



## SJVNL ET

Previous Year Paper (Civil) 30 May, 2019 Shift 1







## SJVN LIMITED

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Participant ID	
Participant Name	
Test Center Name	
Test Date	30/05/2019
Test Time	9:00 AM - 11:30 AM
Subject	Executive Trainee Civil

Section: Discipline

 ${\bf Q.1}$  Slope at the support end of a simply supported beam subjected to uniformly distributed load w throughout its length l is equal to (where elasticity E and moment of inertia I are constant):

Ans







 $\times$  4.  $\frac{wl^2}{48 EI}$ 

Question ID: 16794327703

Status: Answered

Chosen Option: 1

Q.2 Which of the following bolts have high tensile strength?

- √ 1. High strength bolt
- X 2. Unfinished bolts
- X 3. Turned bolt
- X 4. Ribbed bolt

Question ID: 16794327714 Status: Answered

Chosen Option: 1

Q.3 The vertical distance between two consecutive treads in a staircase is called as:

Ans 1. Riser

X 2. Waist

X 3. Nosing

X 4. Soffit

Question ID: 16794327728



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Status: Answered Chosen Option: 1

Q.4 Which law states that the rate of increase of pressure in a vertical direction is equal to weight density of fluid at that

- 1 Pascal's Law
- X 2. Isothermal Law
- 3. Hydrostatic Law
- X 4. Newton's Law of Fluids

Question ID: 16794327620

Status: Answered Chosen Option : 1

Q.5 राष्ट्रीय कृषि आयोग में निम्न में से किस सूखे का उल्लेख नहीं किया गया है?

- Ans 🔀 1. जलविज्ञानीय अनावृष्टि
  - √ ² सामाजिक-आर्थिक अनावृष्टि
  - 🗙 ३. कृषि अनावृष्टि
  - 🗙 ४ पारिस्थितिक अनावृष्टि

Question ID: 16794327657

Status: Answered

Chosen Option: 2

Q.6 Which of these is a natural contaminant of air?

- Ans X 1. Dust
  - 2. Pollen Grains
  - X 3. SO<sub>2</sub>
  - X 4. Smoke

Question ID: 16794327651

Status: Answered

Chosen Option: 1

Q.7 In which stage in a river system does the river flow along an undulating topography and the gradient is very high?

- Ans X 1. Mature stage
  - X 2. Old stage
  - √ 3. Juvenile stage
  - X 4. Incipient stage

Question ID: 16794327724

Status: Answered





Which of these is NOT a nature of generally used chlorofluorocarbons?

- Ans X 1. Reactive
  - X 2. Odourless
  - 3. Non-corrosive
  - X 4. Non-flammable

Question ID: 16794327653

Status: Answered

Chosen Option: 2

Q.9 What is the Poisson's ratio of Ice?

- Ans X 1. 0.29
  - × 2. 0.37
  - **3.** 0.33
  - X 4. 0.48

Question ID: 16794327699

Status: Answered

Chosen Option: 1

What is the deflection at the free end of a cantilever beam subjected to a concentrate load P at the free end (where elasticity E and moment of inertia I are constant)?

0

Ans

- $\times$  2.  $\frac{Pl^3}{36 EI}$
- $\times$  3.  $\frac{Pl^2}{48 EI}$
- $\times$  4.  $\frac{Pl^2}{8EI}$

Question ID: 16794327704 Status: Answered

Chosen Option: 1

Q.1 Which equipment is used for finding soundness of cement?

- Ans 🗸 1. Le-Chatlier apparatus
  - X 2. Core cutter
  - ★ 3. Permeability apparatus
  - ¥ 4. Vicat apparatus

Question ID: 16794327674

Status: Answered





Q.1 2 कांच के निर्माण के दौरान सोडा का उपयोग क्यों किया जाता है?

- Ans 🔀 1. रंग और चमक के लिए
  - X 2 आग के प्रतिरोध को बढ़ाने के लिए
  - X 3. कांच की कठोरता बढाने के लिए
  - √ 4 कांच के संलयन में तीवता लाने के लिए

Question ID: 16794327680 Status: Answered

Chosen Option: 4

Q.1 The shape of the stress-strain curve of concrete up to a strain of 0.002 is \_\_\_\_\_.

- Ans X 1. Linear
  - X 2. Hyperbolic
  - X 3. Semi circular
  - 4. Parabolic

Question ID: 16794327732 Status: Answered

Chosen Option : 1

Q.1 For a circular section, the elastic modulus (Ze) is:

(d = diameter)

- $\sqrt{1. \frac{\pi}{32}} \, \text{X d}^3$
- $\times$  2.  $\frac{\pi}{16}$  X d<sup>3</sup>
- $\times$  3.  $\frac{\pi}{32}$  X d<sup>2</sup>
- $\times$  4.  $\frac{\pi}{16}$  X d<sup>2</sup>

Question ID: 16794327696

Status: Answered

Chosen Option: 1

 $_{5}^{\text{Q.1}}$  1 N/mm<sup>2</sup> is equal to:

- Ans X 1. 1 Pa
  - √ 2. 1 MPa
  - X 3. 1 GPa
  - X 4. 1 KPa

Question ID: 16794327637

Status: Answered





Q.1 6	Flakiness index and elongation index test is NOT applicable to aggregate sizes	maller than
Ans	X 1. 2.36 mm	
	× 2. 10 mm	
	<b>√</b> 3. 6.3 mm	
	× 4. 4.75 mm	
		Question ID : <b>16794327675</b>
		Status : Answered
	<u> </u>	Chosen Option : 4
Q.1 7	Maximum Principal Stress Theory is also known as:	
Ans	★ 1. Beltrami and Haigh's theory	
	★ 2. St. Venanat's Theory	
	X 3. Coulomb's Theory	
	✓ 4. Rankine's Theory	
		Question ID : <b>16794327641</b>
		Status : Answered
		Chosen Option : 4
Q.1 8	The average specific gravity of course aggregate vari	es from:
Ans	X 1. 2.0 to 4.0	
	✓ 2. 2.6 to 2.8	
	× 3. 2.2 to 3.0	
	X 4. 2.0 to 2.9	
		Question ID : 16794327676
		Status : Answered
		Chosen Option : 2
Q.1 9	Flow net is an important tool in analysing irrotational	l flow problems
Ans	★ 1. 3 Dimensional	
	× 2. 1 Dimensional	
	★ 3. 5 Dimensional	
	√ 4. 2 Dimensional	
	ſ	Question ID : <b>16794327622</b>
		Status : Answered
		Chosen Option : 1
Q.2 0	Ratio of the change in pressure to the fractional volume compression	s called
Ans	✓ 1. Bulk Modulus	
	× 2. Poisson's Ratio	
	X 3. Longitudinal Strain  X 3. Longitudinal Strain	
I		





X 4. Volumetric Strain Question ID: 16794327697 Status: Answered Chosen Option: 1 Q.2 "The longitudinal strain is uniform across the cross-section of the cylinder". This assumption is reasonably 1 good for a large portion except near the ends. The theory based on this assumption is called: 1. Coulomb's Theory X 2. St. Venant's Theory 3. Maximum Strain Energy Theory 4. Lame's Theory Question ID: 16794327643 Status: Answered Chosen Option: 1 Q.2 The flow is said to be critical flow if Froude number is \_\_\_\_\_. Ans 🗸 1. Equal to 1 X 2. Equal to 0 X 3. Less than 1 X 4. More than 1 Question ID: 16794327624 Status: Answered Chosen Option: 2 Q.2 Dutch bond is a modification of \_ Ans X 1. Single Flemish bond X 2. Header bond 3. English bond X 4. Stretcher bond Question ID: 16794327736 Status: Answered Chosen Option: 2 Q.2 The preventive measure adopted to reclaim a water logged area is? Ans X 1. Lining of lands X 2. Using of weir 3. Lowering the full supply level ✓ 4. Installation of lift irrigation system Question ID: 16794327659



Status : **Answered** Chosen Option : **1** 

Q.2 Which of these factors are NOT considered during selection of cross-drainage structure?

Ans

- ✓ 1. Direction of water flow
- X 2. Size of the canal and drainage
- X 3. Economic considerations
- X 4. Difference in discharge of water

Question ID: 16794327660 Status: Answered

Chosen Option :  ${\bf 1}$ 

Q.2 During the second stage of anaerobic digestion of waste water, it is necessary to maintain proper

Ans

- X 1. Pressure
- X 2. Impurities
- X 3. Volume
- √ 4. pH

Question ID : 16794327650 Status : Answered

Chosen Option : 1

Ans

- X 1. Eccentricity
- ✓ 2. Pitch
- X 3. Edge distance
- X 4. Gauge

Question ID : 16794327719 Status : Answered

Chosen Option : 2

Q.2 As per IS: 3495 (part I), what is the loading rate used to find the compressive strength of bricks?

Ans

- ✓ 1. 14 N/m<sup>2</sup> per minute
- X 2. 40 N/m<sup>2</sup> per minute
- X 3. 45 N/m<sup>2</sup> per minute
- X 4. 4 N/m<sup>2</sup> per minute

Question ID: 16794327678

Status : Answered





Q.2 Which of these parameters do/does NOT influence the design of a harbour? Ans X 1. Waves √ 2. Rainfall X 3. Tides X 4. Wind Question ID: 16794327665 Status: Answered Chosen Option: 1 Q.3 Which of these is NOT a method used to control dust while constructing tunnels? Ans X 1. Use of respirators X 2. Use of vacuum head X 3. Wet drilling 4. Use of face mask Question ID: 16794327669 Status: Answered Chosen Option: 1 Q.3 Surface of erosion or non-deposition that separates the younger rock formations from the older rock formations is called Ans 1. Unconformity × 2. Folds X 3. Faults X 4. Joints Question ID: 16794327684 Status: Answered Chosen Option: 2 Q.3 A joint when provided in the length of a column is called \_\_\_\_\_. Ans X 1. Batten X 2. Lacing X 4. Lug angle Question ID: 16794327718 Status: Answered Chosen Option: 3 Q.3 Which of the following methods is used to determine the water content? √ 1. Radiation Method X 2. Sieve Analysis





	X 3. Pipette Method	
	X 4. Hydrometer Method	
		Question ID : 16794327634 Status : Answered Chosen Option : 4
Q.3 4	The wall that are supported and restrained against lateral deflection along one to four	sides is called
Ans	★ 1. Stocky wall	
	× 2. Un-braced wall	
	X 3. Slender wall	
	✓ 4. Braced wall	
		Question ID : 16794327733 Status : Answered Chosen Option : 4
Q.3 5	Which of the following tests is used to measure the w	vear of stones?
Ans	✓ 1. Attrition test	
	∠ 2. Crushing test	
	X ₃. Soundness test	
	★ 4. Impact test	
		Question ID : 16794327682
		Status : <b>Answered</b> Chosen Option : <b>4</b>
Q.3 6 Ans	Contour lines can intersect only in the case of an  1. Steep plan	
	× 2. Vertical cliff	
	X 3. Inclined plan	
	✓ 4. Overhanging cliff	
		Question ID : <b>16794327688</b>
		Status : <b>Answered</b>
		Chosen Option : 4
Q.3 7	Ability of rock to pass water through itself is called:	
Ans	X ¹. Flow Time	
	✓ 2. Permeability	
	X 3. Void Ratio	
	X 4. Porosity	





Question ID: 16794327648 Status: Answered

Chosen Option: 2

Q.3	For high-strength	friction bolt	s, what is th	e factor of sa	fety for wind load	?
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X 2. 1.15

X 3. 1.4

X 4. 1.5

Question ID: 16794327722

Status: Answered

Chosen Option: 1

Q.3 The partial factor of safety for steel in limit state design in the design of Reinforced Concrete Structure is:

Ans X 1. 1.75

**2**. 1.15

X 3. 1.65

X 4. 1.5

Question ID: 16794327731

Status: Answered

Chosen Option: 2

Q.4 Hydrometers are generally calibrated at \_\_\_\_\_\_degrees Celsius.

Ans X 1. 29

**2**. 27

X 3. 28

X 4. 26

Question ID: 16794327635

Status: Answered Chosen Option: 2

Q.4 A stair should NOT have a pitch more than \_\_\_\_\_.

Ans X 1. 35°

X 2. 45°

**√** 3. 40°

X 4. 30°

Question ID: 16794327727

Status: Answered

Chosen Option: 4

Q.4 वेल्ड धातु की जोड़ की पूर्ण गहराई तक भेदन में विफलता कहलाती है:

Ans





X 1 पोरोसिटी

🗙 २. स्लैग इन्क्लूजन

√ 3. इनकम्प्लीट पेनेट्रेशन

🗙 ४ इनकम्प्लीट प्यूज़न

Question ID: 16794327715

Status: Answered

Chosen Option: 2

Q.4 मानचित्रों के पुनर्निर्माण, बड़ा करने अथवा छोटा करने के लिए उपयोग किया जाने वाला उपकरण है:

Ans 🗙 1. क्लिनोमीटर

X 2. सेक्सटेंट

X 3. सायलॉन घाट ट्रेसर

√ 4. पैंटाग्राफ

Question ID: 16794327685

Status: Answered

Chosen Option: 4

Q.4 Which one of these methods is used to find the in-situ density of soil?

Ans X 1. Pycnometer Method

X 2. Torsion balance method

X 3. Alcohol Method

4. Rubber Balloon Method

Ouestion ID: 16794327628

Status: Answered

Chosen Option: 1

Q.4 Which of the following is FALSE about vitrified sewer pipes?

Ans X 1. Highly resistant to sulphide corrosion

X 2. Highly imperious

★ 3. High compressive strength

4. Light weight

Question ID: 16794327711

Status: Answered

Chosen Option: 4

Q.4 5 day BOD is taken at a temperature of \_\_\_\_\_\_.

Ans 

√ 1. 20 °C





X 2. 15 °C

X 3. 10 °C

X 4. 0 °C

Question ID: 16794327712

Status: Answered

Chosen Option: 1

Q.4 Which of these resistances is NOT overcome by the engine of a vehicle moving at a certain speed?

Ans X 1. Air Resistance

X 2. Grade Resistance

3. Frictional Resistance

A Rolling Resistance

Question ID: 16794327662

Status: Answered

Chosen Option : 4

Q.4 वह सड़क, जिससे तीव्र और सुरक्षित शहरी यातायात और आवाग<mark>मन सं</mark>भव होता है, कहलाता है:

Ans 🗙 1. कलेक्टर स्ट्रीट

X 2. SH

🗙 3. मुख्य मार्गीय (Arterial Roads)

√ 4. एक्सप्रेस-वे

Question ID: 16794327710

Status: Answered

Chosen Option: 1

Q.4 Which of the following is NOT considered as dead load

Ans 1. Erection load

× 2. Self-weight of the floor slab

X 3. Self-weight of a beam

X 4. Self-weight of a column

Question ID: 16794327694

Status: Answered

Chosen Option: 1

Q.5 What is defined as the ratio of power given by water to the runner of a turbine to the power supplied by the water at the

0 inlet of the turbine?

Ans X 1. Mechanical Efficiency

2. Volumetric Efficiency

X 3. Overall Efficiency





4. Hydraulic Efficiency	
	Question ID : <b>16794327625</b>
	Status : <b>Answered</b>
	Chosen Option : 4

Q.5 What is the time gap between explosion and mucking process, within which the ventilation system installed should

1 clear all poisoned gases and dust in tunnels?

Ans X 1. 20 min

✓ 2. 30 min

X 3. 25 min

X 4. 15 min

Question ID: 16794327667 Status: Answered Chosen Option: 1

Q.5 Process of taking levels on each side of a main line at right angles to that line is called \_

Ans X 1 Differential levelling

√ 2. Cross-section levelling

X 3. Profile levelling

X 4. Reciprocal levelling

Question ID: 16794327692 Status: Answered

Chosen Option : 2

Q.5 Bangalore falls under which seismic zone?

Ans X 1. Zone III

✓ 2. Zone II

X 3. Zone IV

X 4. Zone V

Question ID: 16794327695 Status: Answered

Chosen Option: 3

Q.5 Hydrograph is a graphical Representation of \_\_\_\_\_.

√ 1. Runoff and Time

2. Cumulative Rainfall and Time

X 3. Discharge and Time

A Rainfall Depth and Time

Question ID: 16794327655

Status: Answered





Effective area of fillet weld is equal to the product of \_\_\_\_\_.

- Ans X 1. Effective length and effective width
  - 2. Effective length and effective throat thickness
  - 3. Effective throat thickness and effective width
  - 4. Effective throat thickness and transverse spacing

Question ID: 16794327717

Status: Answered

Chosen Option: 2

Q.5 Which of these shaped traps are NOT used in water closet?

- Ans X 1. P Trap
  - √ 2. C Trap
  - X 3. S Trap
  - X 4. Q Trap

Ouestion ID: 16794327649

Status: Answered

Chosen Option: 4

Q.5 The ratio of lateral strain to linear strain is known as \_\_\_

- Ans X 1. Youngs's Modulus
  - X 2. Hooke's Law
  - X 3. Volumetric Strain
  - 4. Poisson's Ratio

Question ID: 16794327638

Status: Answered

Chosen Option: 4

Q.5 If  $f_V$  is the yield stress, then the permissible shear stress for a steel structure is \_\_\_\_

- × 1. 0.4 f<sub>v</sub>
  - √ 2. 0.45 f<sub>y</sub>
- X 3. 0.6 f<sub>y</sub>
- X 4. 0.66 f<sub>v</sub>

Question ID: 16794327713

Status: Answered

Chosen Option: 1

What is the top diameter and bottom diameter, respectively, of the frustum of the cone used in slump test apparatus that is used to find the consistency of concrete?





Ans X 1. 15 cm and 25 cm X 2. 10 cm and 30 cm × 3. 15 cm and 30 cm 4. 10 cm and 20 cm Question ID: 16794327677 Status: Answered Chosen Option: 4 Q.6 Petrology deals with the study of \_\_\_\_\_. Ans X 1. Minerals ✓ 2. Origin and characteristics of rocks X 3. Structure of earth 4. Characteristics of petroleum products Question ID: 16794327683 Status: Answered Chosen Option: 4 Q.6 Which type of support prevents the movement of the support in each of the three directions? Ans X 1. Roller support X 2. Ball support X 3. Fixed support 4. Ball and socket support Question ID: 16794327701 Status: Answered Chosen Option: 3 Q.6 In self-cleansing velocity, \_\_\_\_. Ans X 1. Solid particles will float on surface and does not move 2. Solid particles does not move with water 3. Solid particles in suspension move along with water 4 Solid particles get settled at the bottom Question ID: 16794327706 Status: Answered Chosen Option: 3 Q.6 Which instrument is used to measure Arbitrary Bearing? Ans 🗸 1. Theodolite × 2. Cylone ghat tracer X 3. Astronomical observations





X 4. Pantagraph Question ID: 16794327686 Status: Answered Chosen Option: 1

Q.6 Measurements taken using photographs as the prime non-contact medium is called

Ans

1. Tellurometer

X 2. Remote sensing

3. Photogrammetry

X 4. EDM

Question ID: 16794327737 Status: Answered

Chosen Option: 2

Q.6 The pressure of fluid is measured by:

Ans X 1. Notch

2. Manometer

X 3. Barometer

X 4. Orifice

Ouestion ID: 16794327621 Status: Answered

Chosen Option : 3

Q.6 Ratio of the volume of voids to the volume of soil solids in the given soil mass is known as \_

Ans X 1. Absorbency

✓ 2. Void ratio

X 3. Porosity

Y 4. Penetration capacity

Question ID: 16794327633 Status: Answered

Chosen Option: 2

Q.6 According to I.S. specifications, rivets or bolts carrying a calculated shear stress through a packing more than 6 mm

7 thick should be increased by how many percentage for each 2 mm thickness of packing?

Ans X 1. 3.5%

× 2. 1.5%

X 3. 5%

**√** 4. 2.5%

Question ID: 16794327721

Status: Answered





Q.6 8	What is the major source of atmospheric mois	ture for precipitation?
Ans	★ 1. Evaporation from ponds	
	√ 2. Evaporation from oceans	
	X 3. Evaporation from wells	
	★ 4. Evaporation from rivers	
		Question ID : <b>16794327670</b>
		Status : <b>Answered</b>
		Chosen Option : 2
Q.6 9	Which instrument can be used to measure the area	of a plan of any shape?
Ans	★ 1. Ceylon ghat tracer	
	× 2. Tellurometer	
	X 3. Sextant	
	✓ 4. Planimeter	
		Question ID : 16794327693
		Status : <b>Answered</b> Chosen Option : <b>1</b>
		Chosen Option . 1
	is the number of vehicles moving in a specified direction on a given point or cross-section during a specified unit of time.	given lane or roadway that pass a
١.		
	✓ 2. Traffic Volume	
	X 3. Traffic Density  ✓ 3. Traffic Density	
	★ 4. Practical Capacity	
		Question ID : 16794327673 Status : Answered
		Chosen Option : 3
Q.7 1	Detention time is the ratio of	
Ans	✓ 1. Volume to flow rate	
	× 2. Flow rate to density	
	X 3. Volume to density  X 3. Volume to density	
	★ 4. Density to flow rate	
	Delibity to hew rate	
		Question ID : <b>16794327709</b> Status : <b>Answered</b>
		Chosen Option : 1
<u> </u>		
Q.7 2	Water that forms a hydration shell around soil grain	ns is known as
Ans	★ 1. Structural water	





	× 2. Pore water		
	X 3. Infiltered w	vater	
	4. Solvate wat	ter	
			Question ID : 16794327636 Status : Answered Chosen Option : 3
Q.7 3	Analysis of space	trusses can be carried out using _	
Ans	X ¹ Mohr's met	thod	
	√ 2. Combinatio.	on of section method and joint met	hod
	X 3. Shape facto	or and joint method	
	X 4. Only shape	factor	
			Question ID : 16794327702 Status : Answered Chosen Option : 3
Q.7 4	Sewer that receives sewage from is called	n the collecting systems and conducts it to a point of final dis	charge or to disposal plant
Ans	★ 1. Relief sewe	er	
	X 2. Lateral sew	ver	
	X 3. Intercepting	g sewer	
	√ 4. Outfall sewer	ver er	
			Question ID : 16794327707 Status : Answered Chosen Option : 4
Q.7 5	Which of these so	oils are deposited by wind action?	
Ans	★ 1. Glacial soil		
	× 2. Volcanic so.	oi <mark>l</mark>	
	X 3. Alluvial soi	il	
	4. Aeolian soi.	il	
			Question ID : 16794327671 Status : Answered Chosen Option : 4
Q.7 6	A flow is said to b	oe Sub-sonic Flow if the Mach nun	nber is
Ans	× 1. More than I	1	
	× 2. Equal to 0		
	X 3. Equal to 1		
	✓ 4. Less than 1		





Question ID: 16794327623 Status: Answered

Chosen Option: 4

 $_{7}^{Q.7}$  What is the bulk modulus for steel in N/m<sup>2</sup>?

Ans X 1. 125 X 10<sup>9</sup>

✓ 2. 160 X 10<sup>9</sup>

X 3. 2.2 X 10<sup>9</sup>

X 4. 75 X 10<sup>9</sup>

Question ID: 16794327700 Status: Answered

Chosen Option: 3

Q.7 Which of the following types of survey is NOT based on the object of survey?

Ans X 1. Engineering survey

2. Geological survey

X 3. Military survey

4. Astronomical survey

Question ID: 16794327690

Status: Answered

Chosen Option: 3

Q.7 In which of the following tests is the solid specimen of soil subjected to direct stress in three mutually perpendicular

Ans X 1. Direct Shear Test

X 2. Unconfinedd Compression Test

X 3. Vane Shear Test

4. Triaxial Compression Test

Question ID: 16794327630

Status: Answered

Chosen Option: 4

Q.8 In a column, the ratio of its effective length to radius of gyration is called:

Ans X 1. Bulk Modulus

2. Slenderness Ratio

X 3. Poisson's Ratio

X 4. Young's Modulus

Question ID: 16794327645

Status: Answered





Q.8 Which of the following is NOT an effect of Fly Ash on cement concrete?

Ans X 1. Reduces permeability of concrete

✓ 2. Increases the heat of hydration of concrete

X 3. Reduces the amount of air entrainment

4. Slightly improves resistance to sulphate attack

Question ID: 16794327679

Status: Answered

Chosen Option: 3

Q.8 The constituent of cement that is responsible for all the undesirable property of cement due to its strong reactive nature

of the Portland Clinker phases is:

★ 1. Tri-calcium silicate

X 2. Di-calcium silicate

X 3. Tetra-calcium alumino ferrite

4. Tri-calcium aluminate

Question ID: 16794327730

Status: Answered

Chosen Option: 3

Q.8 Which geometrical method is used to find principal planes, maximum shear stress and their planes?

Ans

√ ¹ Mohr's Circle of Stress

2. Macaulay's Method

X 3. Moment Area Theorem

X 4. SFD and BMD

Question ID: 16794327640

Status: Answered

Chosen Option: 1

Q.8 Who was the first Swiss Mathematician to derive theoretical expression for buckling load?

Ans X 1. Rankine

X 2. Coulomb

X 3. St. Venant

4. Leonard Euler

Question ID: 16794327644

Status: Answered

Chosen Option: 4

Q.8 Pandrol Clips are used in which railway tracks?

Ans X 1. Bullet train tracks

2. Light rail tracks





3. Ballast-less tracks

Medicated freight corridor tracks

A property of the prope

Question ID: 16794327664 Status: Answered Chosen Option: 4

What is the formula to find the nominal diameter of rivet using Unwin's Formula?

Ans  $\times$  1. 4.23  $\sqrt{t}$ 

× 2. 5.35 √t

X 3. 3.75 √t

✓ 4. 6.04 √t

Question ID: 16794327723 Status: Answered

Chosen Option: 4

Q.8 Width of carriageway for a single-lane road according to Indian Road Congress is:

Ans X 1. 3.25 m

✓ 2. 3.75 m

X 3. 3.50 m

X 4. 4.00 m

Question ID: 16794327672

Status: Answered

Chosen Option: 2

Q.8 As per IS 456-2000, the ultimate load in an RC structure in which effect of wind and earthquake load is neglected, should be:

Ans X 1. 1.5 DL + 0.5 LL

X 2. 1.2 DL + 2.5 LL

√ 3. 1.5 DL + 2.2 LL

X 4. 1.5 DL +1.8 LL

Question ID: 16794327735

Status: Answered

Chosen Option: 4

A compound lens free from spherical aberration is known as \_\_\_\_\_.

★ 1. Elimination of parallax

√ 2. Aplanatic combination

X 3. Magnification

Achromatic combination

Question ID: 16794327691





		Status : <b>Answered</b> Chosen Option : <b>1</b>
	For simply supported slab, what is the minimum thickness of solid one-way slab t criteria in consideration?	taking vertical deflection
Ans	<b>X</b> 1. <b>L</b> /8	
	× 2. L/24	
	<b>√</b> 3. L/20	
	<b>★</b> 4. L/10	
		Question ID : 16794327734
		Status : <b>Answered</b>
		Chosen Option : 3
Q.9 1	Most suitable chemical to reduce the evaporation of	water is?
Ans	★ 1. Methyl Alcohol	
	× 2. Butyl Alcohol	
	✓ 3. Cetyl Alcohol	
	X 4. Ethyl Alcohol  ■ The state of the sta	
	Transfer of Annual designations by	
		Question ID : 16794327654 Status : Answered
		Chosen Option : 3
Q.9 2	Shape factor may be defined as the ratio of	
Ans	★ 1. Elastic Modulus to Plastic Modulus	
	× 2. Plastic Modulus to Rigidity Modulus	
	★ 3. Elastic Modulus to Lateral Strain	
	✓ 4. Plastic Modulus to Elastic Modulus	
		Question ID : 16794327698
		Status : <b>Answered</b>
		Chosen Option : 4
Q.9 3	A curve that changes the alignment of road from downhill to uphill	is called
Ans	✓ 1. Sag Curve	
	× 2. Transition Curve	
	× 3. Summit Curve	
	X 4. Reverse Curve	
	New English Control of the Control o	Out of the 10 to 1
		Question ID : <b>16794327689</b> Status : <b>Answered</b>
l		Chosen Ontion : 3

Q.9 Which of these is an indirect method for the determination of stream flow?





Ans X 1. Dilution techniques 2. Slope area method X 3. Ultrasonic method X 4. Area Velocity method Question ID: 16794327656 Status: Answered Chosen Option: 4 Q.9 Which of these produces dangerous photochemical smog? Ans X 1. Lead X 2. Benzene X 3. Carbon Monoxide 4. Hydrocarbons Question ID: 16794327652 Status: Answered Chosen Option: 1 Q.9 Which gas is the basic cause of Crown Corrosion? Ans  $\sqrt{1}$  H<sub>2</sub>S × 2. NH<sub>3</sub> X 3. CH<sub>4</sub> X 4. CO<sub>2</sub> Question ID: 16794327708 Status: Answered Chosen Option: 1 Q.9 Ratio of shearing stress to shearing strain is known as \_\_\_\_\_. Ans X 1. Polar Modulus X 2. Bulk Modulus 3. Rigidity Modulus Modulus of Elasticity

Modulus of Elastic Question ID: 16794327646 Status: Answered Chosen Option: 3 Q.9 Hooke's law is valid up to what limit? Ans 1. Elastic Limit X 2. Ultimate Stress X 3. Breaking Point





X 4. Plastic Limit

Question ID : 16794327639 Status : Answered Chosen Option : 1

Q.9 Natural rupture along with the opposite walls have moved with respect to each other is called \_\_\_\_\_\_

Ans

✓¹ Fault

X 2. Conglomerate

X 3. Cleavage

X 4. Joint

Question ID: 16794327687 Status: Answered

Chosen Option :  ${\bf 3}$ 

Q.1 Which ventilation system is suitable for tunnels longer than 4-5 km?

Ans

★ 1. Natural Ventilation system

✓ 2. Transverse airflow ventilation system

X 3. Mechanical system

Longitudinal ventilation system

Question ID: 16794327668

Status: **Answered** 

Chosen Option : 4

Q.1 Which of these solid wastes is used in Ceramic Industry?

Ans

★ 1. Chromium Sludge

× 2. Fly Ash

✓ 3. Blast Furnace Slag

X 4. Red Mud

Question ID: 16794327647

Status : **Answered** 

Chosen Option: 3

Q.1 The type of flow in which the velocity at any given time does NOT change with respect to space is known as:

02 Ans

★ 1. Steady Flow

X 2. Compressible Flow

√ 3. Uniform Flow

X 4. Laminar Flow

Question ID : 16794327619 Status : Answered





		Chosen Option : 1			
Q.1 03	A surveying instrument in which a single observer can bisect two ranging rods simultaneous	ly to set perpendicular is:			
Ans					
	✓ 2. Sextant				
	X 3. Dumpy level				
	× 4. Clinometers				
		Question ID : <b>16794327726</b>			
		Status: Answered			
		Chosen Option : 1			
Q.1 04	The wastewater from bathrooms, kitchens, washing places and wash basin, e	c. is called			
Ans	X 1. Garbage				
	★ 2. Sanitary sewage				
	× 3. Rubbish				
	✓ 4. Sullage				
		Ouestion ID : <b>16794327705</b>			
		Status : <b>Answered</b>			
		Chosen Option : 2			
Q.1 05	The shortest distance from the root of the fillet weld to the face of the weld	is called			
Ans	X 1. Effective area				
	✓ 2. Effective throat thickness				
	X 3. Effective length  → The state of the				
	★ 4. Effective depth				
		Out the ID 46704007746			
		Question ID : <b>16794327716</b> Status : <b>Answered</b>			
		Chosen Option : 2			
Q.1 06	Which of these is NOT a function of check rail?				
Ans	★ 1. Protection from derailment				
	✓ 2. Protection for interlocking system of railway t	rack			
	★ 3. Protection for flange from excessive wear				
	× 4. Protection from excessive wear of rail				
		Question ID : <b>16794327663</b>			
		Status : Answered			
		Chosen Option : 2			
Q.1 07	Combined use of surface and sub-surface water in judicious manner to derive maximum ber	efit is termed as			
Ans					





Conjunctive use of water

X 2. Balanced use of water

3. Over usage of water

X 4. Effective use of water

Question ID: 16794327658

Status: Answered Chosen Option: 4

Q.1 If it is the thickness of the plate, tacking rivets should have a pitch in line NOT exceeding:

Ans

X 1. 32t or 200

✓ 2. 32t or 300

X 3. 16t or 300

X 4. 16t or 200

Question ID: 16794327720

Status: Answered

Chosen Option: 4

Q.1 A fluid in which shear stress is more than the yield value and shear stress is proportional to the rate of shear strain is

Ans X 1. Newtonian Fluid

X 2. Ideal Fluid

X 3. Real Fluid

4. Ideal Plastic Fluid

Question ID: 16794327618

Status: Answered

Chosen Option: 4

Q.1 According to Highway Research Board, into how many primary groups is soil classified into?

Ans X 1. 8 types

2. 7 types

X 3. 6 types

X 4. 10 types

Question ID: 16794327629

Status: Answered

Chosen Option: 1

, failure in a complex system occurs when the maximum Q.1 According to

strain in it reaches the value of the strain in uniaxial stress at elastic limit.

1 Maximum Principal Stress Theory

✓ 2. Maximum Strain Theory

3. Maximum Distortion Energy Theory



Maximum Shear Stress Theory

4. Maximum Shear Stress Stre



Question ID: 16794327642 Status: Answered Chosen Option: 2 Q.1 Plain cement concrete has a unit weight of: Ans X 1. 20 KN/m<sup>3</sup> ✓ 2. 24 KN/m<sup>3</sup>  $\times$  3. 18 KN/m<sup>3</sup> X 4. 26 KN/m<sup>3</sup> Question ID: 16794327729 Status: Answered Chosen Option: 2 Q.1 Thin tabular bodies of magma which essentially penetrate parallel to the bedding planes of foliations of the country 13 rocks is known as Ans 🗸 1. Sills × 2. Lopoliths X 3. Laccoliths X 4. Dykes Question ID: 16794327725 Status: Answered Chosen Option: 3 Q.1 How many major river basins does India have? Ans X 1. 13 X 2. 15 X 3. 10 **4**. 12 Question ID: 16794327661 Status: Answered Chosen Option: 4 Q.1 Pascal's Law states that \_\_\_\_\_\_, pressure at a point is equal in all directions. Ans X 1. in a turbulent flow × 2. in a laminar flow ✓ 3. in a static fluid X 4 in a liquid at rest Question ID: 16794327626 Status: Answered





		Chosen Option : 2			
Q.1 16	Which of the following method is NOT a category of tunnelling methods?				
Ans					
	✓ 2. Pressure and pump method				
	X 3. Side drift method				
	X 4. Groove method				
		Question ID : 16794327666 Status : Answered Chosen Option : 4			
Q.1 17	1 Which test is used to determine the undrained shear strength of	cohesive soil?			
Ans					
	√ 2. Vane Shear Test				
	X 3. Direct Shear Test				
	★ 4. Inter Laminar Shear Strength Test				
		Question ID : 16794327631 Status : Answered Chosen Option : 1			
Q.1 18	Piles that are used in locations where increase in the end bearing area is d	esired are called:	_		
Ans					
	× 2. Swage piles				
	<ul><li>X 3. Raymond piles</li><li>X 4. Union metal monotube piles</li></ul>				
		Question ID : <b>16794327632</b> Status : <b>Answered</b> Chosen Option : <b>4</b>			
Q.1 19		n rolled into a thread			
Ans					
	× 2. Liquid Limit				
	➤ 3. Plastic Index				
	✓ 4. Plastic Limit				
		Question ID : 16794327627 Status : Answered Chosen Option : 2			

Q.1 Plastics are examples of \_\_\_\_\_.





Ans X 1 anhydrides

√ 2. polymeric materials

X 3. ceramic materials

X 4. elastomers

Question ID: 16794327681 Status: Answered

Chosen Option: 2

Section: General Ability

Q.1 प्रकाश का परिचय देते हुए रामू ने कहा, "मेरा कोई भाई या बहन नहीं है, लेकिन प्रकाश के पिता मेरे पिता के बेटे हैं"। रामू प्रकाश से कैसे संबंधित है?

X 1. बेटा

**X** 2. चाचा

**√**3. पिता

**X** 4. भाई

Question ID: 16794327740

Status: Answered

Chosen Option: 3

Q.2 एक कक्षा में 18 लड़के हैं जो फुटबॉल के खिलाड़ी हैं। यदि ये लड़कों <mark>की संख्या</mark> के 3/4 है<mark>ं और क</mark>क्षा में लड़कों की कुल संख्या, विद्यार्थियों की कुल संख्या का 2/3 है, तो कक्षा में लड़कियों की संख्या कितनी है?

Ans

√ 1. 12

X 2. 10

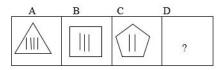
X 3. 15

X 4. 8

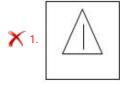
Question ID: 16794327746 Status: Answered

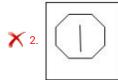
Chosen Option: 1

Q.3 Select the option that is relation to figure C in the same way was figure B is related to figure A.



Ans













Question ID: 16794327747

Status: Answered

Chosen Option: 4

Q.4 Choose the similar pair for the following:

225:16::-----

Ans 🗸 1. 196 : 15

× 2. 144 : 12

X 3. 442 : 21

X 4. 400:19

Question ID: 16794327739

Status: Answered

Chosen Option : 1

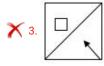
Q.5 A figure is given followed by four alternatives 1, 2, 3 and 4. Choose the alternative which most closely resembles the mirror image of the given figure.

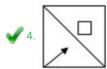


Ans









Question ID: 16794327745

Status: Answered





Select the option that will correctly replace the question mark (?) in the series.

0, 2, 6, 12, 20, 30, 42, 56, 72, ?

Ans X 1. 92

**2**. 90

X 3. 86

X 4. 82

Question ID: 16794327738

Status: Answered

Chosen Option: 2

Q.7 Four number-pairs have been given out of which three are alike in some manner, while the fourth one is different. Choose out the odd one.

Ans

√ 1. 15 – 215

× 2. 19 - 247

X 3. 17 - 221

X 4. 13 - 169

Question ID: 16794327744

Status : Answered

Chosen Option: 1

 $^{Q.8}$  If B = 3, G = 8, then LANGUAGE =?

Ans X 1. 79

X 2. 69

**3**. 76

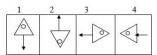
X 4. 68

Question ID: 16794327742

Status: Answered

Chosen Option: 3

Q.9 In the following problem, out of four figures marked 1, 2, 3 and 4, three are similar in a certain manner. However one figure is not like the other three. Choose the figure which is different from the rest.



Ans 🗙 1. 1

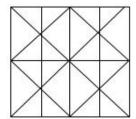
X 2. 3

X 4. 2

Question ID: 16794327741

Status: Answered

Find the minimum number of straight lines in the following figure.



Ans X 1. 20

X 2. 12

**3**. 14

X 4. 16

Question ID: 16794327743

Status: Answered

Chosen Option: 3

Q.1 If the interior angle of a regular polygon is 135°, then the number of sides of the polygon is:

Ans X 1. 7

X 2. 6

**3**. 8

X 4. 5

Question ID: 16794327756

Status: Answered

Chosen Option: 4

Which of the following ratio is the same as  $4^{3.5}$ :  $2^5$ ?

Ans X 1. 5:1

X 2. 2:1

**3**. 4:1

X 4. 7:10

Question ID: 16794327753

Status: Answered

Chosen Option: 3

Q.1 The average of 2,7,6 and x is 5 and the average of 18,1,6,x and y is 10. Then the value of y is:

Ans X 1. 30

**√** 2. 20

X 3. 10

X 4. 5

Question ID: 16794327750

Status: Answered





Q.1 The height of a right circular cone is 21 m and the radius of its base is 28 m. The total surface area of the cone is:

Ans X 1. 5445 m<sup>2</sup>

× 2. 5554 m<sup>2</sup>

X 3. 5545 m<sup>2</sup>

✓ 4. 5544 m<sup>2</sup>

Question ID: 16794327757

Status: Answered

Chosen Option: 4

 $_{5}^{Q.1}$  The sum of all the 2-digit numbers that are divisible by 3 is:

Ans

X 1. 1645

√ 2. 1665

X 3. 1655

X 4. 1675

Question ID: 16794327748

Status: Answered

Chosen Option: 1

Q.1 Suppose that the difference of two numbers is 1660. If 12.5% of one number is 7.5% of the other number, then the two numbers are: 6

Ans

1. 4150, 2490

× 2. 4250, 2490

X 3. 4350, 2490

X 4. 4150, 2390

Question ID: 16794327751

Status: Answered

Chosen Option: 1

Q.1 If 12 men work for 8 hours a day, they can make 80 chairs in 20 days. Find the number of days required for 30 men to make 120 chairs working 6 hours a day.

X 1. 8 days

2. 16 days

X 3. 20 days

X 4. 12 days

Question ID: 16794327755

Status: Answered

Chosen Option: 2

Q.1





On selling a product, a manufacturer gains 10%, the dealer gets 15% and the retail seller gets 25%. If the retail price of the product is  $\overline{\epsilon}$  12650, then the cost of production is:

Ans X 1. ₹ 9500

X 2. ₹ 9000

**√** 3. ₹ 8000

X 4. ₹ 8500

Question ID: 16794327752

Status: Answered

Chosen Option: 4

9 Suppose  $\frac{a}{b} = \frac{6}{5}$ . Then the value of  $\frac{a^2 + b^2}{a^2 - b^2}$  is:

Ans 🗹 1. 61/11

X 2. 61/21

X 3. 71/11

X 4. 51/21

Question ID: 16794327749

Status: Answered

Chosen Option: 1

Q.2 Find the number of years for which a sum of money will triple itself at 25% per annum simple interest.

Ans 🗸 1. 8

X 2. 4

X 3. 12

X 4. 2

Question ID: 16794327754

Status: Answered Chosen Option: 3

Q.2 भारतीय संविधान के अनुसार, वर्ष \_ \_ में लोक सभा और हर राज्य की विधान सभा के चुनावों के लिए मतदान 1 की उम को 21 वर्ष से घटाकर 18 वर्ष कर दिया गया।

Ans X 1. 1997

X 2. 2001

√ 3. 1988

X 4. 1984

Question ID: 16794327760

Status: Answered

Chosen Option: 3

Q.2 लॉर्ड डलहौजी किस वर्ष भारत के गवर्नर-जनरल बने?

X 1 1901

√ 2. 1848





X 3. 1945

X 4. 1864

Question ID: 16794327761

Status: Answered Chosen Option: 4

Q.2 निम्नलिखित में से किसने बास्केटबॉल में योगदान के लिए 2019 का पद्म श्री पुरस्कार जीता?

Ans

√ ¹ प्रशांति सिंह

X 2. बोम्बायला लेशराम

🗙 3. बछंद्री पाल

X 4 हरिका द्रोणावल्ली

Question ID: 16794327765

Status: Answered

Chosen Option: 1

Q.2 वित्त मंत्रालय के बयान के अनुसार, निम्नलिखित में से किस महीने का जी.एस.टी. राजस्व संग्रह एक लाख करोड़ 4 रुपए को पार कर गया?

Ans 🔀 1. अगस्त 2018

🗶 2. जुलाई 2018

**√** 3. मार्च 2019

X 4 दिसंबर 2018

Question ID: 16794327763

Status: Answered

Chosen Option: 3

Q.2 मार्च 2019 में राष्ट्रपति राम नाथ कोविंद ने \_\_\_\_\_ को देश के पहले लोकपाल के रूप में पद की शपथ दिलाई। 5

Ans 🔀 1. जस्टिस अभिलाषा कुमारी

√ 2. जस्टिस पिनाकी चंद्र घोष

🔀 ३ जस्टिस प्रदीप कुमार मोहंती

X 4 जस्टिस दिलीप बी. भोसले

Question ID: 16794327762

Status: Answered

Chosen Option: 4

Q.2 निम्नलिखित में से कौन सा व्यक्ति एक ग्रासरूट इनोवेटर है, जिसे अनार डिसीडर सहित 100 से अधिक कृषि मशीनों

6 के आविष्कार के लिए जाना जाता है?

Ans

1. उदब भारली

🗙 २ शंकरलिंगम नारायणन





X 3. रोहिणी गोडबोले

X 4. बलदेव ढिल्लों

Question ID: 16794327764

Status: Answered

Chosen Option: 4

Q.2 निम्नितिखित में से कौन सा अनुष्ठानिक/कर्म कांडी नृत्य भारत के केरल राज्य से सम्बंधित है?

🔀 1. थेरूकूठू

√ 2. मुडीयेहू

🗙 ३. यक्षागाना

X 4. भांड पाथेर

Question ID: 16794327758 Status: Answered

Chosen Option: 1

<sup>0.2</sup> निम्नलिखित में से कौन सा ऐतिहासिक स्थ<mark>ल गुज</mark>रात में स्थित है?

🗙 1. हुमायूँ का मकबरा

X 2. भीमबेटका शैलाश्रय

√ 3. रानी-की-वाव

🗙 ४ अजंता गुफाएँ

Question ID: 16794327759

Status: Answered

Chosen Option: 3

Q.2 अप्रैल 2019 में, विजया बैंक और देना बैंक का \_\_\_\_\_ के साथ विलय हो गया, जो भारत में सार्वजनिक क्षेत्र 9 के सबसे बड़े बैंक में से एक है।

Ans 🔀 1. केनरा बैंक

🗡 2. बैंक ऑफ इंडिया

X 3. भारतीय स्टेट बैंक

√ 4 बैंक ऑफ बड़ौदा

Question ID: 16794327766

Status: Answered

Chosen Option: 4

<sup>Q.3</sup> निम्न में से कौन सा तमिलनाडु का राज्य पक्षी है?

Ans **X** 1. कोयल





🗙 2. फ्लाईकैचर

🔀 ३. धनेश (हार्नबिल)

🗸 ४. पन्ना कबूतर

Question ID : 16794327767 Status : Answered Chosen Option : 3

