Telangana State Council Higher Education

Notations :

1.Options shown in green color and with ✔ icon are correct.

2.Options shown in red color and with ✖ icon are incorrect.

Question Paper Name :	Civil Engineering 24th Sept 2020 Shift 2
Subject Name :	Civil Engineering
Creation Date :	2020-09-24 17:57:42
Duration :	120
Total Marks :	120
Display Marks:	No
Share Answer Key With Delivery Engine :	Yes
Actual Answer Key :	Yes
Calculator :	None
Magnifying Glass Required? :	No
Ruler Required? :	No
Eraser Required? :	No
Scratch Pad Required? :	No
Rough Sketch/Notepad Required? :	No
Protractor Required? :	No
Show Watermark on Console? :	Yes
Highlighter :	No
Auto Save on Console? :	Yes

Civil Engineering

Group Number :	1
Group Id :	88039696
Group Maximum Duration :	0
Group Minimum Duration :	120

Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	120
Is this Group for Examiner? :	No

Mathematics

Section Id :	880396175
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	10
Number of Questions to be attempted :	10
Section Marks :	10
Display Number Panel :	Yes
Group All Questions :	Yes
Mark As Answered Required? :	Yes
Sub-Section Number :	1
Sub-Section Id :	880396175
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 88039611401 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

One of the eigen values of $\begin{pmatrix} 3 & 4 & 5 \\ 4 & 5 & 6 \\ 5 & 6 & 7 \end{pmatrix}$ is

Options :

88039645601. ✔ 0

88039645602. ✖ 1

88039645603. ✖ 2

88039645604. ✖ 3

Question Number : 2 Question Id : 88039611402 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

$$z = \cos(x - 2y) + e^{(x+2y)^2} \Rightarrow \frac{4\partial^2 z}{\partial x^2} =$$

Options :

88039645605. ✖ $\frac{\partial^2 z}{\partial y^2} + \frac{\partial z}{\partial y}$

88039645606. ✖ $\frac{\partial^2 z}{\partial y^2} - \frac{\partial z}{\partial y}$

88039645607. ✔ $\frac{\partial^2 z}{\partial y^2}$

88039645608. ✖ $\frac{1}{4}\frac{\partial^2 z}{\partial y^2}$

Question Number : 3 Question Id : 88039611403 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Minimum value of $2xy + 2yz + zx$ subject to $xyz = 4$ *is*

Options :

88039645609. ✖ 10

88039645610. ✔ 12

88039645611. ✖ 14

88039645612. ✖ 16

Question Number : 4 Question Id : 88039611404 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The critical point(s) of $f(x, y) = x^2 + y^2 + 2z^2 + z - x$ is

Options :

88039645613. ✖ $\left(-\frac{1}{2}, 0, \frac{1}{4}\right)$

88039645614. ✔ $\left(\frac{1}{2}, 0, \frac{-1}{4}\right)$

88039645615. ✖ $\left(\frac{1}{2}, 0, \frac{1}{4}\right)$

88039645616. ✖ $\left(\frac{1}{2}, 0, \frac{1}{2}\right)$

Question Number : 5 Question Id : 88039611405 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

$$\int_{-2}^{1}\int_{x^2-2}^{-x}(x-2y)\,dy\,dx =$$

Options :

88039645617. ✖ $\frac{21}{20}$

88039645618. ✖ $\frac{15}{14}$

88039645619. ✔ $\frac{27}{20}$

88039645620. ✖ $\frac{23}{20}$

Question Number : 6 Question Id : 88039611406 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Particular integral of $y'' + 4y = 4 + x^2$, then $y(x)$ *is*

Options :

88039645621. ✖ $\frac{x^2}{2}+\frac{7}{4}$

88039645622. ✖ $\frac{x^2}{2}+\frac{7}{8}$

88039645623. ✖ $\frac{x^2}{4}+\frac{7}{4}$

88039645624. ✔ $\frac{x^2}{4}+\frac{7}{8}$

Question Number : 7 Question Id : 88039611407 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Residue of $\frac{\sin^2 z}{z^3}$ at z = 0 is

Options :

88039645625. ✖ 4

88039645626. ✖ 3

88039645627. ✖ 2

88039645628. ✔ 1

Question Number : 8 Question Id : 88039611408 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Two linearly independent solutions of $xy'' + y' = 0$ *are*

Options :

88039645629. ✔ $1, \log x$

88039645630. ✖ $\frac{1}{x}, \log x$

88039645631. ✖ $x, \log x$

88039645632. ✖ $1, x \log x$

Question Number : 9 Question Id : 88039611409 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

$$\oint_{|z|=1} \frac{\sinh^2 z}{z^5} dz =$$

Options :

88039645633. ✖ $\frac{-\pi i}{3}$

88039645634. ✖ $\frac{-2\pi i}{3}$

88039645635. ✔ $\frac{2\pi i}{3}$

88039645636. ✖ $\frac{\pi i}{3}$

Question Number : 10 Question Id : 88039611410 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A natural number n is selected at random from the first 100 natural numbers. Then the probability that $n+\frac{100}{n}>50$ is

Options :

88039645637. ✖ 0.56

88039645638. ✔ 0.55

88039645639. ✖ 0.57

88039645640. ✖ 0.6

Civil Engineering

Section Id :	880396176
Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	110
Number of Questions to be attempted :	110
Section Marks :	110
Display Number Panel :	Yes
Group All Questions :	Yes
Mark As Answered Required? :	Yes
Sub-Section Number :	1
Sub-Section Id :	880396176
Question Shuffling Allowed :	Yes

Question Number : 11 Question Id : 88039611411 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question

Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which of the following scales is largest one?

Options :

88039645641. ✔ 1 cm = 50 m

88039645642. ✖ 1:42000

88039645643. ✖ R.F.= 1/300000

88039645644. ✖ 1 cm = 50 km

Question Number : 12 Question Id : 88039611412 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Contour interval is

Options :

88039645645. ✔ Inversely proportional to the scale of the map

88039645646. ✖ Directly proportional to the flatness of ground

88039645647. ✖ Larger for accurate works

88039645648. ✖ Larger if the time available is more

Question Number : 13 Question Id : 88039611413 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Basic working principle of Global Positioning System (GPS) is

Options :

88039645649. ✔ Triangulation

88039645650. ✖ Trilateration

88039645651. ✖ Traversing

88039645652. ✖ Resection

Question Number : 14 Question Id : 88039611414 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Vibratory roller can be used for compaction of

Options :

88039645653. ✔ Sandy soil

88039645654. ✖ Clayey soil

88039645655. ✖ Silty soil

88039645656. ✖ Any type of soil

Question Number : 15 Question Id : 88039611415 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In which of the following pairs both trees yield soft wood?

Options :

88039645657. ✖ Deodar and shishum

88039645658. ✖ Chir and sal

88039645659. ✖ Sal and teak

88039645660. ✔ Chir and deodar

Question Number : 16 Question Id : 88039611416 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The moisture content in a well-seasoned timber is

Options :

88039645661. ✖ 4% to 6%

88039645662. ✔ 10% to 12%

88039645663. ✖ 15% to 20%

88039645664. ✖ 25%

Question Number : 17 Question Id : 88039611417 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following is the purest form of iron?

Options :

88039645665. ✖ Cast iron

88039645666. ✔ Wrought iron

88039645667. ✖ Mild steel

88039645668. ✖ High carbon steel

Question Number : 18 Question Id : 88039611418 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In brick masonry the bond produced by laying alternate headers and stretchers in each course is known as

Options :

88039645669. ✖ English bond

88039645670. ✔ Double Flemish bond

88039645671. ✖ Zigzag bond

88039645672. ✖ Single Flemish bond

Question Number : 19 Question Id : 88039611419 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Minimum thickness of wall where single Flemish bond can be used is

Options :

88039645673. ✖ Half brick thick

88039645674. ✖ One brick thick

88039645675. ✔ One and a half bricks thick

88039645676. ✖ Two bricks thick

Question Number : 20 Question Id : 88039611420 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Doglegged stairs are

Options :

88039645677. ✔ Half turn stairs

88039645678. ✖ Quarter turn stairs

88039645679. ✖ Straight stairs

88039645680. ✖ Three quarter turn stairs

Question Number : 21 Question Id : 88039611421 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In “10 DS 20”, DS refers to

Options :

88039645681. ✖ Double shutter door

88039645682. ✔ Single shutter door

88039645683. ✖ Double shutter window

88039645684. ✖ Single shutter window

Question Number : 22 Question Id : 88039611422 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The type of window provided on the sloping side of a pitched roof is called

Options :

88039645685. ✔ Dormer window

88039645686. ✖ Gable window

88039645687. ✖ Lantern window

88039645688. ✖ Rash window

Question Number : 23 Question Id : 88039611423 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Modulus of rigidity is defined as the ratio of

Options :

88039645689. ✖ Longitudinal stress to longitudinal strain

88039645690. ✔ Shear stress to shear strain

88039645691. ✖ Stress to strain

88039645692. ✖ Stress to volumetric strain

Question Number : 24 Question Id : 88039611424 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

For an isotropic, homogeneous and elastic material obeying Hooke's law, number of independent elastic constants are

Options :

88039645693. ✔ 2

88039645694. ✖ 3

88039645695. ✖ 9

88039645696. ✖ 1

Question Number : 25 Question Id : 88039611425 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

If a material has identical properties in all directions, it is said to be

Options :

88039645697. ✖ Homogeneous

88039645698. ✔ Isotropic

88039645699. ✖ Elastic

88039645700. ✖ Orthotropic

Question Number : 26 Question Id : 88039611426 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Effective length of a weld is equal to

Options :

88039645701. ✖ Overall length – weld size

88039645702. ✖ Overall length - throat thickness

88039645703. ✔ Overall length - 2 x weld size

88039645704. ✖ Overall length – 2 x throat thickness

Question Number : 27 Question Id : 88039611427 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Effective throat thickness of a fillet weld is

Options :

88039645705. ✖ 0.707 x size of weld

88039645706. ✖ 1.414 x size of weld

88039645707. ✔ A function of the angle between fusion faces

88039645708. ✖ Equal to the side of the fillet

Question Number : 28 Question Id : 88039611428 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

When a member is subjected to axial tensile load, the greatest normal stress is equal to

Options :

88039645709. ✖ Half the maximum shear stress

88039645710. ✖ Maximum shear stress

88039645711. ✔ Twice the maximum shear stress

88039645712. ✖ One and half times the maximum shear stress

Question Number : 29 Question Id : 88039611429 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Rate of change of bending moment is equal to

Options :

88039645713. ✔ Shear force

88039645714. ✖ Deflection

88039645715. ✖ Slope

88039645716. ✖ Rate of loading

Question Number : 30 Question Id : 88039611430 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A long column has maximum crippling load when its

Options :

88039645717. ✖ Both ends are hinged

88039645718. ✔ Both ends are fixed

88039645719. ✖ One end is fixed and other end is hinged

88039645720. ✖ One end is fixed and other end is free

Question Number : 31 Question Id : 88039611431 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Two hinged arch is

Options :

88039645721. ✔ Statically indeterminate by one degrees

88039645722. ✖ Statically indeterminate by two degrees

88039645723. ✖ Statically determinate

88039645724. ✖ Unstable structure

Question Number : 32 Question Id : 88039611432 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If a shaft of diameter 'd' is subjected to a torque, 'T', the maximum shear stress is given by

Options :

88039645725. ✖ $32\ T/\pi\ d^3$

88039645726. ✖ $16\ T/\pi\ d^2$

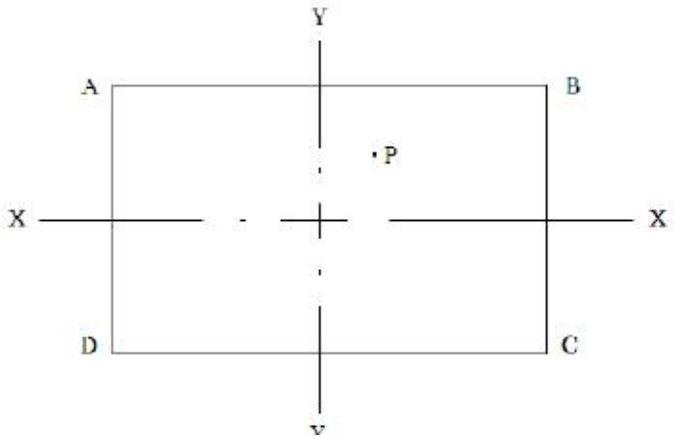
88039645727. ✔ $16\ T/\pi\ d^3$

88039645728. ✖ $64\ T/\pi\ d^4$

Question Number : 33 Question Id : 88039611433 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A masonry pier ABCD as shown in Fig. supports a vertical load 'W' at a point 'P'. The nature of bending stresses at A due to eccentricity of load about x-x axis and y-y axis are



Options :

88039645729. ✖ Compressive and compressive

88039645730. ✖ Tensile and tensile

88039645731. ✔ Compressive and tensile

88039645732. ✖ Tensile and compressive

Question Number : 34 Question Id : 88039611434 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Strain energy stored in a member within limit of proportionality is given by

Options :

88039645733. ✖ ½ x stress x volume

88039645734. ✖ ½ x strain x volume

88039645735. ✔ ½ x strain x stress x volume

88039645736. ✖ ½ x stress x strain

Question Number : 35 Question Id : 88039611435 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Impact test enables one to estimate the property of

Options :

88039645737. ✖ Hardness

88039645738. ✔ Toughness

88039645739. ✖ Strength

88039645740. ✖ Creep

Question Number : 36 Question Id : 88039611436 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If the resultant of two equal forces has the same magnitude as either of the force, then the angle between the two forces is

Options :

88039645741. ✖ 30 degrees

88039645742. ✖ 45 degrees

88039645743. ✖ 60 degrees

88039645744. ✔ 120 degrees

Question Number : 37 Question Id : 88039611437 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

What is the height of centre of gravity of a right circular solid cone of height h on the vertical axis above the base?

Options :

88039645745. ✔ h/4

88039645746. ✖ h/3

88039645747. ✖ h/2

88039645748. ✖ h/5

Question Number : 38 Question Id : 88039611438 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The number of independent equations to be satisfied for static equilibrium of a plane structure is

Options :

88039645749. ✖ 1

88039645750. ✖ 2

88039645751. ✔ 3

88039645752. ✖ 6

Question Number : 39 Question Id : 88039611439 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The moment required to rotate the near end of a prismatic beam through unit angle, without translation, the far end being fixed, is given by

Options :

88039645753. ✖ EI/L

88039645754. ✖ 2EI/L

88039645755. ✖ 3EI/L

88039645756. ✔ 4EI/L

Question Number : 40 Question Id : 88039611440 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Bending moment at any section in a conjugate beam gives _____ in the actual beam

Options :

88039645757. ✖ Slope

88039645758. ✖ Curvature

88039645759. ✔ Deflection

88039645760. ✖ Bending moment

Question Number : 41 Question Id : 88039611441 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The heaviest I-section for same depth is

Options :

88039645761. ✖ ISMB

88039645762. ✖ ISLB

88039645763. ✔ ISHB

88039645764. ✖ ISWB

Question Number : 42 Question Id : 88039611442 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Bending compressive and tensile stresses respectively are calculated based on

Options :

88039645765. ✖ Net area and gross area

88039645766. ✔ Gross area and net area

88039645767. ✖ Net area in both cases

88039645768. ✖ Gross area in both cases

Question Number : 43 Question Id : 88039611443 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Lacing bars in steel column should be designed to resist

Options :

88039645769. ✖ Bending moment due to 2.5 % of the column load

88039645770. ✔ Shear force due to 2.5 % of column load

88039645771. ✖ 2.5 % of the column load

88039645772. ✖ Bending moment and shear force due to 2.5% of column load

Question Number : 44 Question Id : 88039611444 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Minimum pitch provided in riveted steel tanks in terms of rivet diameter (d) is

Options :

88039645773. ✖ 1.5 d

88039645774. ✖ 2.0 d

88039645775. ✖ 2.5 d

88039645776. ✔ 3.0 d

Question Number : 45 Question Id : 88039611445 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Steel tanks are mainly designed for

Options :

88039645777. ✖ Weight of tank

88039645778. ✖ Wind pressure

88039645779. ✔ Water pressure

88039645780. ✖ Earthquake pressure

Question Number : 46 Question Id : 88039611446 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The property of fresh concrete, in which the water in the mix tends to rise to the surface while placing and compacting, is called

Options :

88039645781. ✖ Segregation

88039645782. ✔ Bleeding

88039645783. ✖ Bulking

88039645784. ✖ Creep

Question Number : 47 Question Id : 88039611447 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Workability of concrete is inversely proportional to

Options :

88039645785. ✔ Time of transit

88039645786. ✖ Water-cement ratio

88039645787. ✖ The air in the mix

88039645788. ✖ Size of aggregate

Question Number : 48 Question Id : 88039611448 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The compressive strength of 100 mm cube as compared to 150 mm cube is always

Options :

88039645789. ✖ Less

88039645790. ✔ More

88039645791. ✖ Equal

88039645792. ✖ Uncertain

Question Number : 49 Question Id : 88039611449 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The most commonly used admixture which prolongs the setting and hardening time is

Options :

88039645793. ✔ Gypsum

88039645794. ✖ Calcium chloride

88039645795. ✖ Sodium silicate

88039645796. ✖ Calcium Formate

Question Number : 50 Question Id : 88039611450 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Minimum percentage of reinforcement in slab is_____ for high yield strength-deformed bars or welded fabric

Options :

88039645797. ✔ 0.12 % of the area of section

88039645798. ✖ 0.15 % of the area of section

88039645799. ✖ 0.20 % of the area of section

88039645800. ✖ 0.25 % of the area of section

Question Number : 51 Question Id : 88039611451 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

According to IS : 456, slenderness ratio for a short column is

Options :

88039645801. ✔ Less than 12

88039645802. ✖ Less than 18

88039645803. ✖ Between 18 and 24

88039645804. ✖ More than 24

Question Number : 52 Question Id : 88039611452 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The minimum cover for RCC footing according IS 456:2000 is

Options :

88039645805. ✖ 15 mm

88039645806. ✖ 20 mm

88039645807. ✖ 25 mm

88039645808. ✔ 50 mm

Question Number : 53 Question Id : 88039611453 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The critical section for finding maximum bending moment for footing under masonry wall is located

Options :

88039645809. ✖ At the middle of the wall

88039645810. ✖ At the edge of the wall

88039645811. ✔ Halfway between the middle and edge of the wall

88039645812. ✖ At a distance equal to effective depth of footing from the edge of the wall

Question Number : 54 Question Id : 88039611454 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

According to IS : 456, minimum period stipulated for moist curing of concrete using ordinary Portland cement is

Options :

88039645813. ✖ 3 days

88039645814. ✔ 7 days

88039645815. ✖ 14 days

88039645816. ✖ 28 days

Question Number : 55 Question Id : 88039611455 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

An ideal fluid is

Options :

88039645817. ✖ One which obeys Newton's law of viscosity

88039645818. ✔ Frictionless and incompressible

88039645819. ✖ Highly viscous

88039645820. ✖ Frictionless and compressible

Question Number : 56 Question Id : 88039611456 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The unit of kinematic viscosity is

Options :

88039645821. ✖ $gm/cm\text{-}sec^2$

88039645822. ✖ dyne-sec/cm^2

88039645823. ✖ gm/cm^2-sec

88039645824. ✔ cm^2/sec

Question Number : 57 Question Id : 88039611457 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The total pressure normal to a plane surface inclined at an angle θ with the horizontal is equal to _____ (Where 'p' is the pressure intensity at centre of pressure and 'A' is the total area of inclined surface)

Options :

88039645825. ✔ pA

88039645826. ✖ pA sin θ

88039645827. ✖ pA cos θ

88039645828. ✖ pA tan θ

Question Number : 58 Question Id : 88039611458 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

A floating body is said to be in a state of stable equilibrium

Options :

88039645829. ✖ When its metacentric height is zero

88039645830. ✔ When the metacentre is above the centre of gravity

88039645831. ✖ When the metacentre is below the centre of gravity

88039645832. ✖ Only when its centre of gravity is below its centre of buoyancy

Question Number : 59 Question Id : 88039611459 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Centre of buoyancy always

Options :

88039645833. ✖ Coincides with the centre of gravity

88039645834. ✔ Coincides with the centroid of the displaced fluid

88039645835. ✖ Remains above the centre of gravity

88039645836. ✖ Remains below the centre of gravity

Question Number : 60 Question Id : 88039611460 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

When the velocity distribution is uniform over the cross-section, the correction factor for momentum is

Options :

88039645837. ✖ 0

88039645838. ✔ 1

88039645839. ✖ 4/3

88039645840. ✖ 2

Question Number : 61 Question Id : 88039611461 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Equation of continuity is based on the principle of conservation

Options :

88039645841. ✔ Mass

88039645842. ✖ Energy

88039645843. ✖ Momentum

88039645844. ✖ Velocity

Question Number : 62 Question Id : 88039611462 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The discharge through a v-notch varies as _____ (where 'H' is head)

Options :

88039645845. ✖ $H^{1/2}$

88039645846. ✖ $H^{3/2}$

88039645847. ✔ $H^{5/2}$

88039645848. ✖ $H^{5/4}$

Question Number : 63 Question Id : 88039611463 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The major loss of energy in long pipes is due to

Options :

88039645849. ✖ Sudden enlargement

88039645850. ✖ Sudden contraction

88039645851. ✖ Gradual enlargement or contraction

88039645852. ✔ Friction

Question Number : 64 Question Id : 88039611464 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question

Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The losses are more in

Options :

88039645853. ✖ Laminar flow

88039645854. ✖ Transition flow

88039645855. ✔ Turbulent flow

88039645856. ✖ Critical flow

Question Number : 65 Question Id : 88039611465 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The horse power transmitted through a pipe is maximum when the ratio of loss of head due to friction and total head supplied is

Options :

88039645857. ✔ 1/3

88039645858. ✖ 1/4

88039645859. ✖ 1/2

88039645860. ✖ 2/3

Question Number : 66 Question Id : 88039611466 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The chezy's coefficient

Options :

88039645861. ✖ Is dimensionless

88039645862. ✖ Has the dimension of velocity

88039645863. ✖ Has the dimension of discharge

88039645864. ✔ Has the dimension $L^{1/2}T^{-1}$

Question Number : 67 Question Id : 88039611467 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

For a trapezoidal channel section to be most economical, its hydraulic radius must be equal to _____ (where 'y' is the depth of flow)

Options :

88039645865. ✖ y/4

88039645866. ✔ y/2

88039645867. ✖ $y/2\sqrt{2}$

88039645868. ✖ $y/3\sqrt{2}$

Question Number : 68 Question Id : 88039611468 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The duty is largest

Options :

88039645869. ✖ At the head of water course

88039645870. ✔ On the field

88039645871. ✖ At the head of main canal

88039645872. ✖ Same at all places

Question Number : 69 Question Id : 88039611469 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Hydrograph is the graphical representation of

Options :

88039645873. ✔ Runoff and time

88039645874. ✖ Infiltration and time

88039645875. ✖ Ground water flow and time

88039645876. ✖ Rainfall and time

Question Number : 70 Question Id : 88039611470 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The major resisting force in a gravity dam is

Options :

88039645877. ✖ Water pressure

88039645878. ✖ Wave pressure

88039645879. ✔ Self-weight of dam

88039645880. ✖ Uplift pressure

Question Number : 71 Question Id : 88039611471 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

When the reservoir is full, the maximum compressive force in a gravity dam is produced

Options :

88039645881. ✔ At the toe

88039645882. ✖ At the heel

88039645883. ✖ Within the middle third of base

88039645884. ✖ At centre of base

Question Number : 72 Question Id : 88039611472 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

A divide wall is provided

Options :

88039645885. ✔ At right angle to the axis of weir

88039645886. ✖ Parallel to the axis of weir and upstream of it

88039645887. ✖ Parallel to the axis of weir and downstream of it

88039645888. ✖ At an inclination to the axis of weir

Question Number : 73 Question Id : 88039611473 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

As per Lacey's theory, the silt factor is

Options :

88039645889. ✖ Directly proportional to average particle size

88039645890. ✖ Inversely proportional to average particle size

88039645891. ✔ Directly proportional to square root of average particle size

88039645892. ✖ Not related to average particle size

Question Number : 74 Question Id : 88039611474 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If the R.L's of canal bed level and high flood level of a drain are 212.0 m and 210.0 m respectively, then cross drainage work will be

Options :

88039645893. ✔ Aqueduct

88039645894. ✖ Super passage

88039645895. ✖ Siphon

88039645896. ✖ Siphon aqueduct

Question Number : 75 Question Id : 88039611475 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If D is the depth of scour below original bed, then the width of launching apron is generally taken as

Options :

88039645897. ✖ 1.2 D

88039645898. ✔ 1.5 D

88039645899. ✖ 2.0 D

88039645900. ✖ 2.5 D

Question Number : 76 Question Id : 88039611476 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A hyetograph is a graphical representation of

Options :

88039645901. ✔ Rainfall intensity and time

88039645902. ✖ Rainfall depth and time

88039645903. ✖ Discharge and time

88039645904. ✖ Cumulative rainfall and time

Question Number : 77 Question Id : 88039611477 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The sequence of four stages of survey in a highway alignment is

Options :

88039645905. ✖ Reconnaissance, map study, preliminary survey and detailed survey

88039645906. ✖ Map study, preliminary survey, reconnaissance and detailed survey

88039645907. ✔ Map study, reconnaissance, preliminary survey and detailed survey

88039645908. ✖ Preliminary survey, map study, reconnaissance and detailed survey

Question Number : 78 Question Id : 88039611478 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The ruling design speed on a National highway in plain terrain as per IRC recommendation is

Options :

88039645909. ✖ 60 kmph

88039645910. ✖ 80 kmph

88039645911. ✔ 100 kmph

88039645912. ✖ 120 kmph

Question Number : 79 Question Id : 88039611479 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

On a horizontal curve if the pavement is kept horizontal across the alignment then the pressure on the outer wheels will be

Options :

88039645913. ✔ More than the pressure on inner wheels

88039645914. ✖ Less than the pressure on inner wheels

88039645915. ✖ Equal to the pressure on inner wheels

88039645916. ✖ Zero

Question Number : 80 Question Id : 88039611480 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Los Angeles testing machine is used to conduct

Options :

88039645917. ✔ Abrasion test

88039645918. ✖ Impact test

88039645919. ✖ Toughness test

88039645920. ✖ Crushing strength test

Question Number : 81 Question Id : 88039611481 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The total length of briquette specimen for ductility test of bitumen is

Options :

88039645921. ✖ 50 mm

88039645922. ✔ 75 mm

88039645923. ✖ 100 mm

88039645924. ✖ 125 mm

Question Number : 82 Question Id : 88039611482 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A plate load test was conducted in sand on a 300 mm diameter plate. If the plate settlement was 5 mm at a pressure of 100 kPa, the settlement (in mm) of a 5m × 8 m rectangular footing at the same pressure will be

Options :

88039645925. ✖ 9.4

88039645926. ✖ 18.6

88039645927. ✖ 12.7

88039645928. ✔ 17.8

Question Number : 83 Question Id : 88039611483 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The suitable surfacing material for bridge deck slabs is

Options :

88039645929. ✖ Sheet asphalt

88039645930. ✖ Bituminous carpet

88039645931. ✔ Mastic asphalt

88039645932. ✖ Rolled asphalt

Question Number : 84 Question Id : 88039611484 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The camber for cement concrete roads in the areas of heavy rainfall is

Options :

88039645933. ✔ 2 %

88039645934. ✖ 2.5 %

88039645935. ✖ 3 %

88039645936. ✖ 4 %

Question Number : 85 Question Id : 88039611485 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

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

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

Select your answer according to the coding system given below

Options :

88039645937. ✔ Both A and R are true and R is correct explanation of A

88039645938. ✖ Both A and R are true and A is correct explanation of R

88039645939. ✖ A is true but R is false

88039645940. ✖ R is true but A is false

Question Number : 86 Question Id : 88039611486 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A soil has a discharge velocity of 6×10^{-7} m/s and a void ratio of 0.5. Its seepage velocity is

Options :

88039645941. ✔ 18×10^{-7} m/s

88039645942. ✖ 12×10^{-7} m/s

88039645943. ✖ 6×10^{-7} m/s

88039645944. ✖ 3×10^{-7} m/s

Question Number : 87 Question Id : 88039611487 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The maximum permissible limit for fluoride in drinking water in the absence of alternate source is

Options :

88039645945. ✖ 0.1 mg/litre

88039645946. ✔ 1.5 mg/litre

88039645947. ✖ 5 mg/litre

88039645948. ✖ 10 mg/litre

Question Number : 88 Question Id : 88039611488 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following values of pH represents a stronger acid?

Options :

88039645949. ✔ 2

88039645950. ✖ 5

88039645951. ✖ 7

88039645952. ✖ 10

Question Number : 89 Question Id : 88039611489 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The suitable layout of distribution system for a city with roads of rectangular pattern is

Options :

88039645953. ✔ Grid iron system

88039645954. ✖ Dead end system

88039645955. ✖ Ring system

88039645956. ✖ Radial system

Question Number : 90 Question Id : 88039611490 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The type of valve which allow water to flow in one direction but prevents its flow in the reverse direction is

Options :

88039645957. ✔ Reflux valve

88039645958. ✖ Sluice valve

88039645959. ✖ Air relief valve

88039645960. ✖ Pressure relief valve

Question Number : 91 Question Id : 88039611491 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

A sewer that receives the discharge of a number of house sewers is called

Options :

88039645961. ✖ House sewer

88039645962. ✔ Lateral sewer

88039645963. ✖ Intercepting sewer

88039645964. ✖ Sub-main sewer

Question Number : 92 Question Id : 88039611492 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Standard BOD is measured at

Options :

88039645965. ✖ 20°C- 1 day

88039645966. ✖ 25°C- 3 days

88039645967. ✔ 20°C- 5 days

88039645968. ✖ 30°C- 5 days

Question Number : 93 Question Id : 88039611493 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In the design of grit chambers

Options :

88039645969. ✖ Baffles are essential

88039645970. ✖ Temperature is an important factor

88039645971. ✖ The detention period should be at least 30 minutes

88039645972. ✔ The maximum velocity of flow is 30 cm per second

Question Number : 94 Question Id : 88039611494 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

PERT technique of network analysis is mainly useful for

Options :

88039645973. ✖ Small projects

88039645974. ✖ Large and complex projects

88039645975. ✔ Research and development projects

88039645976. ✖ Deterministic activities

Question Number : 95 Question Id : 88039611495 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Select the incorrect statement

Options :

88039645977. ✖ A critical path always begins at the very first event

88039645978. ✖ A critical path always terminates at the last event

88039645979. ✖ Critical activities control the project duration

88039645980. ✔ Critical activity is the one for which free float is zero

Question Number : 96 Question Id : 88039611496 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Critical path

Options :

88039645981. ✔ Is always longest

88039645982. ✖ Is always shortest

88039645983. ✖ May be longest

88039645984. ✖ May be shortest

Question Number : 97 Question Id : 88039611497 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The time with which direct cost does not reduce with the increase in time is known as

Options :

88039645985. ✖ Crash time

88039645986. ✔ Normal time

88039645987. ✖ Optimistic time

88039645988. ✖ Pessimistic time

Question Number : 98 Question Id : 88039611498 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If the voids of a soil mass are full of air only, the soil is termed as

Options :

88039645989. ✖ Air entrained soil

88039645990. ✖ Partially saturated soil

88039645991. ✔ Dry soil

88039645992. ✖ Dehydrated soil

Question Number : 99 Question Id : 88039611499 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Voids ratio of a soil mass can

Options :

88039645993. ✖ Never be greater than unity

88039645994. ✖ Zero

88039645995. ✔ Take any value greater than zero

88039645996. ✖ Take values between 0 and 1 only

Question Number : 100 Question Id : 88039611500 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A pycnometer is used to determine

Options :

88039645997. ✖ Water content and voids ratio

88039645998. ✖ Specific gravity and dry density

88039645999. ✔ Water content and specific gravity

88039646000. ✖ Voids ratio and dry density

Question Number : 101 Question Id : 88039611501 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following soils has more plasticity index?

Options :

88039646001. ✖ Sand

88039646002. ✖ Silt

88039646003. ✔ Clay

88039646004. ✖ Gravel

Question Number : 102 Question Id : 88039611502 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

According to IS classification, the range of silt size particles is

Options :

88039646005. ✖ 4.75 mm to 2.00 mm

88039646006. ✖ 2.00 mm to 0.425 mm

88039646007. ✖ 0.425 mm to 0.075 mm

88039646008. ✔ 0.075 mm to 0.002 mm

Question Number : 103 Question Id : 88039611503 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following methods are more suitable for the determination of permeability of clayey soil

Options :

88039646009. ✖ Constant head method

88039646010. ✔ Falling head method

88039646011. ✖ Horizontal permeability test

88039646012. ✖ Constant flow rate test

Question Number : 104 Question Id : 88039611504 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The unit of the coefficient of consolidation is

Options :

88039646013. ✖ $cm^2/gram$

88039646014. ✔ cm^2/sec

88039646015. ✖ $gm/cm^2/sec$

88039646016. ✖ gm-cm/sec

Question Number : 105 Question Id : 88039611505 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The angle that Coulomb's failure envelope makes with the horizontal is called

Options :

88039646017. ✖ Cohesion

88039646018. ✔ Angle of internal friction

88039646019. ✖ Angle of repose

88039646020. ✖ Angle at 90 degrees

Question Number : 106 Question Id : 88039611506 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Sensitivity of a soil can be defined as

Options :

88039646021. ✖ Percentage of volume change of soil under saturated condition

88039646022. ✔ Ratio of unconfined compressive strength of undistributed soil to that of soil in a remolded state

88039646023. ✖ Ratio of volume of voids to volume of solids

88039646024. ✖ Ratio of volume of voids to volume of soil

Question Number : 107 Question Id : 88039611507 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question

Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The settlement of a group of friction piles as compared to that of a single pile is

Options :

88039646025. ✖ Same

88039646026. ✖ Less

88039646027. ✔ More

88039646028. ✖ Cannot be said

Question Number : 108 Question Id : 88039611508 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Lime stabilization is very effective in treating

Options :

88039646029. ✖ Sandy soil

88039646030. ✖ Silty soil

88039646031. ✖ Non- plastic soil

88039646032. ✔ Plastic clayey soil

Question Number : 109 Question Id : 88039611509 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The natural void ratio of a saturated clay strata, 3 m thick is 0.90. The final void ratio of the clay at the end of consolidation is expected to be 0.71. The total consolidation settlement of the clay strata is

Options :

88039646033. ✔ 30 cm

88039646034. ✖ 25 cm

88039646035. ✖ 20 cm

88039646036. ✖ 15 cm

Question Number : 110 Question Id : 88039611510 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A flow net is constructed to determine the seepage through an earth dam which is homogenous but anisotropic, gave four flow channels and sixteen equipotential drops. The coefficient of permeability in the horizontal and vertical directions is 4.0×10^{-7} m/s and 1×10^{-7} m/s respectively. If the storage head was 20 m, then the seepage per unit length of dam (in m^3/s) would be

Options :

88039646037. ✖ 5×10^{-7}

88039646038. ✔ 10×10^{-7}

88039646039. ✖ 15×10^{-7}

88039646040. ✖ 20×10^{-7}

Question Number : 111 Question Id : 88039611511 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The gross bearing capacity of a footing is 450 kN/m^2. If the footing is 1.5 m wide and is at a depth of 1 m in a clayey soil which has a unit weight of 20 kN/m^3, then the net bearing capacity is

Options :

88039646041. ✖ 410 kN/m^2

88039646042. ✖ 420 kN/m^2

88039646043. ✔ 430 kN/m^2

88039646044. ✖ 440 kN/m^2

Question Number : 112 Question Id : 88039611512 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The observations made over the same area on different dates to monitor ground features like crop growth is called as

Options :

88039646045. ✔ Temporal resolution

88039646046. ✖ Radiometric resolution

88039646047. ✖ Spatial resolution

88039646048. ✖ Spectral resolution

Question Number : 113 Question Id : 88039611513 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which one of the following traffic survey schemes is most relevant when deciding on locating major routes in a city?

Options :

88039646049. ✖ Traffic volume survey

88039646050. ✔ Origin and destination survey

88039646051. ✖ Speed survey

88039646052. ✖ Traffic capacity survey

Question Number : 114 Question Id : 88039611514 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A mild steel rod tapers uniformly from 30 mm diameter to 12 mm diameter in a length of 300 mm. The rod is subjected to an axial load of 12 kN, E = 2 X 10^5 N/mm^2. What is the extension of the rod in mm?

Options :

88039646053. ✖ $4\pi/5$

88039646054. ✖ $2/(5\pi)$

88039646055. ✖ $\pi/5$

88039646056. ✔ $1/(5\pi)$

Question Number : 115 Question Id : 88039611515 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

For a material having modulus of elasticity equal to 208 GPa and Poisson's ratio equal to 0.3, what is the modulus of rigidity?

Options :

88039646057. ✖ 74 GPa

88039646058. ✔ 80 GPa

88039646059. ✖ 100 GPa

88039646060. ✖ 128.5 GPa

Question Number : 116 Question Id : 88039611516 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A fixed end beam of uniform cross section is loaded uniformly throughout the span.

What is the proportion of the bending moment at the center to the end moment

considering only elastic conditions?

Options :

88039646061. ✖ 1 : 1

88039646062. ✔ 1 : 2

88039646063. ✖ 1 : 4

88039646064. ✖ 2 : 3

Question Number : 117 Question Id : 88039611517 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Consider the following statements :

I. Shear stress is maximum at center line

II. Maximum velocity is 3/2 times the average velocity

III. Discharge varies inversely with the coefficient of viscosity

IV. Reynolds Number is less than 3000

Which of the above statements are correct in connection with a steady laminar flow through a circular pipe?

Options :

88039646065. ✖ I, III and IV

88039646066. ✔ III and IV only

88039646067. ✖ I and III only

88039646068. ✖ II and IV only

Question Number : 118 Question Id : 88039611518 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The initial setting time of cement depends mostly on

Options :

88039646069. ✔ Tricalcium aluminate

88039646070. ✖ Tricalcium silicate

88039646071. ✖ Tricalcium aluminoferrite

88039646072. ✖ Dicalcium silicate

Question Number : 119 Question Id : 88039611519 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

If an element of a stressed body is in a state of pure shear with a magnitude of 80 N/mm^2. The magnitude of maximum principal stress at that location is

Options :

88039646073. ✔ 80 N/mm^2

88039646074. ✖ 113.14 N/mm^2

88039646075. ✖ 120 N/mm^2

88039646076. ✖ 56.57 N/mm^2

Question Number : 120 Question Id : 88039611520 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

A retaining wall retains a sand stratum with $\phi = 30^0$ up to its top. If a uniform surcharge of 12 t/m^2 is subsequently put on the sand strata, then the increase in the active lateral earth pressure intensity on the retaining wall will be

Options :

88039646077. ✖ $1\ t/m^2$

88039646078. ✖ $2\ t/m^2$

88039646079. ✔ $4\ t/m^2$

88039646080. ✖ $8\ t/m^2$