more than the rate of water supply.
  - ☒ 2. less than the rate of water supply.
  - ☒ 3. equal to the rate of water supply.
  - ☒ 4. at 150 litres per capita.

Q.83 A penstock pipe of 10 m diameter carries water under a pressure head of 100 m. If the wall thickness is 9 mm, what is the tensile stress, in Mpa, in the pipe wall?

Question ID : 6910

Chosen Answer : --

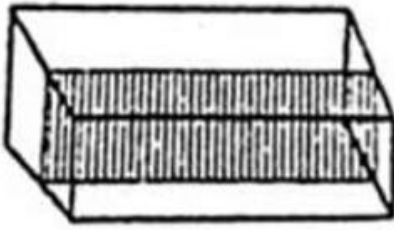
- Ans
- ☒ 1. 1090
  - ☒ 2. 272.5
  - ☒ 3. 2725
  - ☒ 4. 545.0

Q.84

Which type of brick does the given figure represent?

Question ID : 6991

Chosen Option : 3



Ans ☒ 1. Bullnosed brick

☐ 2. Plinth brick

☐ 3. Queen brick

☐ 4. King closure

Q.85 Consider the following statement regarding the vane shear test.

- A. The test is used to determine the undrained strength of intact, fully saturated clays.
- B. The test is very suitable for soft clays.
- C. The test is only used in clays having undrained strengths less than  $500 \text{ kN/m}^2$ .
- D. The test gives reliable result if the clay contains sand or silt laminations.

Which of the given statements are correct?

Question ID : 6886

Chosen Answer : --

Ans ☐ 1. Only A and B

☐ 2. Only B and C

☐ 3. Only A and D

☒ 4. Only C and D

Q.86 The motion of air mass in a tornado is a:

Question ID : 6926

Chosen Answer : --

Ans ☐ 1. forced vortex motion.

☐ 2. free vortex motion.

☐ 3. free vortex at centre and forced vortex outside.

☒ 4. forced vortex at centre and free vortex outside.

Q.87 What does the contour interval on a map sheet denote?

Question ID : 6863

Chosen Option : 3

Ans ☐ 1. Vertical distance of contour lines above the datum plane

☐ 2. Horizontal distance between two successive contour lines

☒ 3. Vertical distance between two successive contour lines

☐ 4. Slope distance between two successive contour lines

Q.88 The wood preservative "Creosote" is derived from:

Question ID : 6984

Ans ☒ 1. Wood or coal

☐ 2. Acidic cupric chromate

☐ 3. Chromated zinc chloride

☐ 4. Pentachlorophenol

Chosen Option : 1

Q.89 The various treatment processes in a water treatment plant are listed below.

A. Filtration

B. Chlorination

C. Sedimentation

D. Coagulation

E. Flocculation

Which of the following is the correct sequence of processes in water treatment?

Ans ☐ 1. A, B, E, C, D

☒ 2. D, E, C, A, B

☐ 3. A, B, C, D, E

☐ 4. B, C, A, E, D

Question ID : 6962

Chosen Option : 3

Q.90 What is the portion of the brick without a triangular corner equal to half the width and half the length, called?

Ans ☒ 1. King closer

☐ 2. Squint Brick

☐ 3. Queen closer

☐ 4. Closer

Question ID : 6848

Chosen Answer : --

Q.91 The major loss of energy in long pipes is due to:

Ans ☐ 1. sudden contraction

☒ 2. friction

☐ 3. gradual contraction or enlargement

☐ 4. sudden enlargement

Question ID : 6928

Chosen Option : 2

Q.92 What is the maximum permissible settlement for isolated foundation or sand as per I.S. code?

Ans ☒ 1. 40 mm

☐ 2. 10 mm

☐ 3. 20 mm

☐ 4. 60 mm

Question ID : 6879

Chosen Option : 1



Q.93 In a supersonic flow, a diverging passage results in:

Question ID : 6929

Chosen Answer : --

- Ans
- ☒ 1. an increase in the velocity and pressure.
  - ☒ 2. a decrease in velocity and pressure.
  - ☒ 3. an increase in the velocity and density.
  - ☒ 4. a decrease in pressure and density.

Q.94 Consider the following statements in the context of aeolian soil.

Question ID : 6898

Chosen Option : 1

- A. The soil has low density and low compressibility.
- B. The soil is deposited by wind.
- C. The soil has large permeability.

Which of these statements are correct?

- Ans
- ☒ 1. All three
  - ☒ 2. Only B and C
  - ☒ 3. Only A and B
  - ☒ 4. Only A and C

Q.95 For a given soil sample,

Question ID : 6892

Chosen Option : 1

$C_c$  = coefficient of gradation

$C_u$  = coefficient of uniformity

$D_{10}$  = effective size

$D_{30}$  = diameter through which 30% of the total soil mass is passing

If  $C_c = 1.0$  and  $C_u = 4.0$ , then what would be the value of  $D_{30}/D_{10}$ ?

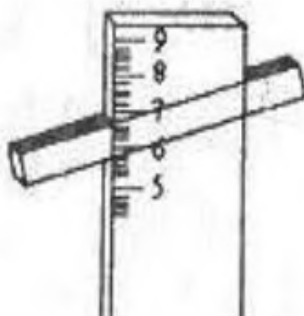
- Ans
- ☒ 1. 2.00
  - ☒ 2. 1.25
  - ☒ 3. 1.50
  - ☒ 4. 1.75

Q.96 Which of the following represents a travelling rod in surveying?

Question ID : 6864

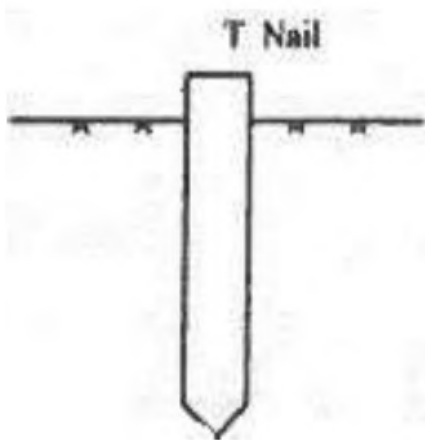
Chosen Answer : --

Ans

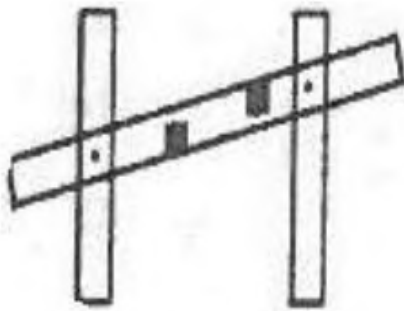


- ☒ 1.

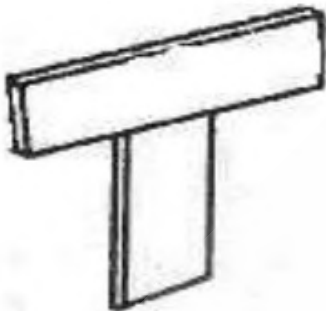




☒ 2.



☒ 3.



☒ 4.

**Q.97** Early attainment of strength in rapid hardening cement is mainly due to:

- Ans** ☒ 1. Tricalcium silicate  
☒ 2. Tricalcium aluminate  
☒ 3. Finer grinding  
☒ 4. Gypsum

Question ID : 6856  
 Chosen Option : 1

**Q.98** When two identical centrifugal pumps are operating in series on a common rising main, then:

- Ans** ☒ 1. the discharge will be nearly doubled, while the pressure remains the same.  
☒ 2. the pressure in the rising main will be nearly doubled, while discharge will remain the same.  
☒ 3. the discharge as well as the pressure in the rising main will be doubled.  
☒ 4. the discharge as well as the pressure in the rising main will increase but not become double.

Question ID : 6911  
 Chosen Answer : --

Q.99 In a 1920 m long pipeline, the velocity of propagation of pressure wave is 960 m/s. The rapid closure of a downstream valve will entail, when the maximum time for the closure is:

Question ID : 6920

Chosen Answer : --

- Ans
- ☒ 1. 8 s
  - ☒ 2. 2 s
  - ☒ 3. 6 s
  - ☒ 4. 4 s

Q.10  
0 The subtense tacheometry method is adopted when the ground is:

Question ID : 6870

Chosen Option : 2

- Ans
- ☒ 1. A waterbody
  - ☒ 2. Undulating
  - ☒ 3. Inclined
  - ☒ 4. Flat

Q.10  
1 Before testing setting time of cement, what should one test for?

Question ID : 6981

Chosen Option : 1

- Ans
- ☒ 1. Consistency
  - ☒ 2. Fineness
  - ☒ 3. Strength
  - ☒ 4. Soundness

Q.10  
2 What does the operating characteristic curve of a turbine mean?

Question ID : 6907

Chosen Answer : --

- Ans
- ☒ 1. Curve drawn at constant head
  - ☒ 2. Curve drawn at constant efficiency
  - ☒ 3. Curve drawn at constant speed
  - ☒ 4. Curve drawn at constant load

Q.10  
3 What is Putty made up of?

Question ID : 6983

Chosen Answer : --

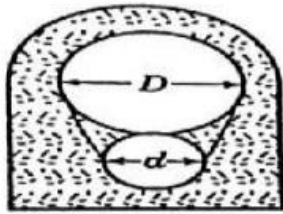
- Ans
- ☒ 1. Red lead and linseed oil
  - ☒ 2. White lead and turpentine
  - ☒ 3. Powered chalk and raw linseed oil
  - ☒ 4. Zinc oxide and boiled linseed oil

Q.10  
4

Question ID : 6946

Chosen Option : 1

Which type of sewer is represented by the figure below?



- Ans
- ☒ 1. Horse shoe shaped sewer
  - ☒ 2. Parabolic shaped sewer
  - ☒ 3. Standard egg shaped
  - ☒ 4. U-shaped sewer

Q.10 For water supply to a medium town, what is the daily variation factor?

Question ID : 6958

Chosen Option : 2

- Ans
- ☒ 1. 2.5
  - ☒ 2. 1.5
  - ☒ 3. 3
  - ☒ 4. 3.5

Q.10 What does the high COD to BOD ratio of an organic pollutant represent?

Question ID : 6945

Chosen Option : 4

- Ans
- ☒ 1. Presence of toxic material in the pollutant
  - ☒ 2. Presence of free oxygen for aerobic decomposition
  - ☒ 3. High biodegradability of the pollutant
  - ☒ 4. Low biodegradability of the pollutant

Q.10 The contact pressure on uniformly loaded circular footing resting on clay, at the centre is:

Question ID : 6878

Chosen Answer : --

- Ans
- ☒ 1. Sinusoidal
  - ☒ 2. Equal
  - ☒ 3. Maximum
  - ☒ 4. Minimum

Q.10 What is the main function of alumina in brick earth?

Question ID : 6989

Chosen Option : 2

- Ans
- ☒ 1. To increase impermeability
  - ☒ 2. To impart plasticity

- ☒ 3. To prevent shrinkage
- ☒ 4. To increase durability

Q.10  
9 In consolidation testing, what is curve fitting method used to determine?

Question ID : 6894  
Chosen Option : 1

- Ans
- ☒ 1. Time factor
  - ☒ 2. Compression index
  - ☒ 3. Swelling index
  - ☒ 4. Coefficient of consolidation

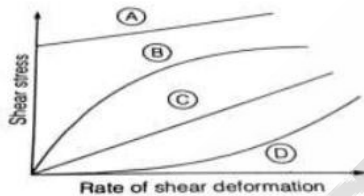
Q.11  
0 Dolomite is a lime stone that contains carbonate of magnesia up to:

Question ID : 6847  
Chosen Answer : --

- Ans
- ☒ 1. 35%
  - ☒ 2. 15%
  - ☒ 3. 25%
  - ☒ 4. 45%

Q.11  
1 In the given figure, which nature of fluid is represented by curve A?

Question ID : 6912  
Chosen Option : 4



- Ans
- ☒ 1. Newtonian
  - ☒ 2. Pseudo-plastic
  - ☒ 3. Dilatant
  - ☒ 4. Ideal Bingham plastic

Q.11  
2 Which of the following represents the correct sequence of plasticity of minerals in soil in an increasing order?

Question ID : 6900  
Chosen Option : 3

- Ans
- ☒ 1. Kaolinite, silica, montmorillonite, illite
  - ☒ 2. Kaolinite, silica, illite, montmorillonite
  - ☒ 3. Silica, kaolinite, illite, montmorillonite

☒ 4. Silica, kaolinite, montmorillonite, illite

Q.11  
3 Location of contour gradient for a highway is best set out from the:

Question ID : 6874

Chosen Answer : --

Ans ☒ 1. bottom to the saddle

☒ 2. ridge down the hill

☒ 3. saddle down the hill

☒ 4. bottom to the ridge

Q.11  
4 Which of the following is the constituent of good brick earth whose excess causes the raw brick shrink and warp during drying and burning?

Question ID : 6851

Chosen Option : 4

Ans ☒ 1. Magnesia

☒ 2. Iron oxide

☒ 3. Alumina

☒ 4. Lime

Q.11  
5 The expansion and shrinkage of plywood are comparatively very low as:

Question ID : 6859

Chosen Option : 4

Ans ☒ 1. they are glued under pressure.

☒ 2. they are held in position by adhesives.

☒ 3.

plies are placed at right angles to each other.

☒ 4. they are prepared from veneers.

Q.11  
6 The determination of ultimate bearing capacity on an eccentrically loaded square footing depends upon the concept of useful:

Question ID : 6893

Chosen Answer : --

Ans ☒ 1. Square

☒ 2. Width

☒ 3. Circle

☒ 4. Triangle

Q.11  
7 When the degree of consolidation is 50%, about how much is the time factor?

Question ID : 6895

Chosen Option : 3

Ans ☒ 1. 0.5

☒ 2. 2.0

☒ 3. 1.0

☒ 4. 0.2

Q.11  
8 Which of the following statements is correct?

Question ID : 6913

Chosen Option : 2

☒ 1.



Ans For water at 100 °C at sea level, the vapour pressure is equal to the atmospheric pressure.

☒ 2.

Air is 50,000 times more compressible than water.

☒ 3.

Viscosity of the molecules is the property exhibited by them in both static and dynamic conditions.

☒ 4.

Surface energy is caused by the force of adhesion between liquid molecules.

Q.11  
9 In case of semi-circular vanes, what can be the theoretical maximum efficiency of the wheel?

Question ID : 6921

Chosen Answer : --

Ans ☒ 1. 75%

☒ 2. 100%

☒ 3. 67%

☒ 4. 50%

Q.12  
0 Which of the following valves is seldom used in water distribution system because of high head loss characteristics?

Question ID : 6960

Chosen Answer : --

Ans ☒ 1. Sluice

☒ 2. Butterfly

☒ 3. Globe

☒ 4. Plug

Q.12  
1 In reciprocal levelling, the error which is not completely eliminated, is due to:

Question ID : 6873

Chosen Option : 4

Ans ☒ 1. Non-adjustment of line of collimation

☒ 2. Refraction

☒ 3. Earth's curvature

☒ 4. Non-adjustment of the bubble tube

Q.12  
2 Tensile strength of concrete is measured by:

Question ID : 6986

Chosen Option : 4

Ans ☒ 1.  
direct tension test in the universal testing machine

☒ 2. applying third point loading on a prism

☒ 3.  
applying compressive load along the diameter of the cylinder

☒ 4.  
applying tensile load along the diameter of the cylinder

Q.12  
3 Quick setting cement is produced by adding:

Question ID : 6850

Chosen Option : 3

- Ans ☒ 1. more amount of gypsum in very fine powdered form
- ☒ 2. pozzolana in very fine powdered form
- ☒ 3. less amount of gypsum in very fine powdered form
- ☒ 4. aluminium sulphate in very fine powdered form

Q.12 For which of the following types of sand is the angle of internal friction maximum?  
4

Question ID : 6883

Chosen Option : 3

- Ans ☒ 1. Angular-grained dense sand
- ☒ 2. Angular- grained loose sand
- ☒ 3. Round-grained loose sand
- ☒ 4. Round-grained dense sand

Q.12 Which coagulant is widely used for sewage treatment?  
5

Question ID : 6939

Chosen Option : 2

- Ans ☒ 1. Lime
- ☒ 2. Alum
- ☒ 3. Ferric chloride
- ☒ 4. Ferric sulphate

Q.12 Regarding plane-table survey, which of the following statements does not hold true?  
6

Question ID : 6868

Chosen Option : 4

- Ans ☒ 1. It is quite suitable for small scale surveys.
- ☒ 2. Less number of control points are required.
- ☒ 3. All the plotting work including contouring can be done in the field.
- ☒ 4. It can be done in all seasons.

Q.12 Theodolite is an instrument used for:  
7

Question ID : 6974

Chosen Option : 3

- Ans ☒ 1. tightening the capstan-headed nuts of level tube.
- ☒ 2. measurement of vertical angles only.
- ☒ 3. measurement of both horizontal and vertical angles.
- ☒ 4. measurement of horizontal angles only.

Q.12 Consistency as applied to cohesive soils is an indicator of its:  
8

Question ID : 6899

Chosen Option : 1

Ans

- ☒ 1. Moisture content
- ☒ 2. Porosity
- ☒ 3. Shear strength
- ☒ 4. Density

Q.12  
9 If the efficiencies of BOD removal of first stage and second stage trickling filters are each 65%, then what is the overall BOD removal efficiency of these filters?

Question ID : 6970  
Chosen Answer : --

Ans

- ☒ 1. 87.75%
- ☒ 2. 77.25%
- ☒ 3. 92.6%
- ☒ 4. 65%

Q.13  
0 Which of the following is not used in measuring perpendicular offsets?

Question ID : 6860  
Chosen Option : 4

Ans

- ☒ 1. Steel tape
- ☒ 2. Optical square
- ☒ 3. Cross staff
- ☒ 4. Line ranger

Q.13  
1 Which of the following sewage treatment units has a parshall flume?

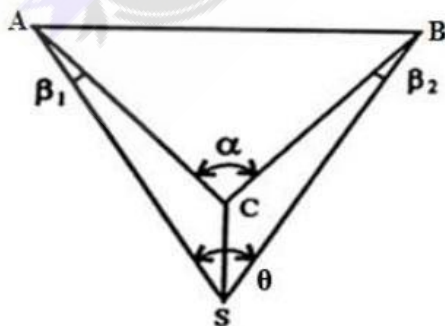
Question ID : 6966  
Chosen Answer : --

Ans

- ☒ 1. Trickling filter
- ☒ 2. Oxidation ditch
- ☒ 3. Grit chamber
- ☒ 4. Aerated lagoon

Q.13  
2 Satellite station S is established during a triangulation survey.

Question ID : 6977  
Chosen Option : 1



What is angle  $\alpha$  equal to?

Ans

- ☒ 1.  $\theta + \beta_1 + \beta_2$

☒ 2.  $\theta + \beta_1 - \beta_2$

☒ 3.  $\theta - \beta_1 - \beta_2$

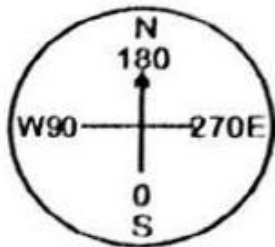
☒ 4.  $\theta - \beta_1 + \beta_2$

Q.13  
3 Which of the figures represents the correct graduation in a surveyor's compass?

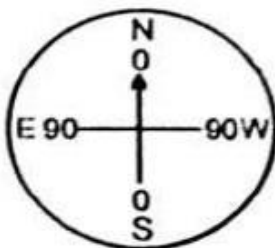
Question ID : 6975

Chosen Option : 2

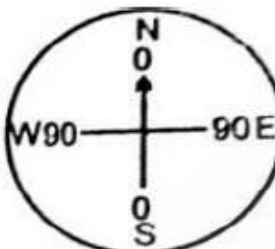
Ans



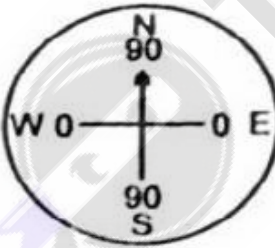
☒ 1.



☒ 2.



☒ 3.



☒ 4.

Q.13  
4 How much water is used for 1 kg of distemper?

Question ID : 6987

Chosen Answer : --

Ans ☒ 1. 0.6 litre

☒ 2. 0.4 litre



☒ 3. 0.2 litre

☒ 4. 0.8 litre

Q.13  
5 Which of the following methods of analysis of water distribution system is most suitable for long and narrow pipe system?

Question ID : 6951

Chosen Answer : --

Ans ☒ 1. Hardy cross method

☒ 2. Equivalent pipe method

☒ 3. Circle method

☒ 4. Electrical analysis method

Q.13  
6 Self-purification of running streams may be due to:

Question ID : 6955

Chosen Option : 1

Ans ☒ 1. dilution, sedimentation and oxidation

☒ 2. sedimentation, oxidation and coagulation

☒ 3. dilution, sedimentation and coagulation

☒ 4. dilution, oxidation and coagulation

Q.13  
7 A shear test was conducted on a soil sample. At failure, the ratio of  $\frac{\sigma_1 - \sigma_3}{2}$  to  $\frac{\sigma_1 + \sigma_3}{2}$  is equal to unity. Which of the following shear tests represents this condition?

Question ID : 6904

Chosen Answer : --

Ans ☒ 1. Undrained triaxial tensile test

☒ 2. Drained triaxial compression test

☒ 3. Undrained triaxial compression test

☒ 4. Unconfined compression test

Q.13  
8 The pressure at a point inside a liquid does not depend on which of the following?

Question ID : 6932

Chosen Option : 2

Ans ☒ 1. The acceleration due to gravity at that point

☒ 2. The shape of containing vessel

☒ 3. The nature of the liquid

☒ 4.

The depth of the point below the surface of the fluid

Q.13  
9 What is the ratio between the length of the sewer and velocity of the flow when running full known as?

Question ID : 6936

Chosen Option : 3

Ans ☒ 1. Time intensity



☐ 2. Time of concentration

☒ 3. Time of flow

☐ 4. Inlet time

Q.14  
0 Consider the following.

- A. Locate the boundaries of an area
- B. Plot the figure to a scale
- C. Find the area of the plot
- D. Find the reduced levels of the plot

Which of the above is/are the objective(s) of chain and cross-staff survey?

Ans ☐ 1. Only D

☒ 2. Only A, B and C

☐ 3. Only A and B

☐ 4. All of them

Q.14  
1 **Assertion A:** The determination of pH value of sewerage is important.

**Reason R:** The efficiency of certain treatment methods depends upon the availability of the pH value.

Which of the following is correct?

Ans ☐ 1. A is true but R is false.

☒ 2.

Both A and R are true, and R is the correct explanation of A.

☐ 3. A is false but R is true.

☐ 4.

Both A and R are true, but R is not a correct explanation of A.

Q.14  
2 **Assertion A:** Loss of head at a sudden expansion of a pipe is larger than that at a sudden contraction

**Reason R:** Separation of flow occurs at sudden contractions

Which of the following is correct?

Ans ☐ 1. A is false but R is true.

☐ 2. A is true but R is false.

☒ 3.

Both A and R are true, but R is not a correct explanation of A.

☐ 4.

Both A and R are true, and R is the correct explanation of A.

Q.14  
3 What is the volume of 1 bag of cement weighing 50 kg?

Ans ☐ 1. 0.020 cu m

Question ID : 6971

Chosen Option : 1

Question ID : 6940

Chosen Option : 2

Question ID : 6919

Chosen Option : 2

Question ID : 6846

Chosen Option : 2

☒ 2. 0.034 cu m

☐ 3. 3.4 cu m

☐ 4. 1.05 cu m

Q.14  
4 The consistency index of a soil is defined as the ratio of:

Question ID : 6881

Chosen Option : 2

Ans ☐ 1.  
liquid limit plus the natural water content to the plasticity index of the soil

☒ 2.  
liquid limit minus the natural water content to the plasticity index of the soil

☐ 3.  
natural water content of the soil minus plasticity limit  
to the plasticity index of the soil

☐ 4.  
natural water content of the soil plus its plasticity limit to the plasticity index of the soil

Q.14  
5 Alkalinity in water is expressed as milligrams per litre in terms of equivalent:

Question ID : 6949

Chosen Option : 4

Ans ☐ 1. Calcium hydroxide

☐ 2. Sodium carbonate

☐ 3. Magnesium carbonate

☒ 4. Calcium carbonate

Q.14  
6 Which of the following statements is correct?

Question ID : 6890

Chosen Option : 1

Ans ☒ 1.  
The greater the unit weight, the greater is permeability.

☐ 2. Unit weight does not affect permeability.

☐ 3.  
The greater the viscosity, the greater is permeability.

☐ 4.  
The greater the unit weight, the smaller is permeability.

Q.14  
7 On standard silica scale, the turbidity in drinking water should be limited to:

Question ID : 6950

Chosen Option : 1

Ans ☒ 1. 10 ppm

☐ 2. 50 ppm

☐ 3. 30 ppm

☐ 4. 20 ppm

Q.14  
8 In all reaction turbine, maximum efficiency is obtained if the:

Question ID : 6922

Chosen Answer : --

Ans ☐ 1. blade angle is  $90^\circ$  at the inlet.

✓ 2.

angle of absolute velocity vector at the outlet is  $90^\circ$ .

✗ 3. guide vane angle is  $90^\circ$ .

✗ 4. blade angle is  $90^\circ$  at the outlet.

Q.14 According to the relevant I.S. code, the weight of the timber is to be reckoned at a moisture content of:

Ans ✗ 1. 8%

✓ 2. 12%

✗ 3. 0%

✗ 4. 4%

Question ID : 6985

Chosen Option : 2

Q.15 As water flows through the runner of a reaction turbine, the pressure acting on it would vary from:

Ans ✗ 1. atmospheric pressure to vacuum.

✓ 2.

more than atmospheric pressure to vacuum.

✗ 3.

less than atmospheric pressure to zero gauge pressure.

✗ 4.

atmospheric pressure to more than atmospheric pressure.

Question ID : 6909

Chosen Answer : --

Q.1 Which of the following will complete the given sequence?  
BYCXD, EVFUG, HSRIJ, ?

Ans ✗ 1. QJSIP

✗ 2. KPLMO

✗ 3. NMOLR

✓ 4. KPLOM

Question ID : 7001

Chosen Option : 4

Q.2 Five friends are standing in a row facing North. Pankaj is to the left of Ravi, Tushant and Amit. Ravi, Tushant and Amit are to the left of Rajiv. Amit is between Ravi and Tushant. If Tushant is fourth from the left, who is fourth from the right?

Ans ✗ 1. Rajiv

✗ 2. Amit

✗ 3. Pankaj

✓ 4. Ravi

Question ID : 7012

Chosen Option : 4

Q.3 Two numbers are in the ratio 3 : 4. If the sum of their squares is 900, then what is the smaller number?

Ans ✓ 1. 18

Question ID : 7008

Chosen Option : 1

☒ 2. 22

☒ 3. 24

☒ 4. 27

Q.4 If '÷' means '+', '×' means '-', '+' means '×', and '-' means '÷', then what is the value of  $108 \div 18 - 3 \times 7 + 2$ ?

Question ID : 7009

Chosen Option : 4

Ans ☒ 1. 70

☒ 2. 215

☒ 3. 317

☒ 4. 100

Q.5 Which of the following will complete the given sequence?

m - np - pm - pno - n - po

Question ID : 7002

Chosen Option : 1

Ans ☒ 1. oonmm

☒ 2. ommmn

☒ 3. mmmno

☒ 4. nnoom

Q.6 Which of the given options replaces “#” below?

867 : 681 :: 986 : #

Question ID : 6997

Chosen Answer : --

Ans ☒ 1. 815

☒ 2. 700

☒ 3. 810

☒ 4. 801

Q.7 In a certain code language, '142' means 'Necklace of Gold', '435' means 'Old is Gold' and '267' means 'Buy lovely Necklace'. Which of the following is the code for 'of'?

Question ID : 7011

Chosen Option : 1

Ans ☒ 1. 1

☒ 2. 7

☒ 3. 3

☒ 4. 5

Q.8 Which of the given options replaces “#” below?

D G K P : W T P K :: # : U R N I

Question ID : 6996

Chosen Option : 4

Ans ☒ 1. F J N R



☒ 2. G J M P

☒ 3. H K O S

☒ 4. F I M R

**Q.9** Avinash is taller than Shaurya, who is shorter than Priya. Avinash is taller than Aryan, who is shorter than Shaurya. Priya is shorter than Avinash. Who is the shortest?

Question ID : 7005

Chosen Option : 3

**Ans** ☒ 1. Avinash

☒ 2. Shaurya

☒ 3. Aryan

☒ 4. Priya

**Q.10** 'K' is the mother of 'L'. 'J' is the son of 'K'. 'N' is the brother of 'M'. 'M' is the daughter of 'L'. 'O' is grandmother of 'J'. How is 'N' related to 'K'?

Question ID : 7004

Chosen Option : 3

**Ans** ☒ 1. Grand Mother

☒ 2. Great Grandson

☒ 3. Grand Son

☒ 4. Grand Daughter

**Q.11** Consider the letters below.

R E C O M M E N D A T I O N

Which of the following words can be formed using the given letters?

Question ID : 7010

Chosen Option : 1

**Ans** ☒ 1. COMMANDER

☒ 2. COMMUNICATOR

☒ 3. MEDIATION

☒ 4. REMINDER

**Q.12** Satish walks 10 km towards East and turns to his right and walks 3 km. He then turns to the right and walks 3 km towards West and then goes 2 km towards left. Finally, he turns right and walks 7 km. In which direction is Satish now from his starting point?

Question ID : 7006

Chosen Option : 2

**Ans** ☒ 1. North

☒ 2. South

☒ 3. West

☒ 4. East

**Q.13** Four letter clusters are given below out of which three are alike in some manner and one is different. Which is different from the rest?

Question ID : 6999

Chosen Option : 1

**Ans** ☒ 1. Z T Y V

☒ 2. J D K C



☒ 3. R L S K

☒ 4. N H O G

Q.14 Which of the given options replaces “#” below?

Scientist : Laboratory : : Doctor : #

Question ID : 6995

Chosen Option : 2

Ans ☒ 1. Operation

☒ 2. Hospital

☒ 3. Stethoscope

☒ 4. Medicine

Q.15 Some equations are solved on the basis of a certain system.

$$8 \times 2 \times 9 = 73$$

$$6 \times 4 \times 5 = 59$$

Question ID : 7007

Chosen Answer : --

What is the result of the equation given below in the same system?

$$4 \times 9 \times 7 = ?$$

Ans ☒ 1. 252

☒ 2. 29

☒ 3. 20

☒ 4. 42

Q.16 Take the given statements as true, and decide which of the given conclusions logically follow(s) from the statements.

Statements:

1. All watches are pens.
2. No pen is paper.

Conclusions:

- I. No watches are papers.
- II. Some papers are watches.

Question ID : 7014

Chosen Option : 2

Ans ☒ 1. Both I and II follow.

☒ 2. Only I follows.

☒ 3. Neither I nor II follows.

☒ 4. Only II follows.

Q.17 Four number ranges are given below out of which three are alike in some manner and one is different. Which is different from the rest?

Question ID : 7000

Chosen Answer : --

Ans ☒ 1. 29-170

☒ 2. 25-144

☒ 3. 18-104

☒ 4. 22-128

Q.18 Which of the following will complete the given sequence?  
6, 15, 35, 77, ?, 337

Question ID : 7003

Chosen Option : 3

Ans ☒ 1. 161

☒ 2. 165

☒ 3. 163

☒ 4. 155

Q.19 The difference between the ages of two sisters is the same as that of their father and mother. The elder sister is 24 years old. At the time of birth of the younger sister, their mother's age was 30 years. If their father is 4 years elder to their mother, what was his age at the time of elder daughter's birth?

Question ID : 7013

Chosen Option : 3

Ans ☒ 1. 35 years

☒ 2. 24 years

☒ 3. 30 years

☒ 4. 32 years

Q.20 Four words are given below out of which three are alike in some manner and one is different. Which is different from the rest?

Question ID : 6998

Chosen Option : 4

Ans ☒ 1. Suggestion

☒ 2. Counselling

☒ 3. Advice

☒ 4. Instruction

Q.1 Which Article of the Constitution of India deals with the power of the High Courts to issue writs?

Question ID : 7021

Chosen Answer : --

Ans ☒ 1. Article 287

☒ 2. Article 226

☒ 3. Article 221

☒ 4. Article 207

Q.2 In which state is Vedanthangal Bird Sanctuary located?

Question ID : 7028

Chosen Answer : --

Ans ☒ 1. Kerala

☒ 2. Rajasthan

☒ 3. Tamil Nadu

☐ 4. Jharkhand

Q.3 Hygrometer is used to measure which of the following?

Question ID : 7032

Chosen Option : 3

Ans ☐ 1. Specific gravity

☐ 2. Sound under water

☒ 3. Relative humidity

☐ 4. Density of milk

Q.4 Whose sacred books are "Jataks"?

Question ID : 7016

Chosen Option : 2

Ans ☐ 1. Hindus

☐ 2. Jains

☐ 3. Tibetans

☒ 4. Buddhists

Q.5 When was the television service introduced for the first time in India?

Question ID : 7017

Chosen Answer : --

Ans ☐ 1. 15 August, 1959

☐ 2. 18 July, 1958

☐ 3. 15 September, 1957

☒ 4. 15 September, 1959

Q.6 Who invented the television?

Question ID : 7033

Chosen Answer : --

Ans ☐ 1. Joseph Lister

☐ 2. Graham Bell

☐ 3. Issac Newton

☒ 4. J.L. Baird

Q.7 In which of the following states is the Dulhasti Power Project located?

Question ID : 7026

Chosen Answer : --

Ans ☒ 1. Jammu & Kashmir

☐ 2. Orissa

☐ 3. Andhra Pradesh

☐ 4. Gujarat

Q.8 Which of the following Indian states does not share a border with Myanmar?

Question ID : 7024

Chosen Option : 4

Ans

- ☒ 1. Nagaland
- ☒ 2. Manipur
- ☒ 3. Tripura
- ☒ 4. Arunachal Pradesh

Q.9 Consider the following events with reference to India's Freedom Movement and arrange them chronologically.

- I. Chauri- Chaura Incident
- II. Quit India Movement
- III. Rowlett Act
- IV. Gandhi – Irwin Pact

Choose the correct answer below.

Ans

- ☒ 1. III, I, IV, II
- ☒ 2. III, II, I, IV
- ☒ 3. IV, II, I, III
- ☒ 4. I, III, II, IV

Q.10 Through which of the following states does the Tropic of cancer pass?

Ans

- ☒ 1. Bihar
- ☒ 2. Tripura
- ☒ 3. Nagaland
- ☒ 4. Meghalaya

Q.11 Who was the first ruler of Slave Dynasty?

Ans

- ☒ 1. Iltutmish
- ☒ 2. Qutub – ud – din Aibek
- ☒ 3. Balban
- ☒ 4. Ala-ud –din Khilji

Q.12 Under which Amendment of the Indian Constitution, did Sikkim become the 22<sup>nd</sup> state of the Indian Union?

Ans

- ☒ 1. 38<sup>th</sup> Amendment
- ☒ 2. 36<sup>th</sup> Amendment
- ☒ 3. 26<sup>th</sup> Amendment
- ☒ 4. 39<sup>th</sup> Amendment

Q.13 Tunga and Bhadra rivers are tributaries of which of the following rivers?

Question ID : 7018

Chosen Option : 1

Question ID : 7023

Chosen Option : 4

Question ID : 7015

Chosen Option : 2

Question ID : 7020

Chosen Option : 2

Question ID : 7025

Ans

- ☒ 1. Tapi
- ☒ 2. Mahanadi
- ☒ 3. Cauveri
- ☒ 4. Krishna

Chosen Answer : --

Q.14 During India's freedom struggle, who was the Viceroy of India when the Simon Commission visited India?

Ans

- ☒ 1. Lord Curzon
- ☒ 2. Lord Irwin
- ☒ 3. Lord Chelmsford
- ☒ 4. Lord Willingdon

Question ID : 7019

Chosen Answer : --

Q.15 In which of the following states is Kudremukh Iron Ore Project located?

Ans

- ☒ 1. Jharkhand
- ☒ 2. Uttarakhand
- ☒ 3. Karnataka
- ☒ 4. Rajasthan

Question ID : 7029

Chosen Answer : --

Q.16 Which of the following mountain ranges stretches from Delhi in the North to Gujarat in the West?

Ans

- ☒ 1. Vindhya Range
- ☒ 2. Eastern Ghats
- ☒ 3. Western Ghats
- ☒ 4. Aravali Range

Question ID : 7022

Chosen Option : 4

Q.17 When did Life Insurance Corporation come into existence?

Ans

- ☒ 1. 1st September 1956
- ☒ 2. 1st January 1964
- ☒ 3. 1st January 1973
- ☒ 4. 5th September 1960

Question ID : 7031

Chosen Answer : --

Q.18 With which game is the Swaythling Cup associated?

Ans

- ☒ 1. Football
- ☒ 2. Hockey
- ☒ 3. Table -Tennis

Question ID : 7034

Chosen Answer : --



☒ 4. Cricket

Q.19 What does the term 'Balance Of Payments' indicate?

Question ID : 7030

Chosen Answer : --

Ans ☒ 1.  
Difference of amount between exports and imports

☒ 2. The debt burden of the Government

☒ 3. Gap between demand and supply

☒ 4. Budget deficit

Q.20 In which of the following states is Mica not found?

Question ID : 7027

Chosen Answer : --

Ans ☒ 1. Andhra Pradesh

☒ 2. Rajasthan

☒ 3. Bihar

☒ 4. Uttar Pradesh

Comprehension:

प्रस्तुत अनुच्छेद को पढ़िए और पूछे गए प्रश्नों के सही उत्तर का चयन करें।

मेरा मन कभी कभी बैठ जाता है। समाचार पत्रों में ठगी, चोरी और भ्रष्टाचार के समाचार भरे रहते हैं। ऐसा लगता है, देश में कोई ईमानदार आदमी रह ही नहीं गया है। हर व्यक्ति संदेह की दृष्टि से देखा जा रहा है। इस समय सुखी वही है, जो कुछ नहीं करता; जो भी कुछ करेगा, उसी में लोग दोष खोजने लगेंगे। उसके सारे गुण भुला दिए जाएंगे और दोषों को बढ़ा-चढ़ा कर दिखाया जाने लगेगा। दोष किसमें नहीं होते? यही कारण है कि हर आदमी दोषी अधिक दिख रहा है, गुणी कम या बिल्कुल ही नहीं। यह चिंता का विषय है।

यह सही है कि इन दिनों कुछ ऐसा माहौल बना है कि ईमानदारी से मेहनत करके जीविका चलाने वाले निरह श्रमजीवी पिस रहे हैं, और झूठ फरेब का रोजगार करने वाले फल-फूल रहे हैं। ईमानदारी को मूर्खता का पर्याय माना जाने लगा है। सच्चाई केवल भीरु और बेबस लोगों के हिस्से पड़ी है। ऐसी स्थिति में जीवन-मूल्यों के बारे में लोगों की आस्था हिलने लगी है। किंतु ऐसी दशा से हमारा उद्धार जीवन-मूल्यों में आस्था रखने से होगा। ऐसी स्थिति में हताश होना ठीक नहीं है।

SubQuestion No. :1

Q.1 अनुच्छेद में लेखक ने किस बात पर चिंता व्यक्त की है?

Question ID : 7037

Chosen Option : 1

Ans ☒ 1.  
व्यक्ति के गुणों की उपेक्षा और दोषों पर अधिक ध्यान दिए जाने पर

☒ 2. व्यक्ति की ईमानदारी के प्रति उपेक्षा पर

☒ 3. हर व्यक्ति को संदेह दृष्टि से देखे जाने पर

☒ 4. लोगों की कार्य के प्रति उपेक्षा पर

SubQuestion No. :2

Q.2 लेखक के अनुसार देश के विकास की संभावनाएँ किसमें हैं?

Question ID : 7038

Chosen Option : 2

Ans ☒ 1. श्रमजीवी बन जाने में

☒ 2. जीवन-मूल्यों में आस्था होने में

☒ 3. ईमानदारी से काम करने में

☒ 4. हताश न होने में

SubQuestion No. :3

Q.3 अनुच्छेद में आया 'उद्धार' शब्द \_\_\_\_\_ से बना है।

Question ID : 7040

Chosen Option : 1

Ans ☒ 1. उद् + हार

☒ 2. उद्वा + र

☒ 3. उत् + हार

☒ 4. उ + द्वार

SubQuestion No. :4

Q.4 अनुच्छेद के अनुसार, 'मेरा मन कभी कभी बैठ जाता है' वाक्य का आशय क्या है?

Question ID : 7036

Chosen Option : 4

Ans ☒ 1. लेखक को स्वयं पर क्रोध आ जाता है।

☒ 2. लेखक को अपराध बोध होता है।

☒ 3. लेखक को पछतावा होता है।

☒ 4. लेखक दुखी हो जाता है।

SubQuestion No. :5

Q.5 अनुच्छेद के माध्यम से लेखक क्या संदेश दे रहा है?

Question ID : 7039

Chosen Option : 3

Ans ☒ 1. हताश होने की आवश्यकता नहीं है

☒ 2. लोगों में हीन भावना मत आने दो

☒ 3. जीवन-मूल्यों में आस्था रखो

☒ 4. मेहनत और ईमानदारी से काम करो

Q.6 कौन-सा शब्द 'अश्व' का पर्याय नहीं है?

Question ID : 7042

Chosen Answer : --

Ans ☒ 1. घोटक

☒ 2. जंबूक

☒ 3. तुरंग

☒ 4. हय

Q.7 'पूर्व दिशा में ही सूर्य उदय होता है' वाक्य में प्रयुक्त रेखांकित शब्द का विलोम (विपरीतार्थक) है:

Question ID : 7041

Chosen Option : 3

Ans ☒ 1. लुप्त

☒ 2. अंतर्धान

✓ 3. अस्त

✗ 4. तिरोहित

Q.8 कौन से शब्द में अनुनासिकता है?

Ans ✗ 1. कंठाग्र

✗ 2. कंगन

✓ 3. कंटीला

✗ 4. कदंब

Question ID : 7045

Chosen Answer : --

Q.9 कौन से शब्द की वर्तनी सही है?

Ans ✗ 1. अत्यूक्ति

✓ 2. अत्युक्ति

✗ 3. अत्योक्ति

✗ 4. अत्युक्ती

Question ID : 7043

Chosen Option : 2

Q.10 'वह हमेशा ग़लत सलाह देता रहता है' वाक्य के रेखांकित अंश के लिए उपयुक्त मुहावरा कौन सा है?

Ans ✓ 1. पट्टी पढ़ाना

✗ 2. पत्ता काटना

✗ 3. कान भरना

✗ 4. नाक चढ़ाना

Question ID : 7044

Chosen Option : 1

