TSPSC
AE & JTO

Previous Year Paper
(GS & GA)
26 Oct, 2023 Shift 1

Print

TCSiON CAE

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 :	PC22162 CIVIL ENGINEERING AE2216 18th Oct 23 S2
Subject Name :	PC22162 CIVIL ENGINEERING AE2216
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
Change Font Color :	No
Change Background Color :	No
Change Theme :	No
Help Button :	No
Show Reports :	No
Show Progress Bar :	No
Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No

CIVIL ENGINEERING

Section type :	Online
Section Negative Marks :	0
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Is Section Default? :	null

Question Number : 1 Question Id : 630680408420 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000

SOW No	PROJECT_NoW_0000

Which of the following is the correct feature of geostationary satellites?

Options :

1. ✖ These have same distance from the Earth's center.

2. ✔ These have same speed as the Earth's rotation.

3. ✖ These have same mass as global weight.

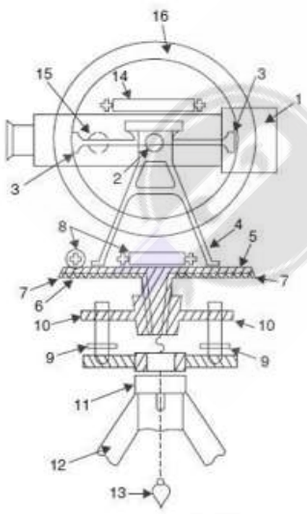
4. ✖ These have same angle with geodetic stations.

Hints :
Civil_Set 1A

Question Number : 2 Question Id : 630680408421 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Which of the following part of a Vernier theodolite is represented by the part 10 as shown in the given figure?



Options :

1. ✖ Lower plate

2. ✖ Vertical circle

3. ✔ Levelling head

4. ✖ Plate level

Hints :
Civil_Set 1A

Question Number : 3 Question Id : 630680408422 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Calculate the magnetic declination at a place if the magnetic bearing of the sun at noon is 187°.

Options :

1. ✔ 7° W

2. ✖ 7°N

3. ✖ 7°E

4. ✖ 7°S

Hints :
Civil_Set 1A

Question Number : 4 Question Id : 630680408423 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Which of the following rules related to 'scale' is True or False?

Rule 1: Choose a scale large enough, so that in plotting or in scaling distances from the finished map, it will not be necessary to read the scale closer than 1/100.

Rule 2: Choose as small a scale as is consistent with a clear delineation of the smallest detail to be plotted, due regard being paid to rule 1.

Options :

1. ✖ Rule 1 is True and Rule 2 is False

2. ✖ Rule 1 is False and Rule 2 is True

3. ✔ Both Rule 1 & Rule 2 are True

4. ✖ Both Rule 1 & Rule 2 are False

Hints :
Civil_Set 1A

Question Number : 5 Question Id : 630680408424 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Which of the following statement(s) is/are incorrect about characteristics of contour lines?

(i) Irregular contours represent uneven ground.

(ii) A contour line must close onto itself, not necessarily within the limits of a map.

(iii) Equally spaced concentric contour lines represent an overhanging cliff.

Options :

1. ✖ Only (i)

2. ✖ Only (ii)

3. ✔ Only (iii)

4. ✖ (i) and (ii) only

Hints :
Civil_Set 1A

Question Number : 6 Question Id : 630680408425 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Arrange the following length measurements in the increasing order.

A. One Mile length

B. One Gunter chain length

C. One Furlong length

D. One Revenue chain length

Options :

1. ✖ A, B, C, D

2. ✔ D, B, C, A

3. ✖ D, C, B, A

4. ✖ C, A, B, D

Hints :

Civil_Set 1A

Question Number : 7 Question Id : 630680408426 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Which of the following is the correct chronological order (from the earliest to the latest) of temporary adjustments for Levelling Instrument?

P. Elimination of Parallax

Q. Setting up the level

R. Levelling up

Options :

1. ✔ Q, R, P

2. ✖ R, Q, P

3. ✖ P, Q, R

4. ✖ Q, P, R

Hints :
Civil_Set 1A

Question Number : 8 Question Id : 630680408427 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

What is the maximum limit of cold water absorption for Common Burnt Clay Bricks of Class Designation 30, according to IS 1077: 1992?

Options :

1. ✖ 20%

2. ✖ 10%

3. ✔ 15%

4. ✖ 25%

Hints :
Civil_Set 1A

Question Number : 9 Question Id : 630680408428 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Which of the following statement is/are correct or incorrect related to determination of compressive strength of Ordinary Portland cement according to IS: 4031 (Part 6) – 1988?

Statements:

1. The side of the cubical testing mould is 50.6 mm.
2. The curing temperature in water should be 27± 2 °C.

Options :

1. ✖ Both statements are correct
2. ✔ Statement 1 is incorrect and statement 2 is correct
3. ✖ Both statements are incorrect
4. ✖ Statement 1 is correct and statement 2 is incorrect

Hints :
Civil_Set 1A

Question Number : 10 Question Id : 630680408429 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Arrange the given manufacturing steps of Encaustic tiles in the chronological order (from the earliest to the latest).

A. The maker's name is stamped on the back.

B. The coarser clay body is put on the back of the face and also a thin coat to form the back.

C. The face is moulded to the desired pattern.

D. A few holes are kept for joining with cement during laying.

Options :

1. ✖ D, B, C, A

2. ✖ A, B, C, D

3. ✖ B, C, D, A

4. ✔ C, B, A, D

Hints :
Civil_Set 1A

Question Number : 11 Question Id : 630680408430 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Which of the following statements is/are correct with respect to Good Timber?

Statements:

(i) The well-seasoned timber with high weight is considered to be sound and strong.

(ii) A good timber should have high water permeability.

(iii) A dull heavy sound, when struck, indicates decayed timber.

Options :

1. ✖ (i) and (ii) only

2. ✖ Only (ii)

3. ✖ Only (iii)

4. ✔ (i) and (iii) only

Hints :
Civil_Set 1A

Question Number : 12 Question Id : 630680408431 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

As per IS 1141: 1993 and for the purpose of seasoning, 'Highly Refractory' timbers are classified as _____ depending upon their behaviour with respect to cracking and splitting, and drying rate.

Options :

1. ✖ Class D

2. ✖ Class C

3. ✔ Class A

4. ✖ Class B

Hints :
Civil_Set 1A

Question Number : 13 Question Id : 630680408432 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Which of the following types of plaster is used in X-Ray rooms as the final coat?

Options :

1. ✖ Acoustic Plaster

2. ✖ Asbestos-Marble Plaster

3. ✔ Barium Plaster

4. ✖ Granite Silicon Plaster

Hints :
Civil_Set 1A

Question Number : 14 Question Id : 630680408433 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

According to National Building Code (NBC) 2016 Part 6 Section 2, for general guidance, what will be the correct depth of exploration (D) at the start of the work if the type of foundation is Raft?

Options :

1. ✖ 2 m below ground level or equal to the height of the fill, whichever is greater

2. ✖ Equal to the bottom width of the cut

3. ✖ One and half times the Length (L) of footing

4. ✔ One and a half times the width (B)

Hints :
Civil_Set 1A

Question Number : 15 Question Id : 630680408434 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma

Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Arrange the following parts of the well foundation in sequential order from bottom to top.

A. Steining

B. Well Cap

C. Well Curb

D. Cutting Edge

Options :

1. ✖ A, D, C, B

2. ✖ D, C, B, A

3. ✖ A, B, C, D

4. ✔ D, C, A, B

Hints :
Civil_Set 1A

Question Number : 16 Question Id : 630680408435 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

How much area should be increased for color washing of corrugated steel sheet?

Options :

1. ✖ 25%

2. ✔ 14%

3. ✖ 50%

4. ✖ 35%

Hints :
Civil_Set 1A

Question Number : 17 Question Id : 630680408436 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Estimate the cost of brickwork required in a wall 4m long, 3m high, and 150mm thick and the rate of brickwork is ₹400 per cum. No Deduction shall be done.

Options :

1. ✔ ₹720

2. ✖ ₹840

3. ✖ ₹960

4. ✖ ₹480

Hints :

Civil_Set 1A

Question Number : 18 Question Id : 630680408437 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

According to IS: 1200 (Part V), identify whether the given statements related to estimation of formwork in RCC are correct or incorrect.

Statements:

1. No deduction shall be made for ventilators having an opening of 1.5 m^2 area.
2. Circular cutting and rounded edges shall be measured in running metres.

Options :

1. ✖ Statement 1 is correct and Statement 2 is incorrect

2. ✔ Statement 1 is incorrect and Statement 2 is correct

3. ✖ Both Statements 1 and 2 are correct

4. ✖ Both Statements 1 and 2 are incorrect

Hints :
Civil_Set 1A

Question Number : 19 Question Id : 630680408438 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Which of the following statement(s) is/are correct about the lead & lift in Estimation?

Statements:

1. The unit of lead is 50m for a distance up to 500m.
2. Lift shall be measured from ground level.
3. The unit of lead is 500m for a distance exceeding 500m up to 5 km.

Options :

1. ✖ 1 and 2 Only

2. ✖ 2 and 3 Only

3. ✔ All Statements 1, 2 and 3

4. ✖ 1 and 3 Only

Hints :
Civil_Set 1A

Question Number : 20 Question Id : 630680408439 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value

Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Match the items under List 1 (Description of Item) with those under List 2 (Unit of Measurement) in Estimating and Costing and choose the correct option.

List 1 (Description of Item)	List 2 (Unit of Measurement)
P. Earthwork	1. Running meter
Q. Clean of Shrubs, Brushwood and small tree	2. Quintal
R. Expansion Joint work in Concrete	3. Square meter
S. Reinforcement	4. Cubic meter

Options :

1. ✖ P – 4, Q – 1, R – 2, S – 3

2. ✖ P – 2, Q – 4, R – 1, S – 3

3. ✖ P – 3, Q – 1, R – 4, S – 2

4. ✔ P – 4, Q – 3, R – 1, S – 2

Hints :
Civil_Set 1A

Question Number : 21 Question Id : 630680408440 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

What will be the specific weight of one litre of liquid which has a weight of 9.81 N?

Options :

1. ✖ 1000 N/m^3

2. ✖ $981\ N/m^3$

3. ✖ $0.00981\ N/m^3$

4. ✔ $9810\ N/m^3$

Hints :
Civil_Set 1A

Question Number : 22 Question Id : 630680408441 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Identify the correct ratio of the loss of head at the entrance of a pipe (h_i) to the Loss of head at the exit of pipe (h_o).

Options :

1. ✖ Ratio = 0.25

2. ✔ Ratio = 0.5

3. ✖ Ratio = 2

4. ✖ Ratio = 4

Hints :
Civil_Set 1A

Question Number : 23 Question Id : 630680408442 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Calculate the corresponding height of fluid (oil) of specific gravity of 0.9, if the pressure intensity at a point in a fluid is given as 3.6 N/cm^2. Take g = 10 m/s^2.

Options :

1. ✖ 0.9 m of oil

2. ✖ 3.6 m of oil

3. ✔ 4 m of oil

4. ✖ 10 m of oil

Hints :
Civil_Set 1A

Question Number : 24 Question Id : 630680408443 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Calculate the theoretical discharge of a single acting reciprocating pump which has a stroke length of 350 mm. The radius of the plunger is 125 mm and the speed of the pump is one revolution per second.

Options :

1. ✔ $\frac{35\pi}{6400}\ m^3/s$

2. ✖ $\frac{35}{6400\pi}m^3/s$

3. ✖ $\frac{35}{640\pi}m^3/s$

4. ✖ $\frac{35\pi}{640}m^3/s$

Hints :
Civil_Set 1A

Question Number : 25 Question Id : 630680408444 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value

Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Identify whether the given statements related to pressure measurement are correct or incorrect.

Statements:

1. Absolute Pressure is equal to sum of atmospheric pressure and gauge pressure.
2. The atmospheric pressure at sea level and at 15°C is equal to 1.033 kN/m^2.

Options :

1. ✔ Statement 1 is correct and Statement 2 is incorrect
2. ✖ Statement 1 is incorrect and Statement 2 is correct
3. ✖ Both Statements 1 and 2 are correct
4. ✖ Both Statements 1 and 2 are incorrect

Hints :
Civil_Set 1A

Question Number : 26 Question Id : 630680408445 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Which of the following is the mismatched pair of 'type of flow' for the given value of 'Reynold's Number'?

Options :

1. ✖ Laminar Flow in pipe = 1000
2. ✔ Laminar Flow in open channel = 2000
3. ✖ Turbulent Flow in open channel = 3500

4. ✖ Turbulent Flow in pipe = 5000

Hints :
Civil_Set 1A

Question Number : 27 Question Id : 630680408446 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Which of the following is the correct chronological order/sequence of the arrangement of parts for the lifting of water by reciprocating pump from bottom to top?

A. Suction Valve

B. Delivery Valve

C. Suction Pipe

D. Delivery Pipe

Options :

1. ✔ C, A, B, D

2. ✖ D, C, B, A

3. ✖ B, D, A, C

4. ✖ C, D, B, A

Hints :
Civil_Set 1A

Question Number : 28 Question Id : 630680408447 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium

Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Identify the correct IRC Code which is referred for the guidelines for the Road Signs?

Options :

1. ✖ IRC: 56

2. ✖ IRC: 37

3. ✔ IRC: 67

4. ✖ IRC: 35

Hints :
Civil_Set 1A

Question Number : 29 Question Id : 630680408448 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Which of the following intersection is represented by the given figure?

Options :

1. ✖ Tee Partial Channelization

2. ✔ Skew Partial Channelization

3. ✖ Staggered Channelization

4. ✖ Tee Complete Channelization

Hints :
Civil_Set 1A

Question Number : 30 Question Id : 630680408449 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

In a district with heavy rainfall, WBM (Water Bound Macadam) of a major district road of 6.6 m width, is planned to be constructed. What should be the height of the crown with respect to the edge? Take Camber = 1 in 33

Options :

1. ✖ 0.19 m

2. ✖ 0.035 m

3. ✖ 0.058 m

4. ✔ 0.1 m

Hints :

Civil_Set 1A

Question Number : 31 Question Id : 630680408450 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Consider the following statements related to geometric design of highways and choose the correct option.

Statements:

1. As a compromise and from practical considerations, it is suggested that the super-elevation should be provided to fully counteract the centrifugal force due to 95% of the design speed.

2. The ratio of the centrifugal force to the weight of the vehicle is known as centrifugal ratio.

Options :

1. ✖ Statement 1 is correct and statement 2 is incorrect

2. ✔ Statement 1 is incorrect and statement 2 is correct

3. ✖ Both Statement 1 & 2 are correct

4. ✖ Both Statement 1 & 2 are incorrect

Hints :
Civil_Set 1A

Question Number : 32 Question Id : 630680408451 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Identify the type of soil which effervesce when tested with weak hydrochloric acid.

Options :

1. ✖ Expansive Clay

2. ✖ Bentonite

3. ✖ Diatomaceous Earth

4. ✔ Calcareous Soil

Hints :
Civil_Set 1A

Question Number : 33 Question Id : 630680408452 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1

Vendor Code	000000
SOW No	PROJECT_NoW_0000

Choose the most relevant consistency type for the soil with following description:

1. Consistency Index= 1.27
2. Unconfined compressive strength= 450 kN/m^2.

Options :

1. ✖ Stiff
2. ✖ Medium
3. ✔ Hard
4. ✖ Soft

Hints :
Civil_Set 1A

Question Number : 34 Question Id : 630680408453 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Identify weather the following statements are correct or incorrect with respect to compaction of soil.

Statements:

1. The heavier compaction decreases the maximum dry density of the soil but increases the optimum water content.
2. In compaction curve, 10% air content line and 90% saturation line are identical.

Options :

1. ✖ Statement 1 is correct and statement 2 is incorrect
2. ✔ Statement 1 is incorrect and statement 2 is correct
3. ✖ Both Statement 1 & 2 are correct
4. ✖ Both Statement 1 & 2 are incorrect

Hints :
Civil_Set 1A

Question Number : 35 Question Id : 630680408454 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Choose the correct statement(s) related to ultimate bearing capacity of a strip footing on cohesive soils.

(i) It remains constant with increase in width of footing.

(ii) It increases with increase in width of footing.

(iii) It decreases with increase in width of footing.

Options :

1. ✔ Only (i)

2. ✖ Both (i) and (ii)

3. ✖ Only (iii)

4. ✖ Both (i) and (iii)

Hints :

Civil_Set 1A

Question Number : 36 Question Id : 630680408455 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Match the items under List 1 (Group Symbol) with those under List 2 (Typical Name) in Indian Standard Classification system and choose the correct option.

List 1(Group Symbol)	List 2 (Typical Name)
P. ML	1. Inorganic Clay of high plasticity
Q. OL	2. Inorganic Silts with none to low plasticity.
R. CH	3. Peat and Other highly organic soils
S. Pt	4. Organic Silts of low plasticity

Options :

1. ✖ P – 4, Q – 1, R – 2, S – 3

2. ✔ P – 2, Q – 4, R – 1, S – 3

3. ✖ P – 3, Q – 1, R – 4, S – 2

4. ✖ P – 4, Q – 3, R – 1, S – 2

Hints :
Civil_Set 1A

Question Number : 37 Question Id : 630680408456 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Which of the following is the correctly matched pair of type of soil and its range of coefficient of permeability (mm/sec)?

Options :

1. ✖ Clean Gravel – 10^{-4} to 10^{-2}

2. ✖ Fine Sand – 10^{2} to 10^{4}

3. ✔ Dense Silt – 10^{-5} to 10^{-4}

4. ✖ Silty Clay – 10^{-2} to 10^{+1}

Hints :

Civil_Set 1A

Question Number : 38 Question Id : 630680408457 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Arrange the following types of soil/rock in decreasing order of their safe bearing capacity.

A. Compact and Dry medium sand

B. Laminated Rock

C. Hard or Stiff Clay

D. Residual Deposits of Shattered and broken rocks

Options :

1. ✖ B, A, C, D

2. ✖ D, C, B, A

3. ✖ D, A, C, B

4. ✔ B, D, C, A

Hints :

Civil_Set 1A

Question Number : 39 Question Id : 630680408458 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

A RCC continuous beam has 2.5 m of effective span. The beam will be deemed to be a deep beam if _____.

Options :

1. ✖ The overall depth of beam is equal to 750 mm

2. ✖ The overall depth of beam is equal to 500 mm

3. ✖ The effective depth of beam is equal to 600 mm

4. ✔ The overall depth of beam is equal to 1200 mm

Hints :
Civil_Set 1A

Question Number : 40 Question Id : 630680408459 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Which of the following is/are the disadvantage(s) of the Working Stress Method in RCC Design?

1. The working stress method fails to discriminate between different types of load that act simultaneously but have different uncertainties.

2. The actual factor of safety is not known in this method of design.

Options :

1. ✖ Statement 1 is correct and statement 2 is incorrect

2. ✖ Statement 1 is incorrect and statement 2 is correct

3. ✔ Both Statement 1 & 2 are correct

4. ✖ Both Statement 1 & 2 are incorrect

Hints :
Civil_Set 1A

Question Number : 41 Question Id : 630680408460 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value

Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

According to IS : 456 – 2000, in limit state method of design of RCC structures, which of the following is the mismatched pair of environmental conditions & minimum grade of reinforced concrete required?

Options :

1. ✖ Very Severe – M35

2. ✔ Mild – M15

3. ✖ Extreme – M40

4. ✖ Moderate – M25

Hints :
Civil_Set 1A

Question Number : 42 Question Id : 630680408461 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Arrange the following in the increasing order of their striking/removal period of formwork for different elements of RCC structures.

A. Props to beam spanning over 6m.

B. Vertical formwork to walls.

C. Props to slabs spanning over 4.5m.

D. Soffit formwork to slabs (props to be re-fixed immediately after removal of formwork)

Options :

1. ✖ B, A, C, D

2. ✖ D, C, B, A

3. ✖ D, A, C, B

4. ✔ B, D, C, A

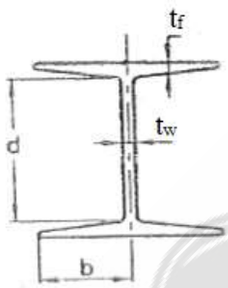
Hints :
Civil_Set 1A

Question Number : 43 Question Id : 630680408462 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

For outstanding element of compression flange of Rolled Steel I-Section, if b/t_f is $< 9.4\varepsilon$, then section is classified as –

{Where, $\varepsilon = (250/fy)^{1/2}$}



Options :

1. ✖ Compact

2. ✖ Semi-Compact

3. ✔ Plastic

4. ✖ Slender

Hints :
Civil_Set 1A

Question Number : 44 Question Id : 630680408463 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

In which of the following situation, the spot welding is used?

Options :

1. ✔ when two plates are placed one below the other

2. ✖ when two plates are placed one butting against the other

3. ✖ when two plates are placed one next to other

4. ✖ when two plates are placed at right angles to each other

Hints :
Civil_Set 1A

Question Number : 45 Question Id : 630680408464 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Consider the following statements related to steel built-up column design according to IS 800: 2007, and choose the correct option.

Statements:

1. In bolted/riveted construction, the effective length of lacing bars for the determination of the design strength shall be taken as the length between the inner end fastener of the bars for single lacing system.

2. In bolted/riveted construction, the minimum width of lacing bars shall be five times the nominal diameter of the end bolt/rivet.

Options :

1. ✖ Both statements are true.

2. ✖ Statement 1 is false and statement 2 is true.

3. ✖ Both statements are false.

4. ✔ Statement 2 is false and statement 1 is true.

Hints :
Civil_Set 1A

Question Number : 46 Question Id : 630680408465 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Which of the following statements is INCORRECT with respect to the design of steel roof trusses?

Statements:

1. If the roof slope is 20°, the snow load may be neglected.
2. One of the most critical load on an industrial steel building is the wind load.
3. The dead loads of the truss include the dead load of roofing materials, purlins, trusses and bracing system.

Options :

1. ✔ Only 1

2. ✖ Only 2

3. ✖ Only 3

4. ✖ Both 2 & 3

Hints :
Civil_Set 1A

Question Number : 47 Question Id : 630680408466 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD

Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

According to IS : 800 – 2007, which of the following is the correctly matched pair of 'thickness of thicker plate' and 'minimum size of fillet weld'?

Options :

1. ✖ 0 mm to 10mm – 2mm

2. ✖ 11 mm to 20mm – 4mm

3. ✔ 21 mm to 32mm – 6mm

4. ✖ 33 mm to 50mm – 12mm

Hints :
Civil_Set 1A

Question Number : 48 Question Id : 630680408467 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Identify the INCORRECT method for reclamation of uncultivable agriculture land due to waterlogging and salinity.

Options :

1. ✖ Leaching

2. ✔ Application of 1 to 5 percent solution of sodium chloride chemical

3. ✖ Adopting rice cultivation

4. ✖ Drainage and lowering of water table

Hints :
Civil_Set 1A

Question Number : 49 Question Id : 630680408468 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Which of the following does represent the irrigating capacity of a unit quantity of water?

Options :

1. ✖ Base Period

2. ✖ Field Capacity

3. ✖ Delta

4. ✔ Duty

Hints :

Civil_Set 1A

Question Number : 50 Question Id : 630680408469 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

A crop requires a total depth of 100 cm of water for a base period of 200 days, determine the duty of irrigating water.

Options :

1. ✖ 17.28 hectares/cumec

2. ✖ 14.32 hectares/cumec

3. ✔ 1728 hectares/cumec

4. ✖ 1432 hectares/cumec

Hints :
Civil_Set 1A

Question Number : 51 Question Id : 630680408470 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Which of the following is/are the correct remedies to prevent the rupture of weir floor due to suction caused by standing wave?

Statements:

1. Providing additional thickness of floor to counterbalance the extra pressure due to the standing wave.
2. Constructing the floor thickness in one concrete mass instead of masonry layers.

Options :

1. ✔ Both statements are correct.
2. ✖ Statement 1 is incorrect and statement 2 is correct.
3. ✖ Both statements are incorrect.
4. ✖ Statement 2 is incorrect and statement 1 is correct.

Hints :
Civil_Set 1A

Question Number : 52 Question Id : 630680408471 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1

Vendor Code	000000
SOW No	PROJECT_NoW_0000

Which of the following is/are the disadvantage(s) of Tipping Bucket Rain Gauge?

Statements:

1. The Tipping Bucket Rain Gauge is most suitable for measuring snow.
2. The Tipping Bucket Rain Gauge does not give accurate results in the case of intense rainfall because some of the rain, which falls during the period when the bucket is emptying, is not measured.
3. The record consists of a series of steps and not a conventional smooth mass curve required for precipitation analysis.

Options :

1. ✖ Only 1
2. ✖ Only 2
3. ✖ Only 3
4. ✔ 2 and 3 only

Hints :
Civil_Set 1A

Question Number : 53 Question Id : 630680408472 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Arrange the following steps for design of flood control project in the correct chronological order (from the earliest to the latest).

A. Select the flood control measure or a combination of measures which offers the desired protection at a minimum cost.

B. Perform the economic analysis of the benefits and costs to determine whether the selected project is economical viable.

C. Estimate the project design flood and determine the flood characteristics of the given area.

D. Design the flood control works for different alternatives of flood control measures so that the cost estimates may be made and their effects on the flood discharge may be estimated.

Options :

1. ✖ A, B, C, D

2. ✔ C, D, A, B

3. ✖ D, C, A, B

4. ✖ B, A, C, D

Hints :
Civil_Set 1A

Question Number : 54 Question Id : 630680408473 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Match the items under List 1 (Basis of Classification of Canal) with those under List 2 (Type/Name of Canal) in Classification of Canals and choose the correct option.

List 1(Basis of Classification of Canal)	List 2 (Type/Name of Canal)
P. Canal Alignment	1. Navigation Canal
Q. Functions of the canal	2. Alluvial Canal
R. Discharge & its relative importance	3. Ridge Canal
S. Boundary surface of the canal	4. Branch Canal

Options :

1. ✖ P - 4, Q - 1, R - 2, S - 3

2. ✖ P - 2, Q - 4, R - 1, S - 3

3. ✔ P - 3, Q - 1, R - 4, S - 2

4. ✖ P - 4, Q - 3, R - 1, S - 2

Hints :
Civil_Set 1A

Question Number : 55 Question Id : 630680408474 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

According to IS 10500: 2012, in absence of an alternate source, how much is the maximum permissible limit of 'colour', for drinking water, provided that toxic substances are not suspected in the available water source?

Options :

1. ✖ 5 Hazen units

2. ✖ 5 NTU units

3. ✖ 15 NTU units

4. ✔ 15 Hazen units

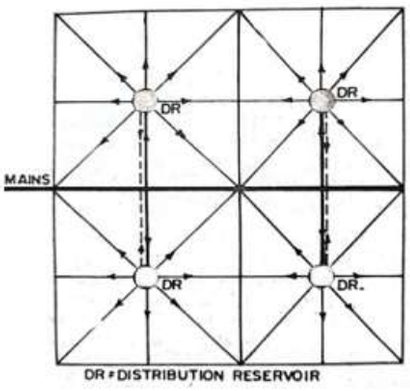
Hints :
Civil_Set 1A

Question Number : 56 Question Id : 630680408475 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1

Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Identify the name of the layout of water distribution system given in the figure.



Options :

1. ✖ Tree system

2. ✔ Radial system

3. ✖ Ring system

4. ✖ Circular system

Hints :
Civil_Set 1A

Question Number : 57 Question Id : 630680408476 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Which of the following is the correct formula to estimate the annual volume (cum) required for a landfill? {where, P = Population, m = average mass(kg) of solid waste collected per person per year, V = annual volume, ρ = compacted fill density (kg/m^3) }

Options :

1. ✔ $\frac{Pm}{\rho}$

2. ✖ Pm_ρ

3. ✖ $\frac{P\rho}{m}$

4. ✖ $\frac{P}{m\rho}$

Hints :
Civil_Set 1A

Question Number : 58 Question Id : 630680408477 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Read the following statements regarding drinking water parameters and choose the correct option.

Statements:

1. When protection against viral infection is required, concentration of free residual chlorine should be minimum 0.5 mg/l in the drinking water.
2. The maximum limit of Sulphate (as SO_4) may be extended (in absence of alternate source) to 400 mg/l, only if the Magnesium does not exceed 30mg/l, in the drinking water.

Options :

1. ✖ Both statements are incorrect.

2. ✖ Statement 1 is correct and statement 2 is incorrect.

3. ✔ Both statements are correct.

4. ✖ Statement 1 is incorrect and statement 2 is correct.

Hints :
Civil_Set 1A

Question Number : 59 Question Id : 630680408478 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value

Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Arrange the following Air Pollution Control Devices in their increasing order of efficiency.

A. Fabric Filter

B. Electrostatic Precipitator

C. Wet Scrubber

D. Gravitational Settling Chamber

Options :

1. ✖ B, D, C, A

2. ✖ C, A, D, B

3. ✖ A, B, C, D

4. ✔ D, C, B, A

Hints :
Civil_Set 1A

Question Number : 60 Question Id : 630680408479 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

For areas of moderate sizes, such as involved for branch sewers, the maximum daily sewage flows can be expressed as_____ .

Options :

1. ✔ 2 × average daily flow

2. ✖ 4 × average daily flow

3. ✖ 0.5 × average daily flow

4. ✖ 6 × average daily flow

Hints :
Civil_Set 1A

Question Number : 61 Question Id : 630680408480 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Choose the most appropriate range of the ratio of ultimate BOD (Bio-chemical oxygen demand) to the COD (Chemical Oxygen Demand) of a waste water, so that it may be considered as fully biodegradable.

Options :

1. ✖ 1.2 to 1.5

2. ✔ 0.9 to 1.0

3. ✖ 0.1 to 0.2

4. ✖ 2.2 to 2.5

Hints :
Civil_Set 1A

Question Number : 62 Question Id : 630680408481 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000

SOW No	PROJECT_NoW_0000

The upper layer of lake water through which sunlight can penetrate is known as:

Options :

1. ✔ Euphotic Zone

2. ✖ Littoral Zone

3. ✖ Benthic Zone

4. ✖ Oligotrophic Zone

Hints :
Civil_Set 1A

Question Number : 63 Question Id : 630680408482 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Calculate the BOD_5 (kg/day) of the waste water of an industry, if the population equivalent of the industrial waste water is 3750 and average standard BOD_5 of domestic sewage is 0.08 kg/day/person.

Options :

1. ✖ 5000

2. ✖ 46875

3. ✔ 300

4. ✖ 480

Hints :
Civil_Set 1A

Question Number : 64 Question Id : 630680408483 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD

Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Which of the following is/are the disadvantage(s) of interceptor related to house drainage in buildings?

1. Cleaning through the inspection arm of the interceptor trap is not easy.
2. Foul gases of the public sewer cannot pass through the interceptor.
3. Interceptor itself forms an obstruction to the normal flow of sewage.

Options :

1. ✖ Only 1
2. ✖ Only 2
3. ✖ Only 3
4. ✔ 1 and 3 only

Hints :
Civil_Set 1A

Question Number : 65 Question Id : 630680408484 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Which of the following is the incorrectly matched pair of material of sewer and its non-scouring velocity (cm/sec)?

Options :

1. ✖ Ordinary Brick-Lined Sewers – 150 to 250
2. ✖ Cement Concrete Sewers – 250 to 300
3. ✔ Cast Iron Sewer Pipes – 60 to 120
4. ✖ Vitrified Tile – 450 to 500

Hints :

Civil_Set 1A

Question Number : 66 Question Id : 630680408485 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

The forces whose lines of action do not lie in one plane and they do not meet at one point are known as _____.

Options :

1. ✔ Non-coplanar and Non-concurrent forces

2. ✖ Non-coplanar and concurrent forces

3. ✖ Coplanar and Non-concurrent forces

4. ✖ Coplanar and concurrent forces

Hints :

Civil_Set 1A

Question Number : 67 Question Id : 630680408486 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

The resultant of two concurrent coplanar forces P & Q is R. If the direction of force Q is reversed then resultant of the forces become S, then $(R^2 + S^2)$ will be equal to _____.

Options :

1. ✖ $(P^2 + Q^2)^2$

2. ✖ $4(P^2 + Q^2)$

3. ✖ $2(P^2 - Q^2)$

4. ✔ $2(P^2 + Q^2)$

Hints :
Civil_Set 1A

Question Number : 68 Question Id : 630680408487 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Read the following statements regarding equilibrium of coplanar and concurrent forces and choose the correct option.

Statements:

1. If two forces acting on a body are represented in magnitude and direction by the two sides of a triangle taken in order, then their resultant is given by the third side of the triangle taken in the opposite order.
2. If three forces acting on a particle keep it in equilibrium, then each force is proportional to the cosine of the angle between the other two forces.

Options :

1. ✖ Both statements are incorrect.

2. ✔ Statement 1 is correct and statement 2 is incorrect.

3. ✖ Both statements are correct.

4. ✖ Statement 1 is incorrect and statement 2 is correct.

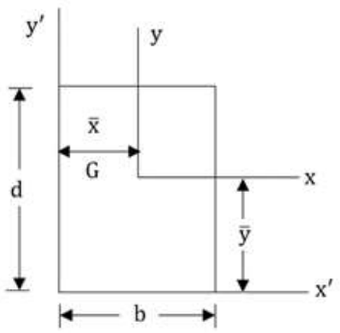
Hints :
Civil_Set 1A

Question Number : 69 Question Id : 630680408488 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD

Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Find the incorrectly matched pair of moment of inertia and its formula related to the given rectangular lamina.



Options :

1. ✖ $I_{y'} - (db^3)/3$

2. ✖ $I_x - (bd^3)/12$

3. ✖ $I_y - (db^3)/12$

4. ✔ $I_{x'} - (bd^3)/2$

Hints :
Civil_Set 1A

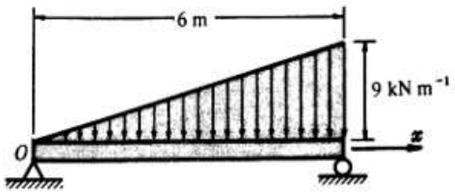
Question Number : 70 Question Id : 630680408489 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Identify the following structural member.



Options :

1. ✖ Simply supported beam with uniformly distributed load.

2. ✔ Simply supported beam with uniformly varying load.

3. ✖ Overhanging beam with uniformly varying load.

4. ✖ Cantilever beam with uniformly varying load.

Hints :
Civil_Set 1A

Question Number : 71 Question Id : 630680408490 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

A steel flat 150 mm wide and 20 mm thick is subjected to a tensile stress of 200 N/mm^2. Find the strain induced in the steel flat. (Take Young's modulus of elasticity= 2×10^5 N/mm^2)

Options :

1. ✖ 0.01

2. ✔ 0.001

3. ✖ 0.150

4. ✖ 0.00075

Hints :
Civil_Set 1A

Question Number : 72 Question Id : 630680408491 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

A cantilever beam of a 2m span has a left end 'A' as a free end, whereas the right end 'B' is the fixed supported end. It is acted upon by a point load of 10 kN at the free end. The maximum bending moment will occur at _____.

Options :

1. ✖ point 'A'

2. ✖ the midpoint of the span

3. ✖ 0.5 m from point 'A'

4. ✔ point 'B'

Hints :
Civil_Set 1A

Question Number : 73 Question Id : 630680408492 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Following IS 1200, match the items under List 1 (Type of work) with those under List 2 (nearest decimal value of measurement). Use codes in lists for matching.

List 1	List 2
P) Length dimension in earthwork (in m units)	1) 0.001
Q) Length dimension in earthwork done by mechanical means, when dimension is more than 25 m (in m units).	2) 0.005
R) Thickness of slab in concrete works (in m units).	3) 0.01
S) Area of steel work (in m^2 units)	4) 0.1

Options :

1. ✔ P - 3, Q - 4, R - 2, S - 1

2. ✖ P - 2, Q - 3, R - 1, S - 4

3. ✖ P - 4, Q - 1, R - 2, S - 3

4. ✖ P - 2, Q - 1, R - 4, S - 3

Hints :
Civil_Set 1A

Question Number : 74 Question Id : 630680408493 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Arrange the following points on stress – strain curve of tension test in chronological order (from the earliest to the latest) of their appearance.

A. Fracture Point

B. Yield Point

C. Proportional Limit

D. Elastic Limit

Options :

1. ✖ D, B, A, C

2. ✔ C, D, B, A

3. ✖ A, C, D, B

4. ✖ B, A, C, D

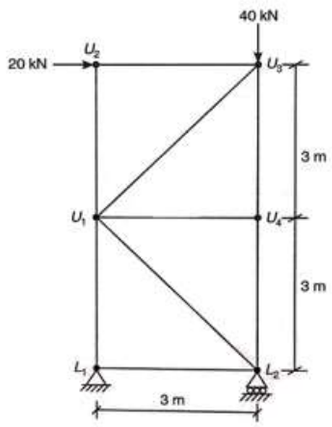
Hints :
Civil_Set 1A

Question Number : 75 Question Id : 630680408494 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value

Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Calculate the axial force in the member U_2U_3 of the given plane pin jointed truss.



Options :

1. ✖ Zero

2. ✔ 20 kN compressive

3. ✖ 20 kN tensile

4. ✖ 60 kN compressive

Hints :
Civil_Set 1A

Question Number : 76 Question Id : 630680408495 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Which of the following statements regarding Euler's Assumptions is/are correct?

Statements:

1. The length of column is very large as compared to cross-sectional dimensions.
2. The cross-section of the column is uniform throughout its length.

Options :

1. ✖ Both statements are incorrect.
2. ✖ Statement 1 is correct and statement 2 is incorrect.
3. ✔ Both statements are correct.
4. ✖ Statement 1 is incorrect and statement 2 is correct.

Hints :
Civil_Set 1A

Question Number : 77 Question Id : 630680408496 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Match the items under List 1 (Type of Beam & Loading Conditions) with those under List 2 (Value of maximum deflection) and choose the correct option.

List 1(Type of Beam & Loading Condition)	List 2 (Value of maximum deflection)
P. Cantilever Beam of span L subjected to point load 'P' at free end.	1. $\frac{PL^3}{48EI}$
Q. Cantilever Beam of span L subjected to uniformly distributed load of intensity 'p' per unit length on entire span	2. $\frac{PL^3}{3EI}$
R. Simply Supported beam of span L subjected to point load 'P' at mid span	3. $\frac{5pL^4}{384EI}$
S. Simply Supported beam of span L subjected to uniformly distributed load of intensity 'p' per unit length on entire span	4. $\frac{pL^4}{8EI}$

(Where, E = Young's Modulus of Elasticity & I = moment of Inertia of the cross-section of the beam for the both beams.)

Options :

1. ✖ P – 4, Q- 1, R – 2, S - 3

2. ✔ P – 2, Q- 4, R – 1, S - 3

3. ✖ P – 3, Q- 1, R – 4, S - 2

4. ✖ P – 4, Q- 3, R – 1, S - 2

Hints :
Civil_Set 1A

Question Number : 78 Question Id : 630680408497 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

The scale of a map is represented as 1 : 50000. The distance between two points A and B is measured as 10 cm in the map. The actual distance between the two points in the field is:

Options :

1. ✖ 0.5 km

2. ✔ 5 km

3. ✖ 50 km

4. ✖ 500 m

Hints :
Civil_Set 1B

Question Number : 79 Question Id : 630680408498 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Consider the electromagnetic spectrum used in remote sensing. Match the items under List 1 (Wave length values) with those under List 2 (Name of region in electromagnetic spectrum).

List 1	List 2
P. 0.4 to 0.7 µm	1. Thermal infrared region
Q. 0.7 to 3 µm	2. Microwave region
R. 3 to 14 µm	3. Near and mid infrared region
S. 1mm to 1m	4. Visible region

Options :

1. ✖ P – 3, Q – 1, R – 4, S – 2

2. ✖ P – 2, Q – 3, R – 4, S – 1

3. ✖ P – 4, Q – 1, R – 2, S – 3

4. ✔ P – 4, Q – 3, R – 1, S – 2

Hints :
Civil_Set 1B

Question Number : 80 Question Id : 630680408499 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Consider the following statements based on stadia tacheometry:

P. Stadia tacheometry is based on readings taken against the stadia cross hairs and two forms of stadia method (fixed hair and movable hair) are used.

Q. Fixed hair stadia method uses a special diaphragm that enable to change the distance between the cross hairs, the intercept is kept constant even though the distance varies.

R. Movable hair method, wherein the distance between the stadia hairs is kept constant, the intercept varies as the distance varies.

Identify the correct statements and choose the correct option.

Options :

1. ✔ P only

2. ✖ Q only

3. ✖ Q and R only

4. ✖ P, Q, and R

Hints :
Civil_Set 1B

Question Number : 81 Question Id : 630680408500 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

The bearings to four stations taken using a prismatic compass are given below in Table. Covert them into reduced bearings and arrange the points in the increasing order of magnitude of reduced bearing values.

Point	Whole circle bearing
P	275° 30′
Q	165° 30′
R	192° 00′
S	328° 30′

Options :

1. ✖ Q, R, S, P

2. ✔ R, Q, S, P

3. ✖ S, R, P, Q

4. ✖ P, Q, S, R

Hints :
Civil_Set 1B

Question Number : 82 Question Id : 630680408501 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Among the different corrections applied to a chain surveying identify the correction which is not always negative.

Options :

1. ✖ Correction due to wrong alignment

2. ✖ Correction due to slope

3. ✔ Correction due to pull

4. ✖ Correction due to sag

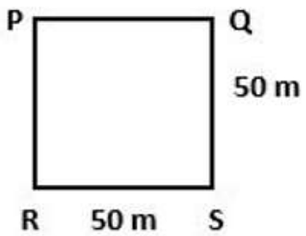
Hints :
Civil_Set 1B

Question Number : 83 Question Id : 630680408502 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

A plot of land is in the form of a square having sides 50 m, with vertices P, Q, R, S as in figure. The reduced level of points P, Q, R, S are 98.6 m, 100.6 m, 101 m, and 99.4 m respectively. The contour line of 100 m elevation will intersect lines PQ and RS at :



Options :

1. ✔ 35 m from P, and 18.75 m from S

2. ✖ 15 m from P, and 31.25 m from S

3. ✖ 35 m from Q and 18.75 m from R

4. ✖ 28 m from Q and 22.75 m from R

Hints :
Civil_Set 1B

Question Number : 84 Question Id : 630680408503 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

In a total station survey work, the leveling of the total station and exact centering at a station are respectively done by using:

Options :

1. ✖ Optical plummet and Automatic compensator

2. ✖ Tripod legs and Standards (A- frame)

3. ✖ Optical plummet, tripod legs and circular bubble

4. ✔ Tripod legs, Levelling Foot screws and Optical plummet

Hints :
Civil_Set 1B

Question Number : 85 Question Id : 630680408504 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Arrange the operations involved in the manufacture of burnt clay bricks in the chronological order (first to last operation). Use codes for answering.

W - Weathering; D - Digging; T - Tempering ; B - Blending ; M - Moulding ; U - Unsoiling ; DR - Drying ; BU - Burning

Options :

1. ✖ U - W - D - T - B - M - DR - BU

2. ✖ D - U - W - T - B - M - DR - BU

3. ✖ D - W - U - T - B - DR - M - BU

4. ✔ U - D - W - B - T - M - DR - BU

Hints :
Civil_Set 1B

Question Number : 86 Question Id : 630680408505 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value

Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

According to IS : 1237 -1980, the average wet transverse strength of cement concrete flooring tiles shall not be less than _____.

Options :

1. ✔ 3 N/mm^2

2. ✖ 5 N/mm^2

3. ✖ 10 N/mm^2

4. ✖ 7.5 N/mm^2

Hints :
Civil_Set 1B

Question Number : 87 Question Id : 630680408506 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Consider the following statements based on the seasoning of timber.

P. Seasoning is the process of reducing the moisture content of timber in order to prevent the timber from possible fermentation and making it suitable for use.

Q. Foxiness, upsets, rind galls are some of the defects caused in timber due to seasoning.

R. Reduction in shrinkage, warping and reduction in weight of timber occurs due to seasoning.

S. Seasoning reduces the natural defects in timber.

Identify the correct statements, and choose the correct option.

Options :

1. ✖ P and S only

2. ✔ P and R only

3. ✖ Q and S only

4. ✖ P, Q, and S only

Hints :
Civil_Set 1B

Question Number : 88 Question Id : 630680408507 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Consider the following pairs with respect to glass :

P. Soda lime glass : Crown glass

Q. Bullet proof glass : Fusing a mixture of silica, borax, lime and felspar

R. Imparts Colour, brightness and shine to glass : Lead oxide

S. Accelerator for the fusion of glass : Lime

Choose the correct answer on matching.

Options :

1. ✖ P only

2. ✖ Q and S only

3. ✔ P and R only

4. ✖ Q, R, and S only

Hints :
Civil_Set 1B

Question Number : 89 Question Id : 630680408508 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Consider the Properties of building materials. Match the items under List 1 (Properties of materials) with those under List 2 (Definition of Properties).

List 1	List 2
P. Weathering resistance	1. Ability of a material to withstand prolonged action of high temperature without melting or losing shape
Q. Frost resistance	2. Ability of a material to endure alternate wet and dry conditions for a long period without considerable deformation and loss of mechanical strength
R. Hygroscopicity	3. Ability of a water-saturated material to endure repeated freezing and thawing with considerable decrease of mechanical strength
S. Refractoriness	4. Property of a material to absorb water vapour from air

Options :

1. ✖ P – 3, Q – 4, R – 1, S – 2
2. ✖ P – 2, Q – 4, R – 1, S – 3
3. ✖ P – 4, Q – 3, R – 2, S – 1
4. ✔ P – 2, Q – 3, R – 4, S – 1

Hints :

Civil_Set 1B

Question Number : 90 Question Id : 630680408509 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD

Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

According to Indian standards, what is the size of opening and size of frame of a door represented as 8DS20.

Options :

1. ✔ Size of opening = 800 mm X 2000 mm ; size of frame = 790 mm X 1990 mm

2. ✖ Size of opening = 810 mm X 2010 mm ; size of frame = 800 mm X 2000 mm

3. ✖ Size of opening = 800 mm X 2000 mm ; size of frame = 780 mm X 1980 mm

4. ✖ Size of opening = 820 mm X 2020 mm ; size of frame = 800 mm X 2000 mm

Hints :
Civil_Set 1B

Question Number : 91 Question Id : 630680408510 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Following the National Building Code of India, 2016, if W is the width of supported wall (in mm units), the width at the base of wall foundation (in mm units) B, shall not be less than :

Options :

1. ✖ $B = W + 200$

2. ✔ $B = W + 300$

3. ✖ $B = W + 250$

4. ✖ $B = W + 100$

Hints :
Civil_Set 1B

Question Number : 92 Question Id : 630680408511 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Following the national building code of india 2016, Arrange the following buildings according to the increasing order (lowest to highest) of floor area ratios for occupancies facing one public street of at least 9 m width. Use codes for answering.

H. Hazardous type 1

I. Industrial type 1

E. Educational type 1

M. Mercantile type 1

Options :

1. ✖ E - M - I - H

2. ✖ M - I - E- H

3. ✔ H - I - M - E

4. ✖ E - H - I - M

Hints :
Civil_Set 1B

Question Number : 93 Question Id : 630680408512 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Identify the type of bond used in brick masonry shown in Figure.

H – HEADER FACING ; S – STRETCHER FACING ; Q – QUEEN CLOSER

Options :

1. ✖ English bond

2. ✖ Stretcher bond

3. ✖ Header bond

4. ✔ Double Flemish bond

Hints :
Civil_Set 1B

Question Number : 94 Question Id : 630680408513 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

The following statements(P, Q, R, S) pertain to force system acting on bodies.

P. Equal and opposite forces acting on a body always constitute a couple action on the body.

Q. Coplanar force systems can be concurrent or non-concurrent, parallel or non-parallel.

R. Forces may act over a line, a surface or a volume, and are correspondingly denoted as lineal, surface and body forces.

S. The concept of moment of a force is equal to the sum of moments due to its components is not valid always.

Identify the correct statements, and choose the correct option.

Options :

1. ✖ P and Q only

2. ✖ R and S only

3. ✔ Q and R only

4. ✖ P, R, S only

Hints :
Civil_Set 1B

Question Number : 95 Question Id : 630680408514 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Consider the centroids of the following geometric shapes. (y_{cg} : distance to centroidal axis XX from the bottom or base)

P. Quarter of a circle of radius R with its base parallel to the centroidal axis in X direction : $y_{cg} = \frac{3\pi}{4R}$

Q. Triangle of base b and height h with the base b parallel to centroidal axis in X direction : $y_{cg} = \frac{h}{3}$

R. Semi-circle of radius R with its diameter (as base) kept parallel to the centroidal axis in X direction : $y_{cg} = \frac{4R}{3\pi}$

S. Square of side a with its side kept parallel to centroidal axis in X direction : $y_{cg} = \frac{a}{2}$

Choose the correct answer on matching.

Options :

1. ✖ P only

2. ✖ Q and S only

3. ✖ P and R only

4. ✔ Q, R, and S only

Hints :

Civil_Set 1B

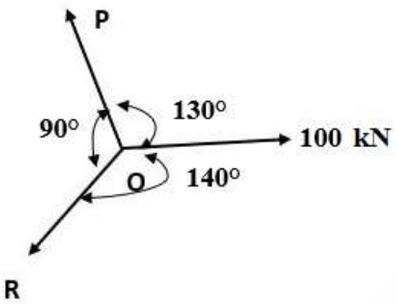
Question Number : 96 Question Id : 630680408515 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Three forces as shown in Figure, act at the centre O of a body, keep the body in equilibrium. Determine the magnitude of the force P in kN units?



Options :

1. ✖ 100 cos 130

2. ✖ 100 sin 130

3. ✔ 100 sin 140

4. ✖ 100 cos 140

Hints :

Civil_Set 1B

Question Number : 97 Question Id : 630680408516 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

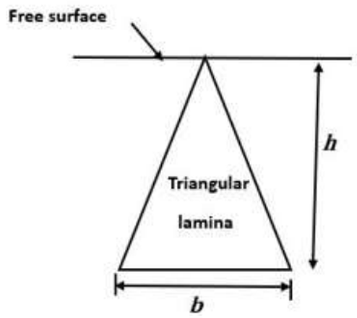
Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1

Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

The moment of inertia of a triangular lamina as in Figure, about the free surface line passing through the vertex of the triangle is given by :



Options :

1. ✖ $\frac{bh^3}{24}$

2. ✖ $\frac{bh^3}{36}$

3. ✔ $\frac{bh^3}{4}$

4. ✖ $\frac{bh^3}{8}$

Hints :
Civil_Set 1B

Question Number : 98 Question Id : 630680408517 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

A mild steel specimen is subjected to a tension test to plot its stress strain behaviour. The chronological order in which the following stress points occur during the progress of test (first to the last) is : (Use codes for answering)

Y - Yield point ; E - Elastic limit ; B - Breaking stress ; U - Ultimate stress

Options :

1. ✖ Y - E - B - U

2. ✔ E - Y - U - B

3. ✖ Y - E - U - B

4. ✖ E - Y - B- U

Hints :
Civil_Set 1B

Question Number : 99 Question Id : 630680408518 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

What is the bulk modulus K of the material for a material having modulus of elasticity E and modulus of rigidity N, it is seen that E = 2 N.

Options :

1. ✖ $\frac{E}{2}$

2. ✖ $\frac{E}{4}$

3. ✔ $\frac{E}{3}$

4. ✖ $\frac{2E}{3}$

Hints :
Civil_Set 1B

Question Number : 100 Question Id : 630680408519 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD

Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

The following statements (P, Q) pertain to strain energy stored in a material.

P : The maximum strain energy that can be stored in a material without permanent set is when the stress σ is equal to the stress f at elastic limit of the material.

Q : If f is the stress at the elastic limit of a material, then modulus of resilience $= \frac{f^2}{E}$, where E is the Young's modulus of material.

Choose the correct statement(s)

Options :

1. ✔ P only

2. ✖ Q only

3. ✖ Both P and Q

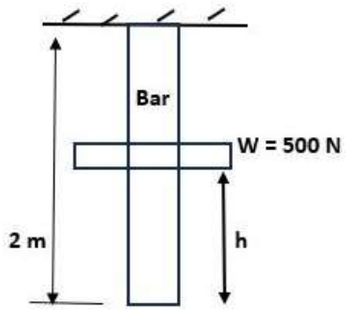
4. ✖ Neither P nor Q

Hints :
Civil_Set 1B

Question Number : 101 Question Id : 630680408520 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

A steel bar of square shape with side 20 mm and length 2 m is suspended from roof as in figure. A weight of 500 N is dropped from a height of h on a collar attached to the lower end of bar, which produces an elongation of 1 mm in the bar. Find the height of drop h, if the stress in the bar is not to exceed 100 MPa. Take Youngs modulus of material of bar as 200 GPa.



Options :

1. ✖ 78 mm

2. ✖ 19.5 mm

3. ✖ 49 mm

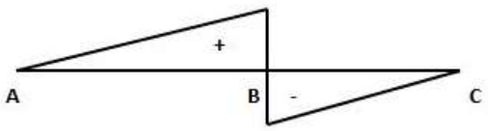
4. ✔ 39 mm

Hints :
Civil_Set 1B

Question Number : 102 Question Id : 630680408521 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

The bending moment diagram of a simply supported beam AC with supports at A and C is shown in figure. The load acting on the beam is :



Options :

1. ✔ A couple applied at the point B

2. ✖ A concentrated load at the point B

3. ✖ A uniformly distributed load over the whole length of beam AC

4. ✖ Equal and Opposite moments applied at A and C

Hints :
Civil_Set 1B

Question Number : 103 Question Id : 630680408522 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

For a cantilever beam of span L different type of loads are applied. Match the Item List 1 (Type and position of load on a cantilever beam) with List 2 (shape of bending moment diagram) and select the correct answer using the codes given in lists :

List 1	List 2
P. Carrying concentrated load at free end	1. Rectangle
Q. Uniformly distributed load over entire span	2. Triangle
R. Carry a linearly varying load with zero at free end and maximum at fixed end	3. Parabola
S. Free end is subjected to a couple	4. Cubic parabola

Options :

1. ✖ P – 4, Q - 3, R - 2, S - 1

2. ✔ P – 2, Q - 3, R - 4, S - 1

3. ✖ P – 3, Q - 4, R - 2, S - 1

4. ✖ P – 2, Q - 1, R - 4, S - 3

Hints :
Civil_Set 1B

Question Number : 104 Question Id : 630680408523 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value

Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Consider application of Eulers theory for long columns. Arrange the columns for the situations given below on the basis of the increasing order of crippling load (lowest to highest values). Use codes for answering. (Note : Assume the columns in all cases have same length and EI values)

P - Both ends of the column are hinged.

Q - Both ends of the column are fixed.

R - One end of the column is fixed and the other end is hinged.

S - One end of the column is fixed and the other end is free.

Options :

1. ✖ S - R - Q - P

2. ✖ R - P - Q - S

3. ✔ S - P - R - Q

4. ✖ P - R - Q - S

Hints :
Civil_Set 1B

Question Number : 105 Question Id : 630680408524 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

The following statements (P, Q, R, S) pertain to the assumptions for the analysis of perfect truss.

P. The joints in the truss are rigidly fixed and can resist moments.

Q. The load on the truss is applied at the joints only.

R. The centroidal lines of the members at a joint, meet at the joint.

S. The truss can be loaded either on the joints or on the members in between joints.

Identify the correct statements, and choose the correct option.

Options :

1. ✖ P, Q, R, S

2. ✖ P and S only

3. ✖ P, R and S only

4. ✔ Q ad R only

Hints :
Civil_Set 1B

Question Number : 106 Question Id : 630680408525 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

The following statements pertain to the applicability of the "middle third rule" on analysis of retaining walls subjected to direct and bending stresses.

P. The rule can be applied irrespective of the shapes of the bottom section of the retaining wall.

Q. This condition pertains to the development of maximum compressive stress at any point of the wall section.

Choose the correct statement(s).

Options :

1. ✖ P only

2. ✖ Q only

3. ✖ Both P and Q

4. ✔ Neither P nor Q

Hints :
Civil_Set 1B

Question Number : 107 Question Id : 630680408526 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

If at a point in a fluid flow system the gauge pressure reading is measured as, $200 kN/m^2$ express the pressure as absolute pressure (in metre of water units). Take atmospheric pressure as 10 m of water, and unit weight of water as $10 kN/m^3$.

Options :

1. ✖ 20 m

2. ✔ 30 m

3. ✖ 10 m

4. ✖ 12 m

Hints :
Civil_Set 1B

Question Number : 108 Question Id : 630680408527 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000

SOW No	PROJECT_NoW_0000

If P represents the fluid flow parameter at a fixed point in space, then the condition for steady flow can be stated as:
(Notation : t - time ; s - space)

Options :

1. ✔ $\frac{\partial P}{\partial t} = 0$

2. ✖ $\frac{\partial P}{\partial t} \neq 0$

3. ✖ $\frac{\partial P}{\partial s} = 0$

4. ✖ $\frac{\partial P}{\partial s} \neq 0$

Hints :
Civil_Set 1B

Question Number : 109 Question Id : 630680408528 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

The following statements (P, Q) pertain to flow through pipes.

P : The hydraulic grade line and the total energy line are coincident for a body of water at rest.

Q : The total energy line in a flow of an ideal fluid in a horizontal pipe with no addition of external energy will always be horizontal.

Choose the correct statement(s)

Options :

1. ✖ P only

2. ✖ Q only

3. ✔ Both P and Q

4. ✖ Neither P nor Q

Hints :

Civil_Set 1B

Question Number : 110 Question Id : 630680408529 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

What is the wetted perimeter of flow of the channel for the most economical section of a rectangular open channel, the hydraulic radius is 1 m.

Options :

1. ✖ 1 m

2. ✖ 2 m

3. ✖ 4 m

4. ✔ 8 m

Hints :

Civil_Set 1B

Question Number : 111 Question Id : 630680408530 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Among the flow measuring devices given as options, identify the one which is used for the measurement of velocity of flow in both open channel flow and pipe flow.

Options :

1. ✖ Rectangular notch

2. ✔ Pitot tube

3. ✖ Piezometer

4. ✖ Orifice meter

Hints :
Civil_Set 1B

Question Number : 112 Question Id : 630680408531 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

The following statements (P,Q,R) are based on the assumptions on which the design of reinforced concrete structures is done, following the limit state of collapse.

P. Stress-strain curve of concrete is assumed to follow a linear variation.

Q. Maximum stress in the characteristic stress strain curve of concrete in flexural compression is restricted to 0.67 fck (where fck is characteristic compressive strength of concrete)

R. The design stress strain curve is obtained by scaling down the ordinates of the characteristic stress strain curve by the appropriate partial safety factor.

Identify the correct statement(s) and choose the correct option.

Options :

1. ✖ P only

2. ✖ Q only

3. ✔ Q and R only

4. ✖ P, Q, R

Hints :
Civil_Set 1B

Question Number : 113 Question Id : 630680408532 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

The following statements (P, Q) pertain to the working stress method of design (WSD) of reinforced concrete structures.

P : WSD discriminates between different types of loads in design that act simultaneously, but have different degrees of uncertainty, through partial safety factors.

Q : WSD assumes a factor of safety being the ratio of the strength of the material to the permissible stress in material.

Choose the correct statement(s).

Options :

1. ✖ P only

2. ✔ Q only

3. ✖ Both P and Q

4. ✖ Neither P nor Q

Hints :
Civil_Set 1B

Question Number : 114 Question Id : 630680408533 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

According to IS 456: 2000, when the span is less than 3.5 m and imposed load less than 3 kN/m^2, the span to overall depth ratio of continuous two-way RCC slabs with Fe415 steel can be taken as :

Options :

1. ✖ 35

2. ✔ 32

3. ✖ 36

4. ✖ 28

Hints :
Civil_Set 1B

Question Number : 115 Question Id : 630680408534 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

As per IS 456 : 2000, the value of minimum eccentricity to be adopted for the design of a reinforced concrete rectangular column of size 300 mm x 300 mm, having unsupported length of 3.3 m is :

Options :

1. ✖ 10 mm

2. ✖ 6.6 mm

3. ✖ 16.6 mm

4. ✔ 20 mm

Hints :
Civil_Set 1B

Question Number : 116 Question Id : 630680408535 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Consider the following pairs with respect to the members of a steel roof truss :

P. Principal tie : Top chord member subjected to compressive forces.

Q. Sling : Main inclined members carrying tension.

R. Principal rafter : Lower chord member subjected to tensile forces.

S. Strut : Members under compression.

Choose the correct answer on matching.

Options :

1. ✖ P and R only

2. ✔ Q and S only

3. ✖ P, R and S only

4. ✖ R only

Hints :
Civil_Set 1B

Question Number : 117 Question Id : 630680408536 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

The following statements (P, Q) pertain to design of steel compression members.

P. The tendency of a member to buckle is usually measured by its slenderness ratio.

Q. The longer the compression member becomes for the same cross section, the smaller becomes its tendency to buckle.

Choose the correct statement(s).

Options :

1. ✔ P only

2. ✖ Q only

3. ✖ Both P and Q

4. ✖ Neither P nor Q

Hints :
Civil_Set 1B

Question Number : 118 Question Id : 630680408537 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

The following statements (P, Q, R) pertain to design of steel beam members subjected to bending.

P. For a laterally unsupported beam, the design bending strength may be governed by lateral torsional buckling strength.

Q. Web crippling in a steel beam occurs due to excessive bending moment.

R. The design bending strength of beam adequately supported against lateral torsion buckling is governed by the yield stress.

Identify the correct statement(s) and choose the correct option.

Options :

1. ✖ P only

2. ✖ Q only

3. ✔ P and R only

4. ✖ P, Q, R

Hints :
Civil_Set 1B

Question Number : 119 Question Id : 630680408538 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium

Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

According to IS 800:2007, the partial safety for Dead load to be adopted under Limit state of Strength criteria, with the combination of loadings taken as DL + LL + CL (DL : Dead load, LL : Live load, CL : Crane load) is :

Options :

1. ✔ 1.5

2. ✖ 1.0

3. ✖ 1.2

4. ✖ 0.9

Hints :
Civil_Set 1B

Question Number : 120 Question Id : 630680408539 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

According to IS 800:2007, the recommended values of the following physical properties : Unit mass (ρ), Modulus of Elasticity (E), and Poisson's ratio (μ) of structural steel (irrespective of the grade) for use in design, are to be taken as:

Options :

1. ✖ $\rho = 785\ kg/m^3$; E = 2 000 MPa ; $\mu = 0.25$

2. ✖ $\rho = 9850\ kg/m^3$; $E = 2 \text{ X } 10^6$ MPa ; $\mu = 0.4$

3. ✖ $\rho = 6850\ kg/m^3$; $E = 2 \text{ X } 10^4$ MPa ; $\mu = 0.2$

4. ✔ $\rho = 7850\ kg/m^3$; $E = 2 \text{ X } 10^5$ MPa ; $\mu = 0.3$

Hints :
Civil_Set 1B

Question Number : 121 Question Id : 630680408540 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

A steel built up column is subjected to an axial force of 3000 kN. The lacing system has to be designed for resisting a transverse shear of :

Options :

1. ✖ 30 kN

2. ✖ 45 kN

3. ✔ 75 kN

4. ✖ 150 kN

Hints :
Civil_Set 1B

Question Number : 122 Question Id : 630680408541 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

When fillet welds are subjected to normal stress (σ) and shear stress (τ), the equivalent stress on the weld (f) is computed as :

Options :

1. ✖ $\sqrt{\sigma^2 + \tau^2}$

2. ✖ $\sqrt{3\sigma^2 + \tau^2}$

3. ✔ $\sqrt{\sigma^2 + 3\tau^2}$

4. ✖ $\sqrt{0.5\sigma^2 + 3\tau^2}$

Hints :
Civil_Set 1B

Question Number : 123 Question Id : 630680408542 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

In canal irrigation, the duty of water at the head of main canal, head of distributary, head of water course and that at field are represented as DM, DD, DW, DF respectively. Arrange them in the decreasing order of duty values.

Options :

1. ✖ DM - DW - DD - DF

2. ✔ DF - DW - DD - DM

3. ✖ DF - DD - DW - DM

4. ✖ DM - DD - DW - DF

Hints :
Civil_Set 1B

Question Number : 124 Question Id : 630680408543 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Consider the following pairs with respect to diversion head works in a river:

P. Weir : Structure constructed across a river for heading up of water effected by gates alone.

Q. Barrage : Solid obstruction constructed across a river using masonry/concrete for heading up of water.

R. Divide wall : Built at right angle to the axis of weir to prevent cross currents and flow parallel to the weir

S. Fish ladder : Provided parallel to the axis of weir for migration of fishes.

Choose the correct answer on matching.

Options :

1. ✖ P and Q only

2. ✖ Q and S only

3. ✖ P, R and S only

4. ✔ R only

Hints :
Civil_Set 1B

Question Number : 125 Question Id : 630680408544 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Due to a storm of specified magnitude and duration, direct runoff occurs from a basin. The components direct runoff due to the storm is :

Options :

1. ✔ Surface runoff, prompt interflow and channel precipitation

2. ✖ Surface runoff and channel precipitation

3. ✖ Surface runoff, delayed interflow and base flow

4. ✖ Surface runoff and infiltration

Hints :
Civil_Set 1B

Question Number : 126 Question Id : 630680408545 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

In irrigation practices, which of the following in field moisture deficiency is the water required to bring the soil moisture content of the soil?

Options :

1. ✖ Saturation capacity

2. ✔ Field capacity

3. ✖ Wilting point

4. ✖ Hygroscopic capacity

Hints :

Civil_Set 1B

Question Number : 127 Question Id : 630680408546 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

The following details pertain to the crossing of a canal and a natural drain. Bed level of Canal = + 111 m; Full Supply depth of Canal = 1.8 m; Bed level of Drain = + 109.4 m ; depth of flow at High Flood Level = 2.2 m. The suitable type of Cross drainage work is :

Options :

1. ✖ Aqueduct

2. ✖ Super Passage

3. ✖ Canal syphon

4. ✔ Syphon Aqueduct

Hints :
Civil_Set 1B

Question Number : 128 Question Id : 630680408547 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

The following statements (P, Q, R) pertain to the intakes /transportation of water.

P. Weir intake is type of Canal intake.

Q. Pipe intake is a type of River intake

R. Gravity conduits for water conveyance are designed in such a way that it follows the natural hydraulic gradient.

Identify the correct statements and choose the correct option.

Options :

1. ✖ P and Q only

2. ✔ Q and R only

3. ✖ P and R only

4. ✖ R only

Hints :
Civil_Set 1B

Question Number : 129 Question Id : 630680408548 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD

Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

The water treatment proposed for the township of an industry consists of the following unit operations.

P. Post chlorination

Q. Demineralization

R. Rapid sand filtration

S. Softening

Arrange the treatment units in the chronological order. Use codes.

Options :

1. ✖ P - R - Q - S

2. ✖ R- P - Q - S

3. ✖ S - R - Q - P

4. ✔ R - S - P - Q

Hints :

Civil_Set 1B

Question Number : 130 Question Id : 630680408549 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Which is the most acceptable economical option for solid waste management?

Options :

1. ✖ composting

2. ✖ Pyrolysis

3. ✖ Incineration

4. ✔ Landfill

Hints :
Civil_Set 1B

Question Number : 131 Question Id : 630680408550 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

A conventional rapid mixing tank is treating water at 144 Million litres/day. If the hydraulic retention time is 72 second, the tank volume will be :

Options :

1. ✖ 72 m^3

2. ✔ 120 m^3

3. ✖ 100 m^3

4. ✖ 10 m^3

Hints :
Civil_Set 1B

Question Number : 132 Question Id : 630680408551 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

The following statements (P, Q) pertain to air pollutants.

P. Secondary air pollutants are those that are produced in the air by the interaction of two or more primary air pollutants.

Q. Peroxy Acetyl Nitrate (PAN) comes under the category of secondary air pollutants.

Identify the correct statement(s) and choose the correct option.

Options :

1. ✖ P only

2. ✖ Q only

3. ✔ Both P and Q

4. ✖ Neither P nor Q

Hints :
Civil_Set 1B

Question Number : 133 Question Id : 630680408552 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Match the following items under List 1 (Purpose served by valve) with those under List 2 (Name of valve).

List 1	List 2
P. To stop and regulate the flow of water under ordinary operations or emergency.	1. Pressure relief valve
Q. Situated in the line on a slope such that each section of the line between the line valves can be drained completely.	2. Check valve
R. To prevent the reversal of flow in a pipeline.	3. Line valve
S. Provided in summit of a pipeline to keep the pressure in the pipeline below a specified value.	4. Scour valve

Options :

1. ✔ P - 3, Q - 4, R - 2, S - 1

2. ✖ P - 3, Q - 2, R - 4, S - 1

3. ✖ P - 2, Q - 3, R - 1, S - 4

4. ✖ P - 4, Q - 3, R - 2, S - 1

Hints :
Civil_Set 1B

Question Number : 134 Question Id : 630680408553 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

The treatments that are done in a conventional sewage treatment plant are listed.

1. Primary sedimentation
2. Screening
3. Trickling filter
4. Grit chamber
5. Disinfection
6. Secondary sedimentation

Indicate the sequential order in which the treatments are done (use the codes).

Options :

1. ✖ 2 - 1 - 4 - 3 - 5 - 6

2. ✖ 4 - 1 - 2 - 3 - 6 - 5

3. ✖ 4 - 2 - 1 - 3 - 5 - 6

4. ✔ 2 - 4 - 1 - 3 - 6 - 5

Hints :
Civil_Set 1B

Question Number : 135 Question Id : 630680408554 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

From a sewage pumping station, a sample of 2.5 milli litre (ml) of raw sewage has been diluted to 250 ml and the Initial dissolved oxygen and Final dissolved oxygen of the sample are 12 mg/litre, 5 mg/litre respectively, what is the Biological oxygen demand (BOD) of the raw sewage.

Options :

1. ✖ 1200 mg/l

2. ✔ 700 mg/l

3. ✖ 240 mg/l

4. ✖ 500 mg/l

Hints :
Civil_Set 1B

Question Number : 136 Question Id : 630680408555 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

As per CPHEEO guidelines, in sewerage system design, for the estimation of per capita sewage flow, the peak factor for the contributary population is taken as :

Options :

1. ✖ Always a constant value

2. ✖ High values for high population

3. ✔ High values for low population

4. ✖ Low values for low population

Hints :
Civil_Set 1B

Question Number : 137 Question Id : 630680408556 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

For sewage treatment using an oxidation pond, when it gets overloaded, what is the chemical that is added to stimulate the algal growth.

Options :

1. ✔ Sodium nitrate

2. ✖ Sodium chloride

3. ✖ Calcium hydroxide

4. ✖ Bleaching powder

Hints :
Civil_Set 1B

Question Number : 138 Question Id : 630680408557 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Consider the following types of road surface in a locality where the rainfall intensity is the same.

B. Thin Bituminous surface roads

E. Earth roads

G. Gravel roads

C . Cement concrete roads

The correct sequence of roads in the ascending order of steepness of camber (low to high values) of the above roads is : (Use codes for answering)

Options :

1. ✖ E - G - B - C

2. ✖ B - C - E - G

3. ✖ G- C - B - E

4. ✔ C - B - G - E

Hints :
Civil_Set 1B

Question Number : 139 Question Id : 630680408558 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Consider the following pairs with respect to traffic regulation in roads :

P. Rotary island : Traffic control Structure .

Q. Traffic studies : Traffic flow characteristics.

R. Speed limit sign : Informatory sign

S. Clover leaf interchange : Grade separation.

Choose the correct answer on matching.

Options :

1. ✖ P and Q only

2. ✖ R and S only

3. ✔ P, Q and S only

4. ✖ R only

Hints :
Civil_Set 1B

Question Number : 140 Question Id : 630680408559 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

The following statements (P, Q) pertain to design of pavements .

P. Westergaard's stress equation method is used for the design of flexible pavements.

Q. California bearing ratio (CBR) method is used for the design of concrete pavements.

Identify the correct statement(s) and choose the correct option.

Options :

1. ✖ P only

2. ✖ Q only

3. ✖ Both P and Q

4. ✔ Neither P nor Q

Hints :
Civil_Set 1B

Question Number : 141 Question Id : 630680408560 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD

Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

In a horizontal circular highway curve, for a constant value of co-efficient of lateral friction, the value of required super elevation:

Options :

1. ✔ Increases with Increase in speed and decrease in radius of curve

2. ✖ Increases with decrease in both speed and radius of curve

3. ✖ Increases with Increase in both speed and radius of curve

4. ✖ Decreases with Increase in speed and decrease in radius of curve

Hints :

Civil_Set 1B

Question Number : 142 Question Id : 630680408561 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

In a highway an ascending gradient of 1 in 50 meets another ascending gradient of 1 in 30, determine the deviation angle?

Options :

1. ✖ $\frac{1}{55}$

2. ✖ $\frac{4}{75}$

3. ✖ $\frac{17}{330}$

4. ✔ $\frac{1}{75}$

Hints :

Civil_Set 1B

Question Number : 143 Question Id : 630680408562 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

As per IRC : 73 -1980, what is the width of carriage way for non-urban highway two lane road with raised kerbs.

Options :

1. ✖ 7 m

2. ✖ 8 m

3. ✔ 7.5 m

4. ✖ 6.5 m

Hints :

Civil_Set 1B

Question Number : 144 Question Id : 630680408563 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

The following statements (P, Q, R, S) are given

P. Consolidation is a function of total stress on soil.

Q. During compaction the soil is completely saturated.

R. In consolidation, volume reduction is due to expulsion of pore water from voids.

S. Compaction is almost an instantaneous phenomenon.

Identify the correct statement(s), and choose correct answer.

Options :

1. ✖ P and Q only

2. ✔ R and S only

3. ✖ P, Q and R only

4. ✖ P, Q and S only

Hints :
Civil_Set 1B

Question Number : 145 Question Id : 630680408564 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

Match the items under List 1 (Test/Equipment) with those under List 2 (Purpose of test for soil). Use codes in list for matching.

List 1	List 2
P. Hydrometer	1. Determination of consistency limits of soil
Q. Ring and Water replacement method	2. Moisture content determination of soil
R. Sand bath method	3. Determine the grain size distribution of soil
S. Casagrande's apparatus	4. Determination of in-place density of soil

Options :

1. ✖ P - 4, Q - 3, R - 1, S - 2

2. ✔ P - 3, Q - 4, R - 2, S - 1

3. ✖ P - 2, Q - 3, R - 1, S - 4

4. ✖ P - 4, Q - 1, R - 2, S - 3

Hints :
Civil_Set 1B

Question Number : 146 Question Id : 630680408565 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

What is the correct sequence of occurrence of the Atterberg limits : Shrinkage limit (SL) Liquid limit(LL) , Plastic limit (PL) when the moisture content of a clayey soil reduced from a large value to a lower value gradually. Use the symbols for answering.

Options :

1. ✖ SL, PL, LL

2. ✖ LL, SL, PL

3. ✖ PL, SL, LL

4. ✔ LL, PL, SL

Hints :
Civil_Set 1B

Question Number : 147 Question Id : 630680408566 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium

Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

The saturated unit weight of a soil sample is estimated as 20.64 kN/m^3 . If the unit weight of water is 10 kN/m^3 , estimate the submerged unit weight of soil (in kN/m^3 units) ?

Options :

1. ✔ 10.64

2. ✖ 20.64

3. ✖ 30.64

4. ✖ 2.064

Hints :

Civil_Set 1B

Question Number : 148 Question Id : 630680408567 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

The following statements (P, Q) pertaining to a soil mass are given.

P. A high value of dry unit weight indicates a more compact soil.

Q. When the soil is at its liquid limit, its liquidity index is zero.

Identify the correct statement(s) and choose the correct option.

Options :

1. ✔ P only

2. ✖ Q only

3. ✖ Both P and Q

4. ✖ Neither P nor Q

Hints :

Civil_Set 1B

Question Number : 149 Question Id : 630680408568 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

If q_u is the ultimate bearing capacity of a soil, then the net safe bearing capacity q_{ns} is given by : (Notations : F - factor of safety , D_f - depth of foundation , γ - unit weight of soil)

Options :

1. ✔ $q_{ns} = \frac{q_u - \gamma D_f}{F}$

2. ✖ $q_{ns} = \frac{q_u + \gamma D_f}{F}$

3. ✖ $q_{ns} = q_u - \frac{\gamma D_f}{F}$

4. ✖ $q_{ns} = q_u + \frac{\gamma D_f}{F}$

Hints :

Civil_Set 1B

Question Number : 150 Question Id : 630680408569 Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Key Details :

Key	Value
Program	TBD
Course	TBD
Topic	TBD
Sub Topic	TBD
Concept or Type	TBD
Difficulty Level	M-Medium
Level	Grade Diploma
Exam	VIO1_Civil_Set 1
Project	VIOLIN1
Vendor Code	000000
SOW No	PROJECT_NoW_0000

As per IS classification Fine sand size particle are of diameter ranging from :

Options :

1. ✖ 4.75 mm to 20 mm
2. ✖ 4.75 mm to 2 mm
3. ✖ 2 mm to 0.425 mm
4. ✔ 0.425 mm to 0.075 mm

Hints :
Civil_Set 1B