

Junior Engineer Civil Mechanical Electrical and Quantity Surveying and Contract Examination 2019

Roll Number	
Candidate Name	
Venue Name	
Exam Date	11/12/2020
Exam Time	3:00 PM - 5:00 PM
Subject	Junior Engineer 2019 Civil

Section : General Intelligence and Reasoning

Q.1 Select the option in which the two words are NOT related in the same way as are the two words in the given word-pair.
Neuron : Brain

- Ans
- ☒ 1. Potassium : Polythene
 - ☐ 2. Leaves : Tree
 - ☐ 3. Wool : Blanket
 - ☐ 4. Chip : Computer

Question ID : 6549784792
Status : Answered
Chosen Option : 4

Q.2 Select the option that is related to the third term in the same way as the second term is related to the first term.
HOCKEY : IPDLFZ :: TRANSFER : ?

- Ans
- ☐ 1. USBMPGFS
 - ☐ 2. USBOTEES
 - ☐ 3. USBOSGDZ
 - ☒ 4. USBOTGFS

Question ID : 6549784794
Status : Answered
Chosen Option : 4

Q.3 Arrange the following words in a meaningful sequence.
a) Dogs b) Rats c) Lion d) Elephant e) Mosquito

- Ans
- ☐ 1. badec
 - ☐ 2. abcde
 - ☐ 3. cabde
 - ☒ 4. ebacd

Question ID : 6549784787
Status : Answered
Chosen Option : 4

Q.4 Select the option that is related to the third number in the same way as the second number is related to the first number.

21 : 438 :: 34 : ?

- Ans
- ☒ 1. 1155
 - ☒ 2. 1149
 - ☒ 3. 1256
 - ☒ 4. 1156

Question ID : 6549784815

Status : Not Answered

Chosen Option : --

Q.5 Select the option that can replace question mark (?) in the following matrix.

14 15 17

21 22 24

290 325 ?

- Ans
- ☒ 1. 402
 - ☒ 2. 403
 - ☒ 3. 405
 - ☒ 4. 401

Question ID : 6549784816

Status : Answered

Chosen Option : 4

Q.6 'Zoology' is related to 'Animals' in the same way as 'Numismatics' is related to '_____'

- Ans
- ☒ 1. Insects
 - ☒ 2. Liver
 - ☒ 3. Currency
 - ☒ 4. Neonatal

Question ID : 6549784790

Status : Not Answered

Chosen Option : --

Q.7 Introducing a girl, Meena said, "She is the only daughter of my sister's son". What relation does Meena's sister have to the girl?

- Ans
- ☒ 1. Paternal grandmother
 - ☒ 2. Grandmother's sister
 - ☒ 3. Mother-in-law
 - ☒ 4. Maternal grandmother

Question ID : 6549784806

Status : Answered

Chosen Option : 1

Q.8 Select the combination of letters that when sequentially placed in the blanks of the given letter series will complete the series.

_ n u _ u m _ m _ m n _ n u _

- Ans**
-  1. u, m, n, m, u, n
 -  2. m, n, u, n, u, m
 -  3. n, m, u, n, m, u
 -  4. m, n, n, u, u, m

Question ID : 6549784782

Status : Not Answered

Chosen Option : --

Q.9 Select the combination of letters that when sequentially placed in the blanks of the given letter series will complete the series.

_ t _ s d _ t a _ d p _ a s _

- Ans**
-  1. s, p, a, s, t, d
 -  2. p, a, s, p, t, d
 -  3. d, a, d, s, t, p
 -  4. p, a, p, s, t, d

Question ID : 6549784781

Status : Not Answered

Chosen Option : --

Q.10 Select the option that is related to the third number in the same way as the second number is related to the first number.

19 : 133 :: 23 : ?

- Ans**
-  1. 159
 -  2. 138
 -  3. 142
 -  4. 161

Question ID : 6549784811

Status : Answered

Chosen Option : 4

Q.11 Select the Venn diagram that best illustrates the relationship between the following classes.
Liquid, Water, Inflammable

Ans



Question ID : 6549784827

Status : Answered

Chosen Option : 2

Q.12 KK is 16th from the left end in a row and PG is 18th from the right end. MJ is 11th from KK towards the right end and 3rd from PG towards the right end. How many people are there in the row?

Ans

☒ 1. 43

☒ 2. 40

☒ 3. 41

☒ 4. 42

Question ID : 6549784807

Status : Not Answered

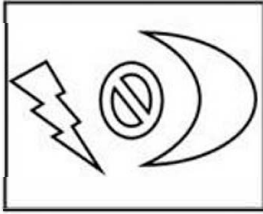
Chosen Option : --

Q.13 Select the correct mirror image of the given figure when the mirror is placed to the right side of the figure.

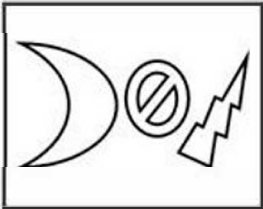


Ans

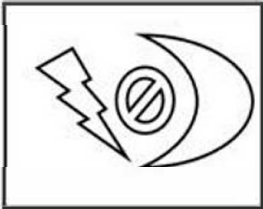
✗ 1.



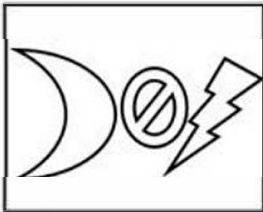
✗ 2.



✓ 3.



✗ 4.



Question ID : 6549784825

Status : Answered

Chosen Option : 3

Q.14 Select the option that is related to the third term in the same way as the second term is related to the first term.

CALLER : BCKNDT :: BATTLE : ?

Ans

✗ 1. ACSVND

✗ 2. ACRSND

✓ 3. ACSVKG

✗ 4. ADRVKG

Question ID : 6549784795

Status : Answered

Chosen Option : 3

Q.15 In a certain code language, BOOK is coded as 5886, EXAM is coded as 2714 and COLLEGE is coded as 0899232. What will be the code for 'MOCKABLE' in the same language?

- Ans
- ☒ 1. 48061592
 - ☐ 2. 18610592
 - ☐ 3. 18061592
 - ☐ 4. 48061252

Question ID : 6549784800

Status : Answered

Chosen Option : 1

Q.16 Select the option in which the given figure is embedded. (Rotation is NOT allowed)



Ans

- ☐ 1.
- ☐ 2.
- ☐ 3.
- ☒ 4.

Question ID : 6549784822

Status : Answered

Chosen Option : 4

Q.17 Arrange the following words in the order in which they appear in an English dictionary.

1. Presentation
2. Prevail
3. Precautious
4. Precarious
5. Pretention

Ans  1. 3, 1, 2, 5, 4
 2. 4, 3, 1, 5, 2
 3. 3, 1, 4, 2, 5
 4. 4, 1, 3, 5, 2

Question ID : 6549784786

Status : Answered

Chosen Option : 2

Q.18 Select the option that is related to the third term in the same way as the second term is related to the first term.

SHELTER : TJHPYKY :: OUTSIDE : ?

Ans  1. PVWWNJL
 2. PWWWNJL
 3. NVUTJEF
 4. NWWXNJL

Question ID : 6549784796

Status : Answered

Chosen Option : 2

Q.19 Arrange the following organisms in a logical and meaningful order.

1. Dinosaurs
2. Mammals
3. Early Reptiles
4. Bacteria
5. Fish

Ans  1. 5, 4, 2, 3, 1
 2. 4, 5, 1, 3, 2
 3. 4, 3, 5, 1, 2
 4. 4, 5, 3, 1, 2

Question ID : 6549784785

Status : Answered

Chosen Option : 3

Q.20 Rajesh is standing to the east of Ram, who is standing to the north of Ramesh. If Rohan is standing to the south of Ramesh, then in which direction is Rohan standing with respect to Rajesh?

- Ans  1. South-West
 2. South-East
 3. North-West
 4. North-East

Question ID : 6549784803
Status : Answered
Chosen Option : 4

Q.21 Select the option in which the two words are related in the same way as are the two words in the given word-pair.
Truth : Fiction

- Ans  1. Light : Shine
 2. Charm : Glamour
 3. Gap : Cavity
 4. Speedy : Leisurely

Question ID : 6549784791
Status : Answered
Chosen Option : 4

Q.22 Select the option in which the two numbers share the same relationship as that shared by the given number-pair.
529 : 23

- Ans  1. 635 : 25
 2. 111 : 11
 3. 381 : 19
 4. 729 : 27

Question ID : 6549784812
Status : Answered
Chosen Option : 4

Q.23 Select the correct combination of mathematical signs that can sequentially replace the four signs to balance the given equation.
 $20 \div 12 \times 4 + 8 - 6 = 29$

- Ans  1. +, ×, −, +
 2. −, +, ×, +
 3. +, −, +, ×
 4. −, +, ×, +

Question ID : 6549784818
Status : Not Answered
Chosen Option : --

Q.24 Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

- I. All violins are instruments
2. All instruments are guitars.

Conclusions:

- I. All guitars are instruments.
- II. All violins are guitars.

- Ans**
- ☒ 1. Neither conclusion I nor II follows.
 - ☒ 2. Only conclusion I follows
 - ☒ 3. Only conclusion II follows
 - ☒ 4. Both conclusions I and II follow

Question ID : 6549784802

Status : Answered

Chosen Option : 3

Q.25 Rekha is the mother of Aryan. Anand is the father of Arpan. If Aryan, Arpan and Rahul are brothers, then which of the following statements is INCORRECT?

- Ans**
- ☒ 1. Rahul and Rekha are not related.
 - ☒ 2. Anand is the father of Aryan.
 - ☒ 3. Rekha is Anand's wife.
 - ☒ 4. Aryan has two siblings.

Question ID : 6549784805

Status : Not Answered

Chosen Option : --

Q.26 Select the correct combination of mathematical signs that can sequentially replace the * signs to balance the given equation.

$$5 * 3 * 8 * 12 * 4 = 3$$

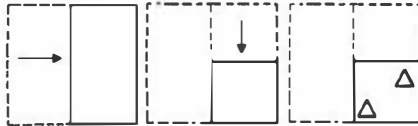
- Ans**
- ☒ 1. +, ×, −, ÷
 - ☒ 2. +, ×, ÷, −
 - ☒ 3. −, ×, +, ÷
 - ☒ 4. +, ÷, −, ×

Question ID : 6549784817

Status : Answered

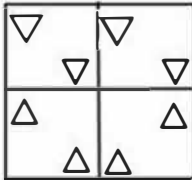
Chosen Option : 2

Q.27 A paper is folded and cut as shown in the following figure. How will it appear when unfolded?

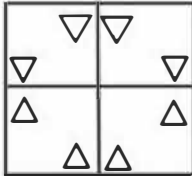


Ans

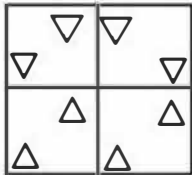
✗ 1.



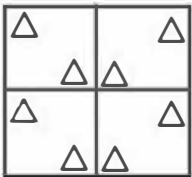
✓ 2.



✗ 3.



✗ 4.



Question ID : 6549784826

Status : Answered

Chosen Option : 2

Q.28 Select the option that is related to the third number in the same way as the second number is related to the first number.

5 : 130 :: 7 : ?

Ans

✗ 1. 351

✗ 2. 343

✓ 3. 350

✗ 4. 353

Question ID : 6549784813

Status : Answered

Chosen Option : 3

Q.29 A clock is so rotated that the digit 6 is replaced by 12 and the digit 3 is replaced by 9. In which direction respectively will the hour and minute hand be at exactly 22 : 15 hours?

- Ans
- ☒ 1. South-East and West
 - ☐ 2. North-East and East
 - ☐ 3. North-East and West
 - ☐ 4. South-East and East

Question ID : 6549784804

Status : Not Answered

Chosen Option : --

Q.30 For how many positive integer values of X can the following statement be true?

$$X^2 \leq 2X$$

- Ans
- ☐ 1. 4
 - ☐ 2. 3
 - ☐ 3. 1
 - ☒ 4. 2

Question ID : 6549784819

Status : Not Answered

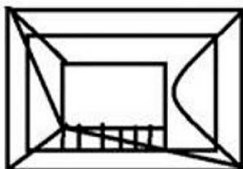
Chosen Option : --

Q.31 Select the option in which the given figure is embedded. (Rotation is NOT allowed)

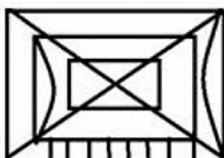


Ans

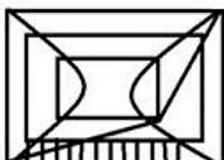
☒ 1.



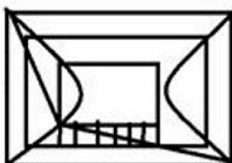
☒ 2.



☒ 3.



☒ 4.



Question ID : 6549784823

Status : Answered

Chosen Option : 4

Q.32 Select the option in which the two numbers are NOT related in the same way as are the two numbers in the given number-pair.

7 : 343

Ans

☒ 1. 11 : 1331

☒ 2. 15 : 3375

☒ 3. 17 : 4923

☒ 4. 13 : 2197

Question ID : 6549784814

Status : Marked For Review

Chosen Option : 2

Q.33 In a row of some people, X is 11th from the left and Z is 15th from the right. When X and Z interchange their positions, X will be 5th from the left. What will be Z's position from the right after the rearrangement?

- Ans**
- ☒ 1. 11th
 - ☒ 2. 9th
 - ☒ 3. 17th
 - ☒ 4. 7th

Question ID : 6549784808
Status : Not Answered
Chosen Option : --

Q.34 Select the option in which the two words are related in the same way as are the two words in the given word-pair.
Despair : Desperation

- Ans**
- ☒ 1. Shallow : Deep
 - ☒ 2. Hideous : Ugly
 - ☒ 3. Virtuous : Sinful
 - ☒ 4. Joy : Misery

Question ID : 6549784793
Status : Answered
Chosen Option : 3

Q.35 In a certain code language 'SUNRISE' is written as 'U'ZPWKXG'. How will 'DARKER' be written in the same code language?

- Ans**
- ☒ 1. FFTPGW
 - ☒ 2. EFTPGV
 - ☒ 3. FETPGV
 - ☒ 4. FFSPGW

Question ID : 6549784797
Status : Answered
Chosen Option : 1

Q.36 Arrange the following objects in a logical and meaningful order.

1. Belt
2. Sandals
3. Pocket square
4. Hat
5. Bow-tie

Ans  1. 4, 5, 2, 1, 3
 2. 4, 3, 1, 2, 5
 3. 4, 5, 3, 1, 2
 4. 2, 5, 3, 1, 4

Question ID : 6549784784

Status : Answered

Chosen Option : 3

Q.37 Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

1. Some scooters are not trains.
2. Some trains are cars.
3. Some buses are cars.

Conclusions:

- I. All scooters are cars.
- II. Some buses are trains.

Ans  1. Only conclusion II follows
 2. Neither conclusion I nor II follows
 3. Only conclusion I follows
 4. Both conclusions I and II follow

Question ID : 6549784801

Status : Answered

Chosen Option : 4

Q.38 Select the option that can replace the question mark (?) in the following series.

A, D, J, M, S, ?

Ans  1. X
 2. R
 3. Y
 4. V

Question ID : 6549784779

Status : Answered

Chosen Option : 4

Q.39 Select the option that can replace question mark (?) in the following series.

C, H, O, X, ?

Ans ☒ 1. D

☒ 2. I

☒ 3. L

☒ 4. K

Question ID : 6549784780

Status : Answered

Chosen Option : 2

Q.40 Select the option in which the given figure is embedded. (Rotation is NOT allowed)

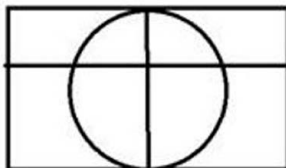
Σ

Ans

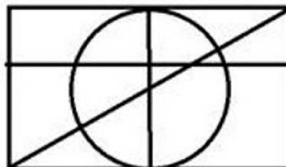
☒ 1.



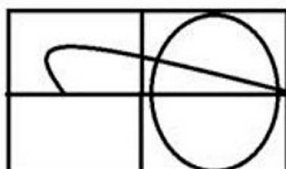
☒ 2.



☒ 3.



☒ 4.



Question ID : 6549784824

Status : Answered

Chosen Option : 1

Q.41 Select the Venn diagram that best illustrates the relationship between the following classes.

Indian, Architect, Educated

Ans



Question ID : 6549784828

Status : Answered

Chosen Option : 2

Q.42 Select the combination of letters that when sequentially placed in the blanks of the given letter series will complete the series.

_ _ o _ u _ _ p _ i o _

Ans

✓ 1. u, i, p, i, o, u, p

✗ 2. i, p, u, i, p, o, u

✗ 3. u, i, p, i, u, o, p

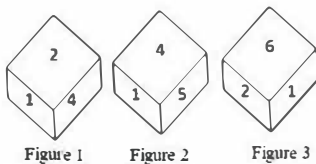
✗ 4. o, p, i, u, o, u, p

Question ID : 6549784783

Status : Not Answered

Chosen Option : --

Q.43 Three different positions of the same dice are shown. Find the number on the face opposite to the face showing number '1'?



Ans

✗ 1. 6

✗ 2. 2

✗ 3. 4

✓ 4. 3

Question ID : 6549784821

Status : Answered

Chosen Option : 4

Q.44 'Tailor' is related to 'Needle' in the same way as 'Warrior' is related to '_____'.

- Ans
- ☐ 1. War
 - ☐ 2. Headdress
 - ☒ 3. Sword
 - ☐ 4. Armour

Question ID : 6549784788
Status : Answered
Chosen Option : 4

Q.45 In a certain code language, 'Party On Monday' is written as 'LPNMO HK QHKRPO'. How will 'Mandatory' be written in the same code language?

- Ans
- ☐ 1. QRPKNHMNO
 - ☒ 2. QPKRPMHNO
 - ☐ 3. QKPRPMHNO
 - ☐ 4. QPKRPNHNO

Question ID : 6549784798
Status : Not Answered
Chosen Option : --

Q.46 Select the number that can replace the question mark (?) in the following series.
31, 37, 41, 43, ?, 53, 59

- Ans
- ☐ 1. 45
 - ☐ 2. 49
 - ☐ 3. 51
 - ☒ 4. 47

Question ID : 6549784810
Status : Not Answered
Chosen Option : --

Q.47 If JAM and CAT are coded as 24, then how will WAX be coded?

- Ans
- ☒ 1. 48
 - ☐ 2. 42
 - ☐ 3. 24
 - ☐ 4. 21

Question ID : 6549784799
Status : Not Answered
Chosen Option : --

Q.48 Select the number that can replace the question mark (?) in the following series.

14, 8, 20, 7, 26, 6, 32, ?

- Ans
- ☒ 1. 32
 - ☒ 2. 8
 - ☒ 3. 36
 - ☒ 4. 5

Question ID : 6549784809

Status : Not Answered

Chosen Option : --

Q.49 'Fan' is related to 'Electricity' in the same way as 'Car' is related to '_____',

- Ans
- ☒ 1. Fuel
 - ☒ 2. Steering
 - ☒ 3. Engine
 - ☒ 4. Tire

Question ID : 6549784789

Status : Answered

Chosen Option : 1

Q.50 Which of the following statements is correct for Quantity A and B?

Quantity A

$$(2X - 17) \div 2$$

Quantity B

$$X - 17$$

- Ans
- ☒ 1. Quantity A is greater
 - ☒ 2. Quantity A will be four times higher than Quantity B
 - ☒ 3. Quantity B is greater
 - ☒ 4. Both the quantities will be the same

Question ID : 6549784820

Status : Not Answered

Chosen Option : --

Section : General Awareness

Q.1 Which of the following is also called as devil-fish?

- Ans
- ☒ 1. Pila
 - ☒ 2. Chiton
 - ☒ 3. Unio
 - ☒ 4. Octopus

Question ID : 6549784843

Status : Not Answered

Chosen Option : --

Q.2 What is the function of an important part of the human eye, the iris?

- Ans
- ☒ 1. Control pupil size
 - ☐ 2. Image building
 - ☐ 3. Eye lens protection
 - ☐ 4. Straighten the inverted image on the retina

Question ID : 6549784840
Status : Answered
Chosen Option : 1

Q.3 When was the Drafting Committee formed?

- Ans
- ☐ 1. 17 October, 1945
 - ☐ 2. 14 August, 1948
 - ☒ 3. 29 August, 1947
 - ☐ 4. 9 November, 1946

Question ID : 6549784872
Status : Answered
Chosen Option : 4

Q.4 The period of rising inflation but falling output and rising unemployment is called:

- Ans
- ☐ 1. recession
 - ☐ 2. disinflation
 - ☐ 3. depression
 - ☒ 4. stagflation

Question ID : 6549784837
Status : Answered
Chosen Option : 1

Q.5 What is the cause of the Cushing disease?

- Ans
- ☐ 1. Viral infection
 - ☒ 2. Elevated levels of a hormone
 - ☐ 3. Bacterial infection
 - ☐ 4. Fungal infection

Question ID : 6549784841
Status : Not Answered
Chosen Option : --

Q.6 In which part of the body are the Tarsal bones found?

- Ans
- ☐ 1. Ear
 - ☒ 2. Leg
 - ☐ 3. Head
 - ☐ 4. Hand

Question ID : 6549784842
Status : Not Answered
Chosen Option : --

Q.7 Which of the following is a crop of the Zaid season?

- Ans
- ☐ 1. Mustard
 - ☒ 2. Pumpkin
 - ☐ 3. Soybean
 - ☐ 4. Ground nut

Question ID : 6549784859
Status : Answered
Chosen Option : 2

Q.8 Which of the following is NOT correct about Oxalic Acid?

- Ans
- ☐ 1. It is found in small amounts in human urine.
 - ☐ 2. It is a Dicarboxylic Acid.
 - ☒ 3. When it combines with potassium it forms an explosive substance.
 - ☐ 4. It removes ink spots from cloth.

Question ID : 6549784850
Status : Not Answered
Chosen Option : --

Q.9 When was the National Green Tribunal formed?

- Ans
- ☒ 1. 18 October, 2010
 - ☐ 2. 20 August, 2014
 - ☐ 3. 04 January, 2012
 - ☐ 4. 17 March, 2011

Question ID : 6549784848
Status : Answered
Chosen Option : 4

Q.10 Kerala got the first position on the 'SDG India Index 2019'. SDG India Index was developed by:

- Ans
- ☒ 1. Ministry of Finance
 - ☒ 2. Ministry of Human Resource Development
 - ☒ 3. NITI Aayog
 - ☒ 4. Ministry of Defence

Question ID : 6549784835
Status : Answered
Chosen Option : 3

Q.11 Which of the following is INCORRECTLY matched with regards to viceroy and the corresponding incidents?

- Ans
- ☒ 1. Lord Chelmsford - Rowlatt Act
 - ☒ 2. Lord Reading - Establishment of Swaraj Party
 - ☒ 3. Lord Irwin - First Round Table Conference
 - ☒ 4. Lord Wavell - The Cripps Mission

Question ID : 6549784869
Status : Answered
Chosen Option : 2

Q.12 The theme of the BioAsia 2020 is:

- Ans
- ☒ 1. 'Trees and Future'
 - ☒ 2. 'Health and Pollution'
 - ☒ 3. 'Today for Tomorrow'
 - ☒ 4. 'Today for Plantation'

Question ID : 6549784832
Status : Answered
Chosen Option : 3

Q.13 The term 'Sarkar' in Mughal administration stands for:

- Ans
- ☒ 1. province
 - ☒ 2. village
 - ☒ 3. government
 - ☒ 4. district

Question ID : 6549784866
Status : Answered
Chosen Option : 3

Q.14 The femur bones of the human body are also known as:

- Ans
- ☒ 1. wrist bones
 - ☐ 2. thigh bones
 - ☐ 3. shoulder bones
 - ☐ 4. collar bones

Question ID : 6549784849
Status : Answered
Chosen Option : 2

Q.15 On which route has the 'Second Tejas Train' been launched by Indian Railways?

- Ans
- ☒ 1. Ahmedabad – Mumbai route
 - ☐ 2. Lucknow – Delhi route
 - ☐ 3. Bhopal – Nagpur
 - ☐ 4. Jaipur – Pune route

Question ID : 6549784831
Status : Answered
Chosen Option : 1

Q.16 The Punchhi Commission is related to:

- Ans
- ☐ 1. fundamental right
 - ☐ 2. panchayat Raj
 - ☒ 3. centre-state relations
 - ☐ 4. election commission

Question ID : 6549784874
Status : Answered
Chosen Option : 4

Q.17 When was the Right To Information (Amendment) Act, 2019 passed by the Lok Sabha?

- Ans
- ☒ 1. 22 July, 2019
 - ☐ 2. 2 October, 2019
 - ☐ 3. 18 February, 2019
 - ☐ 4. 13 December, 2019

Question ID : 6549784875
Status : Answered
Chosen Option : 2

Q.18 Which state government has decided to celebrate the first day of every month of the year 2020 as 'No Vehicle Day'?

- Ans
- ☒ 1. Chhattisgarh
 - ☒ 2. Odisha
 - ☒ 3. Rajasthan
 - ☒ 4. Karnataka

Question ID : 6549784833

Status : Answered

Chosen Option : 4

Q.19 Which of the following can be used to harden glass?

- Ans
- ☒ 1. Chlorethane
 - ☒ 2. Potassium Chloride
 - ☒ 3. Nitrogen Dioxide
 - ☒ 4. Calcium Chloride

Question ID : 6549784845

Status : Answered

Chosen Option : 3

Q.20 Which organisation has approved a \$490 million loan as part of a \$904 million public-private partnership project to improve about 1,600 kilometres of state highways and major district roads in Madhya Pradesh in the year 2019?

- Ans
- ☒ 1. World Bank
 - ☒ 2. Asian Development Bank
 - ☒ 3. International Monetary Fund
 - ☒ 4. World Trade Organisation

Question ID : 6549784836

Status : Answered

Chosen Option : 2

Q.21 Which of the following is INCORRECTLY matched with respect to mineral and its site?

- Ans
- ☒ 1. Iron ore - Bailadila
 - ☒ 2. Silver - Zawar
 - ☒ 3. Coal - Jharia
 - ☒ 4. Bauxite - Khetri

Question ID : 6549784863

Status : Answered

Chosen Option : 2

Q.22 Who is the author of the book 'Why I Am a Hindu'?

- Ans
- ☒ 1. Shiv Khera
 - ☒ 2. Shashi Tharoor
 - ☒ 3. Khushwant Singh
 - ☒ 4. Anita Desai

Question ID : 6549784870

Status : Answered

Chosen Option : 3

Q.23 Which of the following is NOT correct about graphite?

- Ans
- ☒ 1. It is a allotrope of carbon.
 - ☒ 2. Graphite has a high melting point.
 - ☒ 3. It has tetrahedral structure.
 - ☒ 4. Graphite is insoluble in water and organic solvents.

Question ID : 6549784855

Status : Answered

Chosen Option : 3

Q.24 Which of the following is NOT a deficiency disease?

- Ans
- ☒ 1. Anaemia
 - ☒ 2. Gonorrhoea
 - ☒ 3. Xerophthalmia
 - ☒ 4. Goitre

Question ID : 6549784856

Status : Answered

Chosen Option : 2

Q.25 Sunita Lakra announced her international retirement in January 2020. With which sport is Sunita Lakra associated?

- Ans
- ☒ 1. Tennis
 - ☒ 2. Cricket
 - ☒ 3. Badminton
 - ☒ 4. Hockey

Question ID : 6549784877

Status : Answered

Chosen Option : 4

Q.26 Which of the following plants produce opium?

- Ans
- ☐ 1. Nicotiana Tabacum
 - ☐ 2. Cucumis Sativus
 - ☐ 3. Sorghum Vulgare
 - ☒ 4. Papaver Somniferum

Question ID : 6549784852

Status : Answered

Chosen Option : 2

Q.27 Which of the following is NOT correct about Laterite soil?

- Ans
- ☐ 1. This soil is poor in organic matter, nitrogen, phosphate.
 - ☐ 2. This soil develops in areas with high temperature and high rainfall.
 - ☒ 3. This soil is widespread in the northern plains and the river valleys.
 - ☐ 4. This is the result of intense leaching due to tropical rains.

Question ID : 6549784864

Status : Answered

Chosen Option : 3

Q.28 भारतीय पुरावनस्पति विज्ञान (Indian Paleobotany) के जनक कौन हैं?

- Ans
- ☐ 1. चंद्रशेखर वेंकट रमन
 - ☐ 2. प्रफुल्ल चंद्र रे
 - ☒ 3. बीरबल साहनी
 - ☐ 4. मेघनाद साहा

Question ID : 6549784847

Status : Answered

Chosen Option : 1

Q.29 Which of the following is NOT correct about a concave mirror?

- Ans
- ☐ 1. When the object is on focus, the image is formed at the infinite.
 - ☒ 2. The reflective surface of this mirror is embossed.
 - ☐ 3. It is used in vehicle headlights and searchlights.
 - ☐ 4. Concave mirrors can produce both real and virtual images.

Question ID : 6549784857

Status : Answered

Chosen Option : 2

Q.30 Which of the following hormones does NOT belong to the reproductive system?

- Ans
- ☒ 1. Progesterone hormone
 - ☒ 2. Adrenaline hormone
 - ☒ 3. Estrogen hormone
 - ☒ 4. Testosterone hormone

Question ID : 6549784854
Status : Answered
Chosen Option : 2

Q.31 Which of the following Passes is located in Sikkim?

- Ans
- ☒ 1. Taungup Pass
 - ☒ 2. Baralacha Pass
 - ☒ 3. Nathula Pass
 - ☒ 4. Banihal Pass

Question ID : 6549784861
Status : Answered
Chosen Option : 3

Q.32 Which catalyst is used in the thermal decomposition of KClO_3 (potassium chlorate)?

- Ans
- ☒ 1. Molybdenum
 - ☒ 2. Glycerol
 - ☒ 3. Ethanol
 - ☒ 4. Manganese dioxide

Question ID : 6549784853
Status : Answered
Chosen Option : 4

Q.33 Which Article says that the elections to the House of the People and to the Legislative Assembly of every state shall be on the basis of adult suffrage?

- Ans
- ☒ 1. Article 301
 - ☒ 2. Article 326
 - ☒ 3. Article 261
 - ☒ 4. Article 300

Question ID : 6549784876
Status : Not Answered
Chosen Option : --

Q.34 कौन सी टीम सैफ़ (SAFF) महिला चैम्पियनशिप 2019 की विजेता थी?

- Ans ☒ 1. भारत
☒ 2. संयुक्त राज्य अमेरिका
☒ 3. पाकिस्तान
☒ 4. जापान

Question ID : 6549784878

Status : Answered

Chosen Option : 2

Q.35 Which of the following is NOT correct with respect to drip irrigation?

- Ans ☒ 1. It saves water wastage.
☒ 2. Fertilizers can be used with high efficiency.
☒ 3. It requires very less installation.
☒ 4. It prevents soil erosion.

Question ID : 6549784860

Status : Answered

Chosen Option : 3

Q.36 India got the 63rd position in Ease of Doing Business Report 2020. Which organisation publishes the report?

- Ans ☒ 1. International Monetary Fund
☒ 2. World Bank
☒ 3. World Trade Organisation
☒ 4. World Customs Organisation

Question ID : 6549784839

Status : Answered

Chosen Option : 3

Q.37 Which of the following joint bones can bend in only one direction?

- Ans ☒ 1. Pivot joint
☒ 2. Saddle joint
☒ 3. Hinge joint
☒ 4. Gliding joint

Question ID : 6549784851

Status : Answered

Chosen Option : 2

Q.38 What colour of light is formed when red, blue and green colours of light meet in equal proportion?

- Ans
- ☒ 1. Black
 - ☒ 2. Yellow
 - ☒ 3. White
 - ☒ 4. Violet

Question ID : 6549784844

Status : Answered

Chosen Option : 3

Q.39 निम्नलिखित में से कौन सी नदी ब्रह्मपुत्र नदी प्रणाली का भाग नहीं है?

- Ans
- ☒ 1. सुबनसिरी
 - ☒ 2. मानस
 - ☒ 3. इंद्रावती
 - ☒ 4. थनसिरी

Question ID : 6549784858

Status : Answered

Chosen Option : 3

Q.40 Choose the INCORRECT statement with respect to the Kushan ruler Kanishka:

- Ans
- ☒ 1. Third Buddhist council was held during his reign.
 - ☒ 2. The main capital of his empire was located at Purwapura in Gandhara.
 - ☒ 3. Charak was contemporary to Kanishka.
 - ☒ 4. Huvishka was the successor of Kanishka.

Question ID : 6549784868

Status : Not Answered

Chosen Option : --

Q.41 Which of the following is used to open a new tab on a browser?

- Ans
- ☒ 1. Ctrl + T
 - ☒ 2. Ctrl + A
 - ☒ 3. Ctrl + W
 - ☒ 4. Ctrl + Y

Question ID : 6549784830

Status : Not Answered

Chosen Option : --

Q.42 Which of the following instruments is used to determine the area of irregular plots in a map?

- Ans
- ☐ 1. Mapometer
 - ☐ 2. Cartometer
 - ☐ 3. Segmometer
 - ☒ 4. Planimeter

Question ID : 6549784846

Status : Answered

Chosen Option : 4

Q.43 NASA released a picture of crashed Vikram lander on 3, December 2019. Which satellite did NASA use to find Vikram?

- Ans
- ☐ 1. Skylab
 - ☒ 2. Lunar Reconnaissance Orbiter
 - ☐ 3. Explorer 1
 - ☐ 4. Juno

Question ID : 6549784834

Status : Answered

Chosen Option : 2

Q.44 KALIA scheme launched by the Odisha government is related to:

- Ans
- ☐ 1. students
 - ☐ 2. women
 - ☐ 3. children
 - ☒ 4. farmers

Question ID : 6549784838

Status : Answered

Chosen Option : 4

Q.45 Choose the correct option with respect to the Poona Pact.

- Ans
- ☐ 1. Signed in August 1931 between Mahatma Gandhi and BR Ambedkar.
 - ☐ 2. Signed in August 1931 between Mahatma Gandhi and Lord Irwin.
 - ☐ 3. Signed in September 1932 between Mahatma Gandhi and Lord Irwin.
 - ☒ 4. Signed in September 1932 between Mahatma Gandhi and BR Ambedkar.

Question ID : 6549784867

Status : Answered

Chosen Option : 4

Q.46 Which of the following is INCORRECTLY matched with respect to river and the corresponding town on its bank?

- Ans
- ☒ 1. Brahmaputra - Dibrugarh
 - ☒ 2. Narmada - Pune
 - ☒ 3. Gomti - Lucknow
 - ☒ 4. Chambal - Kota

Question ID : 6549784862

Status : Answered

Chosen Option : 4

Q.47 When was the Famine Commission under the Chairmanship of Sir Richard Strachey set up?

- Ans
- ☒ 1. 1895
 - ☒ 2. 1912
 - ☒ 3. 1904
 - ☒ 4. 1878

Question ID : 6549784865

Status : Answered

Chosen Option : 3

Q.48 The term 'Pentium' is related to _____.

- Ans
- ☒ 1. microprocessor
 - ☒ 2. mouse
 - ☒ 3. hard disk
 - ☒ 4. DVD

Question ID : 6549784829

Status : Answered

Chosen Option : 1

Q.49 Which Article provides protection from arrest and detention to a person?

- Ans
- ☒ 1. Article 22
 - ☒ 2. Article 19
 - ☒ 3. Article 32
 - ☒ 4. Article 18

Question ID : 6549784873

Status : Answered

Chosen Option : 1

Q.50 In Golden Globe Awards 2019 which movie won the award in the category Best Motion Picture - Drama?

- Ans
- ☐ 1. Joker
 - ☐ 2. Marriage Story
 - ☐ 3. Call Me By Your Name
 - ☒ 4. 1917

Question ID : 6549784871

Status : Answered

Chosen Option : 4

Section : General Engineering Civil and Structural

Q.1 At the base of a mountain, a mercury barometer reads 700 mm whereas at the top it reads 500 mm of Mercury. The density of air is 1.23 kg m^{-3} , is assumed constant. Determine the height of the mountain.

(Take specific gravity of mercury as 13.6, and the density of water as 1000 kg m^{-3})

- Ans
- ☐ 1. 3423 m
 - ☒ 2. 2211 m
 - ☐ 3. 1584 m
 - ☐ 4. 1122 m

Question ID : 6549784928

Status : Not Answered

Chosen Option : --

Q.2 In a structural steel work it is mentioned that a rolled steel section ISLB 500 @735.8 N/m was used in the work. This indicates that the section is:

- Ans
- ☐ 1.
a T-section 500 mm deep and the self-weight is 735.8 N/m length
 - ☒ 2.
an I-section 500 mm deep and the self-weight is 735.8 N/m length
 - ☐ 3.
a T-section 500 mm deep, flange width 500 mm, and the self-weight is 735.8 N/m length
 - ☐ 4.
a channel section 500 mm deep and the self-weight is 735.8 N/m length

Question ID : 6549784973

Status : Answered

Chosen Option : 2

Q.3 The items given in options pertain to different aspects or functionalities of track design in railway engineering. Select the INCORRECT combination.

Ans  1.

Ballast : Granular mattress laid over the earth formation to provide suitable bed for the sleepers on which they can rest

 2.

Ruling gradient : Maximum gradient to which a track may be laid in a particular section

 3.

Marshalling yard : To separate goods wagons received from various centers in the order of stations to which they are to be sent

 4.

Pusher gradient : Rising gradient which is followed by a falling gradient and along which the train climbs easily due to momentum gained by them over the falling gradient

Question ID : 6549784943

Status : Answered

Chosen Option : 2

Q.4 The soil moisture content of a clay soil sample was determined for the plastic limit, liquid limit and shrinkage limits. What will be the correct sequence of the occurrence of the following limits, Plastic Limit (P), Liquid limit (L) and shrinkage limit (S), associated with the decrease in moisture content (in the order high moisture content to low moisture content)?

(Use symbols P, L, and S for selection of answer)

Ans  1. L, S, P

 2. P, L, S

 3. S, L, P

 4. L, P, S

Question ID : 6549784917

Status : Answered

Chosen Option : 4

Q.5 Which of the following is NOT the method of estimating building works?

Ans  1. Crossing method

 2. Out-to-out and in-to-in

 3. Centre line method

 4. Method of projections

Question ID : 6549784894

Status : Answered

Chosen Option : 1

Q.6 In an earth work construction, a mass haul diagram is a diagram showing:

- Ans
- ☐ 1. the amount of cutting and filling along the length
 - ☐ 2. the longitudinal section of the site
 - ☐ 3. the cross-section of the site
 - ☒ 4. the cumulative volume of earth work and the haulage

Question ID : 6549784892

Status : Not Answered

Chosen Option : --

Q.7 For an airport, match the items in List 1 (Runway component) with those in List 2 (design criteria). Use the codes in the list for matching.

List 1

- A. Basic runway length
- B. Airport drainage
- C. Runway geometric design
- D. Runway Capacity

List 2

- 1. Location of exit taxiways
- 2. Engine failure class
- 3. Width and length of safety area of airport
- 4. Grading of airport site

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

Question ID : 6549784944

Status : Answered

Chosen Option : 4

Q.8 Three statements (S1, S2 and S3) related to civil engineering works are given. Identify the correct statements.

S1 : Mounds of earth left undisturbed in pits dug out for borrowing earth are known as Deadmen.

S2 : In earth work, the final shape of the ground after exaction or filling up is known as Burjis.

S3 : Dressed square stone blocks of given dimensions having faces perpendicular to each other and laid in courses is known as Ashlar .

- Ans
- ☐ 1. Only S2
 - ☐ 2. S1, S2, and S3
 - ☐ 3. S2 and S3
 - ☒ 4. S1 and S3

Question ID : 6549784893

Status : Answered

Chosen Option : 2

Q.9 The capitalised value of a property fetching a net annual rent of ₹64,000 /- at the highest prevailing rate of interest of 8% is:

- Ans**
- ☐ 1. ₹59,25,926/-
 - ☐ 2. ₹8,64,000/-
 - ☐ 3. ₹5,12,000/-
 - ☒ 4. ₹8,00,000/-

Question ID : 6549784899

Status : Not Answered

Chosen Option : --

Q.10 The yield strength of a mild steel specimen was found to be 250 N/mm². Taking a factor of safety of 2, the allowable working stress is:

- Ans**
- ☐ 1. 62.5 N/mm²
 - ☐ 2. 250 N/mm²
 - ☐ 3. 500 N/mm²
 - ☒ 4. 125 N/mm²

Question ID : 6549784974

Status : Answered

Chosen Option : 4

Q.11 A set of four rapid gravity filter bed system is to be designed for a town of 100000 population with daily supply of 250 litre/person day. The rate of filtration through the filter bed is 5000 litre/hour/m². If the length of filter bed is twice the width, determine the length (L) and width (W) of filter bed.

- Ans**
- ☐ 1. L = 12.4 m; W = 6.2 m
 - ☒ 2. L = 10.2 m; W = 5.1 m
 - ☐ 3. L = 11.8 m; W = 5.9 m
 - ☐ 4. L = 8.6 m; W = 4.3 m

Question ID : 6549784954

Status : Not Answered

Chosen Option : --

Q.12 Determine the specific weight of a liquid having specific gravity of 0.85. Take specific weight of water as 10000 N/m³. Express the answer in kN/m³ units.

- Ans**
- ☐ 1. 85
 - ☐ 2. 0.085
 - ☐ 3. 0.85
 - ☒ 4. 8.5

Question ID : 6549784925

Status : Answered

Chosen Option : 4

Q.13 The following statements (S1 to S4) pertain to a compression member.

S1 : The effective length depends on the boundary conditions of member at ends.

S2 : The elastic critical stress in compression decreases with decrease in slenderness ratio.

S3 : The ratio of the effective length to the radius of gyration of the member is termed as slenderness ratio of member.

S4 : The elastic critical stress in compression is independent of the slenderness ratio.

Identify the INCORRECT statement(s).

Ans

☒ 1. Only S1

☒ 2. Only S1 and S3

☒ 3. Only S2 and S4

☒ 4. Only S1, S3 and S4

Question ID : 6549784977

Status : Answered

Chosen Option : 4

Q.14 Which one out of four options below is NOT the purpose of vertical shafts in tunnel?

Ans

☒ 1. To speed up excavation from many working faces.

☒ 2.

To provide natural ventilation during and after the construction of tunnel.

☒ 3.

To pump out the water in case it is found during the construction of tunnel.

☒ 4.

To make use of it as a quarry to obtain stones for masonry works.

Question ID : 6549784946

Status : Answered

Chosen Option : 4

Q.15 A homogeneous simply supported prismatic beam of width B , depth D and span L is subjected to a concentrated load of magnitude 200 kN. The load can be placed anywhere along the span of the beam. The maximum flexural stress developed in the beam is:

Ans

☒ 1. $\frac{600 L}{B D^2}$

☒ 2. $\frac{75 L}{B D^2}$

☒ 3. $\frac{300 L}{B D^2}$

☒ 4. $\frac{75 L}{2 B D^2}$

Question ID : 6549784960

Status : Answered

Chosen Option : 3

Q.16 For a simply supported beam, if the area under the shear force diagram between 2 points is a constant C, then the difference between the moments at these points is:

Ans

- ☒ 1. C^2
- ☒ 2. C
- ☒ 3. $\frac{C^2}{2}$
- ☒ 4. 2 C

Question ID : 6549784957

Status : Answered

Chosen Option : 2

Q.17 Identify the method that is NOT used for determination of in situ unit weight of a natural soil deposit?

Ans

- ☒ 1. Sand bath method
- ☒ 2. Core cutter method
- ☒ 3. Water displacement method
- ☒ 4. Sand replacement method

Question ID : 6549784918

Status : Answered

Chosen Option : 1

Q.18 Among the different methods of tunnel construction, identify the one which is NOT suitable for rocks.

Ans

- ☒ 1. Shield method
- ☒ 2. Drift method
- ☒ 3. Full face method
- ☒ 4. Heading and benching method

Question ID : 6549784945

Status : Not Answered

Chosen Option : --

Q.19 A water course has a culturable command area of 1200 hectares (1 hectare = 10^4 m^2). The intensity of irrigation for crop A is 40% and for crop B is 35%, both being Kharif crops. The crop A has a kor period of 20 days and crop B has a kor period of 15 days. Calculate the discharge of the water course if the kor depth for crop A is 10 cm and for crop B is 16 cm.

Ans

- ☒ 1. $0.8 \text{ m}^3/\text{s}$
- ☒ 2. $0.15 \text{ m}^3/\text{s}$
- ☒ 3. $0.28 \text{ m}^3/\text{s}$
- ☒ 4. $0.52 \text{ m}^3/\text{s}$

Question ID : 6549784938

Status : Not Attempted and
Marked For Review

Chosen Option : --

Q.20 In the case of reinforced concrete column footings, the minimum value of nominal cover thickness to be provided for meeting the durability requirements, under very severe exposure conditions is:

- Ans
- ☒ 1. 50 mm
 - ☐ 2. 60 mm
 - ☐ 3. 40 mm
 - ☐ 4. 75 mm

Question ID : 6549784968

Status : Answered

Chosen Option : 4

Q.21 The criteria for minimum and maximum area of tension steel requirement in reinforced concrete beams (singly reinforced) as per IS 456 : 2000 is respectively: (Notations: A_s - area of steel, b - breadth of beam, d - effective depth of beam, D - depth of beam, f_y - characteristic yield strength of reinforcement)

- Ans
- ☐ 1. $\frac{A_{s_{min}}}{bd} \geq \frac{0.78}{f_y}, \frac{A_{s_{max}}}{bD} \leq 0.04$
 - ☒ 2. $\frac{A_{s_{min}}}{bd} \geq \frac{0.85}{f_y}, \frac{A_{s_{max}}}{bD} \leq 0.04$
 - ☐ 3. $\frac{A_{s_{min}}}{bd} \geq \frac{0.75}{f_y}, \frac{A_{s_{max}}}{bD} \leq 0.4$
 - ☐ 4. $\frac{A_{s_{min}}}{bd} \geq \frac{0.8}{f_y}, \frac{A_{s_{max}}}{bD} \leq 0.05$

Question ID : 6549784971

Status : Answered

Chosen Option : 2

Q.22 The major compound(s) present in Ordinary Portland Cement responsible for the strength is/are:

- Ans
- ☐ 1. tricalcium aluminate
 - ☐ 2. tetracalcium alumino ferrite
 - ☐ 3. dicalcium silicate and tetracalcium alumino ferrite
 - ☒ 4. tricalcium silicate and dicalcium silicate

Question ID : 6549784885

Status : Answered

Chosen Option : 4

Q.23 In connection with the flow of a fluid in a pipe (with parabolic velocity distribution), identify the correct statement regarding the kinetic energy correction factor α :

- Ans
- ☒ 1. $\alpha_{\text{laminar flow}} = 2$
 - ☐ 2. $\alpha_{\text{laminar flow}} = 1.33$
 - ☐ 3. $\alpha_{\text{laminar flow}} = 1$
 - ☐ 4. $\alpha_{\text{laminar flow}} < \alpha_{\text{turbulent flow}}$

Question ID : 6549784927
Status : Not Answered
Chosen Option : --

Q.24 Identify the method for the forecast of population of a town, wherein the percentage increase in population from decade to decade, is assumed to remain constant.

- Ans
- ☒ 1. Geometric increase method
 - ☐ 2. Logistic curve method
 - ☐ 3. Incremental increase method
 - ☐ 4. Arithmetic increase method

Question ID : 6549784951
Status : Answered
Chosen Option : 4

Q.25 If excess silica is present in bricks, it makes the bricks:

- Ans
- ☒ 1. brittle and weak on burning
 - ☐ 2. crack on drying
 - ☐ 3. warp
 - ☐ 4. melt on burning

Question ID : 6549784879
Status : Answered
Chosen Option : 1

Q.26 A diversion head work constructed across a river with heading up of water effected by the gates alone is called:

- Ans
- ☐ 1. cross regulator
 - ☐ 2. weir
 - ☐ 3. head regulator
 - ☒ 4. barrage

Question ID : 6549784933
Status : Answered
Chosen Option : 1

Q.27 Identify the INCORRECT statement about pitch of the lateral ties in the RCC column.

Ans  1.

Pitch must be less than 24 times the diameter of lateral ties.

 2. Pitch must be less than or equal to 300 mm.

 3. Pitch must be less than least lateral dimension of column.

 4.

Pitch must be less than 16 times of smallest diameter of longitudinal bar in column.

Question ID : 6549784969

Status : Answered

Chosen Option : 1

Q.28 For the computation of annual average daily traffic, what is the minimum number of days of continuous traffic count made at a location?

Ans  1. 2 days

 2. 7 days

 3. 5 days

 4. 3 days

Question ID : 6549784940

Status : Answered

Chosen Option : 2

Q.29 The best procedure for the disposal of batteries containing heavy metals is:

Ans  1. disposal in landfill

 2. recycle

 3. open dumping

 4. burning

Question ID : 6549784949

Status : Answered

Chosen Option : 2

Q.30 Match the items under List 1 (Terms associated with placing of concrete) with those under List 2 (Definition of the phenomena). Use codes in lists for matching.

List 1

- P. Mobility
- Q. Bleeding
- R. Segregation
- S. Consistency

List 2

- 1. Firmness of concrete
- 2. Separation of the constituents of a homogeneous mixture of concrete
- 3. Ability to be moulded
- 4. Water gain

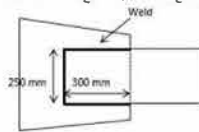
- Ans
- ☒ 1. P – 1, Q – 4, R – 3, S – 2
 - ☒ 2. P – 3, Q – 4, R – 2, S – 1
 - ☒ 3. P – 4, Q – 3, R – 1, S – 2
 - ☒ 4. P – 2, Q – 4, R – 1, S – 3

Question ID : 6549784964

Status : Answered

Chosen Option : 2

Q.31 A tie member in a truss girder is 250 mm x 14 mm in size. It is welded to a gusset plate 10 mm thick by a fillet weld. The overlap of the member is 300 mm. The weld is 6 mm in size. Find the strength of the joint if the welding is done as shown in Figure (welding is shown in thick black lines). Allowable shear stress in weld = 108 N/mm^2 .



- Ans
- ☒ 1. 498.9 kN
 - ☒ 2. 308.4 kN
 - ☒ 3. 385.6 kN
 - ☒ 4. 514.3 kN

Question ID : 6549784978

Status : Not Answered

Chosen Option : --

Q.32 Select the incorrect statement from following.

Ans ☒ 1.

In the total station, the angles and distances are recorded in the digital form.

☒ 2.

The total station cannot measure horizontal distance less than 2 km.

☒ 3.

The total station has all facilities of tacheometer operated electronically.

☒ 4. The total station is operated through the control panel.

Question ID : 6549784911

Status : Answered

Chosen Option : 2

Q.33 The correction due to wrong alignment of the tape:

Ans ☒ 1. is always negative

☒ 2. can be positive or negative

☒ 3.

depends upon whether the alignment is wrong to the right or left of the line

☒ 4. is always positive

Question ID : 6549784905

Status : Answered

Chosen Option : 1

Q.34 For M25 concrete the modulus of elasticity of concrete can be in the acceptable range of:

Ans ☒ 1. 20000 to 30000 N/mm²

☒ 2. 30000 to 40000 N/mm²

☒ 3. 10000 to 15000 N/mm²

☒ 4. 15000 to 20000 N/mm²

Question ID : 6549784965

Status : Answered

Chosen Option : 1

Q.35 Regulatory signs are generally circular in shape. Identify a regulatory sign which is NOT circular in shape.

Ans ☒ 1. No parking sign

☒ 2. Restriction Ends sign

☒ 3. Stop sign

☒ 4. Speed limit sign

Question ID : 6549784941

Status : Answered

Chosen Option : 3

Q.36 In a trigonometric levelling, using a theodolite, vertical angles were measured to the vanes fixed at 1 m and 4 m marks of a staff held vertical, at a station Q from the instrument kept at a station P. The vertical angles were $3^{\circ} 30'$ and $6^{\circ} 15'$. Find the horizontal distance PQ.

(take $\tan 3^{\circ} 30' = 0.0611$; $\tan 6^{\circ} 15' = 0.1095$; $\tan 9^{\circ} 45' = 0.172$)

- Ans
- ☒ 1. 62 m
 - ☐ 2. 34.2 m
 - ☐ 3. 17.8 m
 - ☐ 4. 55.6 m

Question ID : 6549784912
Status : Not Answered
Chosen Option : --

Q.37 The assumption made in the theory of simple bending that plane sections before bending remains plane after bending leads to:

- Ans
- ☐ 1. occurrence of maximum stress at the extreme fibers
 - ☐ 2. bending stress becoming zero at the neutral axis
 - ☐ 3. the stress diagram being linear
 - ☒ 4. strain diagram being linear

Question ID : 6549784955
Status : Answered
Chosen Option : 4

Q.38 Given below are the statements (S1 and S2) associated with fresh concrete.

S1 : As the compaction factor of a concrete sample increases, its slump value also increases.

S2 : Slump cone test helps in qualitatively understanding the strength of concrete.

Identify the correct inference(s).

- Ans
- ☐ 1. Both S1 and S2 are true.
 - ☐ 2. S1 is false and S2 is true.
 - ☐ 3. Both S1 and S2 are false.
 - ☒ 4. S1 is true and S2 is false.

Question ID : 6549784966
Status : Answered
Chosen Option : 4

Q.39 In the Bernoulli's equation ($\frac{p}{\gamma} + \frac{v^2}{2g} + Z = \text{constant}$, with notations : p – intensity of pressure, γ - unit weight, v – velocity of flow, g – acceleration due to gravity, Z – elevation above datum), each term in the equation represents:

- Ans**
- ☒ 1. energy in N.m/N weight of fluid
 - ☐ 2. power in kW/kg mass of fluid
 - ☐ 3. energy in N.m of fluid
 - ☐ 4. energy in N.m/kg mass of fluid

Question ID : 6549784922

Status : Answered

Chosen Option : 1

Q.40 The different processes underwater treatment are given under List 1, and the purpose of the treatment process is given under List 2.

Match the items in List 1 with those under List 2 using the codes in lists.

List 1

- C. Filtration
- D. Aeration
- E. Zeolite process
- F. Ozone treatment

List 2

- 1. Disinfection
- 2. Removal of calcium and magnesium cations.
- 3. Removal of suspended impurities
- 4. Process converts Iron and manganese from their soluble state to insoluble state.

- Ans**
- ☐ 1. C – 3, D – 2, E – 1, F – 4
 - ☒ 2. C – 3, D – 4, E – 2, F – 1
 - ☐ 3. C – 4, D – 3, E – 1, F – 2
 - ☐ 4. C – 2, D – 1, E – 3, F – 4

Question ID : 6549784952

Status : Answered

Chosen Option : 2

Q.41 A smart station is used to indicate:

- Ans**
- ☒ 1. a total station with an integrated GPS module
 - ☐ 2. a total station attached to a computer
 - ☐ 3. total station with an electromagnetic distance measuring equipment
 - ☐ 4. a total station with software to calculate and display quantities

Question ID : 6549784906

Status : Answered

Chosen Option : 1

Q.42 If three centrifugal pumps identical in all respects and each capable of delivering a discharge Q against a head H are connected in parallel, the resulting discharge is:

- Ans
- ☐ 1. Q against a head $3H$
 - ☒ 2. $3Q$ against a head H
 - ☐ 3. $3Q$ against a head $\sqrt{3} H$
 - ☐ 4. $3Q$ against a head $3H$

Question ID : 6549784924

Status : Answered

Chosen Option : 2

Q.43 Concrete recommended for the construction of radiation shields in nuclear plants is:

- Ans
- ☒ 1. high density concrete
 - ☐ 2. medium density concrete
 - ☐ 3. light weight concrete
 - ☐ 4. fibre reinforced concrete

Question ID : 6549784882

Status : Answered

Chosen Option : 1

Q.44 According to IS 456 : 2000, the percentage increase in the design bond stress in limit state, for deformed bars in tension (conforming to IS 1786), with respect to plain bars in tension is:

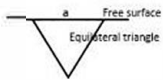
- Ans
- ☐ 1. 50
 - ☐ 2. 20
 - ☐ 3. 35
 - ☒ 4. 60

Question ID : 6549784967

Status : Answered

Chosen Option : 4

Q.45 An equilateral triangular plate of side a is immersed in water with one side at free water surface as in the given figure. The centre of pressure is below the water surface at a depth of:



Ans

☒ 1. $\frac{a}{2\sqrt{3}}$

☒ 2. $\frac{a}{3}$

☒ 3. $\frac{\sqrt{3}a}{4}$

☒ 4. $\frac{a}{\sqrt{3}}$

Question ID : 6549784929

Status : Answered

Chosen Option : 1

Q.46 Identify the one which is NOT an ozone layer depleting chemical.

Ans

☒ 1. Methyl bromide

☒ 2. Chlorofluorocarbons

☒ 3. Copper sulphate

☒ 4. Carbon tetrachloride

Question ID : 6549784950

Status : Answered

Chosen Option : 3

Q.47 What is the minimum period before striking the formwork to RCC slabs (with props to be refixed immediately after removal of formwork)?

Ans

☒ 1. 3 days

☒ 2. 14 days

☒ 3. 7 days

☒ 4. 21 days

Question ID : 6549784961

Status : Answered

Chosen Option : 1

Q.48 The following details pertain to the crossing of a canal and a drain. Bed level of Canal = + 151 m; Full Supply depth of Canal = 1.8 m; Bed level of Drain = - 149.4, depth of flow in the drain at high flood level = 2.1 m. The suitable type of cross drainage work is:

- Ans**
- ☒ 1. aqueduct
 - ☒ 2. canal syphon
 - ☒ 3. syphon aqueduct
 - ☒ 4. super passage

Question ID : 6549784935

Status : Answered

Chosen Option : 3

Q.49 A watershed having an area of 4 km^2 is subjected to a rainfall event of 9 cm, thereby generating stream flow at the outlet of the watershed for 10 h. If the average stream flow rate at the outlet of the catchment is $5 \text{ m}^3/\text{s}$, occurring for a period of 10 h, the runoff co-efficient of the watershed for the storm is:

- Ans**
- ☒ 1. 0.3
 - ☒ 2. 0.5
 - ☒ 3. 0.6
 - ☒ 4. 0.4

Question ID : 6549784937

Status : Not Answered

Chosen Option : --

Q.50 A normally consolidated clay layer settled by 20 mm when the effective stress was increased from 25 to 50 kN/m^2 . What will be the settlement when the effective stress is increased from 50 to 100 kN/m^2 ?

- Ans**
- ☒ 1. 5 mm
 - ☒ 2. 40 mm
 - ☒ 3. 20 mm
 - ☒ 4. 10 mm

Question ID : 6549784920

Status : Answered

Chosen Option : 3

Q.51 A plot of land measures 500 m^2 . The built up area is 300 m^2 . The plinth area rate of this building is ₹5,000 per m^2 and includes the cost of water supply, sanitary and electric installations. The age of the building is 40 years. The cost of land is ₹6,000 per m^2 . Compute the total value of the property. Assume the fixed percentage of depreciation as 2. (take $0.98^{40} = 0.4457$)

- Ans**
- ☒ 1. ₹36,68,550/-
 - ☒ 2. ₹37,10,850/-
 - ☒ 3. ₹38,50,000/-
 - ☒ 4. ₹39,60,150/-

Question ID : 6549784902

Status : Not Answered

Chosen Option : --

Q.52 A building costing ₹70,00,000/- was constructed on a free hold land measuring 1000 m² in a city recently. Prevailing rate of land in the neighbourhood is ₹1,500/- per m². If the expenditure on an outgoing including sinking fund is ₹2,40,000/- per annum, work out the gross rent (in ₹) of the property per month. Assume a net return of 6% on the cost of building and 4% on cost of land.

- Ans**
- ☒ 1. 60,000/-
 - ☐ 2. 35,000/-
 - ☐ 3. 55,000/-
 - ☐ 4. 40,000/-

Question ID : 6549784901
Status : Not Answered
Chosen Option : --

Q.53 A solid circular shaft having a diameter of 100 mm is subjected to a torque of 8 kN.m. Determine the maximum shear stress induced in the shaft (in N/mm² units)?

- Ans**
- ☐ 1. $\frac{256}{\pi}$
 - ☐ 2. $\frac{64}{\pi}$
 - ☐ 3. $\frac{144}{\pi}$
 - ☒ 4. $\frac{128}{\pi}$

Question ID : 6549784959
Status : Answered
Chosen Option : 4

Q.54 The thinner used in plastic paint is:

- Ans**
- ☐ 1. naptha
 - ☒ 2. water
 - ☐ 3. oil
 - ☐ 4. spirit

Question ID : 6549784881
Status : Answered
Chosen Option : 1

Q.55 A cantilever beam of span L is subjected to a clockwise moment of M at the free end. The shear force at any point on the beam is:

- Ans
- ☒ 1. M/L^2
 - ☒ 2. Zero
 - ☒ 3. M/L
 - ☒ 4. $2M/L$

Question ID : 6549784956

Status : Answered

Chosen Option : 2

Q.56 The unconfined strength of three types of cohesive soils: Soil A, Soil B, and Soil C, are 35 kN/m^2 and 450 kN/m^2 and 140 kN/m^2 respectively. Identify the correct statement based on the consistency behaviour of soils.

- Ans
- ☒ 1. Soil A is categorised as Soft, soil B is categorised as Stiff and Soil C is categorised as Hard.
 - ☒ 2. Soil A is categorised as Hard, soil B is categorised as Stiff and Soil C is categorised as Soft.
 - ☒ 3. Soil A is categorised as Soft, soil B is categorised as Hard and Soil C is categorised as Stiff.
 - ☒ 4. Soil A is categorised as Stiff, soil B is categorised as Hard and Soil C is categorised as Soft.

Question ID : 6549784919

Status : Answered

Chosen Option : 3

Q.57 The purpose of fire proofing of timber is to:

- Ans
- ☒ 1. extinguish the fire and dissipate the heat generated
 - ☒ 2. not allow fire to come closer to wood
 - ☒ 3. extinguish the fire by absorbing the heat generated
 - ☒ 4. make it difficult to ignite and support its own combustion

Question ID : 6549784880

Status : Answered

Chosen Option : 4

Q.58 The interior angles of closed traverse ABCDE are measured as below:

Angle A = $76^{\circ} 12' 00''$

Angle B = $112^{\circ} 12' 00''$

Angle C = $98^{\circ} 12' 40''$

The bearing of initial line is $217^{\circ} 50' 20''$. The bearing of line BC will be:

- Ans
- ☒ 1. $150^{\circ} 2' 20''$
 - ☐ 2. $170^{\circ} 5' 18''$
 - ☐ 3. $122^{\circ} 4' 18''$
 - ☐ 4. $330^{\circ} 2' 20''$

Question ID : 6549784909

Status : Not Attempted and
Marked For Review

Chosen Option : --

Q.59 Which of the following statements pertaining to steel are true or false?

ST1 : Mild steel has higher ultimate tensile strength when compared to High Carbon Steel.

ST2 : TOR steel is high strength deformed bars with high yield and bond strength.

- Ans
- ☐ 1. Both ST1 and ST2 are false.
 - ☒ 2. ST1 is false and ST2 is true.
 - ☐ 3. ST1 is true and ST2 is false.
 - ☐ 4. Both ST1 and ST2 are true.

Question ID : 6549784888

Status : Answered

Chosen Option : 4

Q.60 Match the items in List 1 (Property of cement) with those under List 2 (Method for conduct of test) using the codes in the list.

List 1	List 2
P. Soundness Test	1. Vicat's Apparatus test
Q. Fineness	2. Le-Chatelier apparatus
R. Setting time	3. Briquette test
S. Tensile strength	4. Air permeability method

- Ans
-  1. P-4, Q-2, R-3, S-1
 -  2. P-1, Q-4, R-2, S-3
 -  3. P-3, Q-4, R-2, S-1
 -  4. P-2, Q-4, R-1, S-3

Question ID : 6549784886
Status : Answered
Chosen Option : 4

Q.61 In canal formation, the term 'balancing depth' is used to indicate:

- Ans
-  1.
depth of cutting for minimum cross section area, for canal section formed fully in cutting
 -  2.
depth of filling, for which area of cutting = area of filling, for canal section formed partly in cutting and partly in filling
 -  3.
depth of filling for minimum cross section area for canal section formed fully in filling
 -  4.
depth of cutting, for which area of cutting = area of filling, for canal section formed partly in cutting and partly in filling

Question ID : 6549784931
Status : Answered
Chosen Option : 4

Q.62 If the amount of annuity is paid for a definite number of periods or years it is known as:

- Ans
-  1. perpetual annuity
 -  2. annuity certain
 -  3. annuity due
 -  4. deferred annuity

Question ID : 6549784898
Status : Answered
Chosen Option : 1

Q.63 Out of the cohesion limit, sticky limit, liquid limit, plastic limit and shrinkage limit, the most important in engineering practices are:

- Ans
- ☒ 1. cohesion limit, plastic limit and liquid limit
 - ☒ 2. liquid limit, plastic limit, shrinkage limit
 - ☒ 3. cohesion limit, plastic limit, shrinkage limit and sticky limit
 - ☒ 4. plastic limit, shrinkage limit and cohesion limit

Question ID : 6549784915
Status : Answered
Chosen Option : 2

Q.64 Which of the following is considered as Ultimate (safety) limit state in limit state design of steel structures?

- Ans
- ☒ 1. Vibrations in structure causing discomfort
 - ☒ 2. Corrosion and durability
 - ☒ 3. Repairable damage due to deflection
 - ☒ 4. Fracture due to Fatigue

Question ID : 6549784976
Status : Answered
Chosen Option : 3

Q.65 No deduction is made in the quantity estimation for brick work in cement mortar for openings having size up to:

- Ans
- ☒ 1. 0.1 m²
 - ☒ 2. 0.5 m²
 - ☒ 3. 0.01 m²
 - ☒ 4. 1.0 m²

Question ID : 6549784891
Status : Answered
Chosen Option : 2

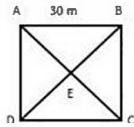
Q.66 Consider different types of soils i.e. Fine sand(F), Homogeneous clay(C), Coarse gravel(G), Silty clay(S). Arrange the soils in the increasing order of their permeability (low to high values).

- Ans
- ☒ 1. S, C, G, F
 - ☒ 2. S, C, F, G
 - ☒ 3. C, S, F, G
 - ☒ 4. C, F, S, G

Question ID : 6549784914
Status : Answered
Chosen Option : 3

Q.67 An excavation is in the form of a square of side 30 m, shown in the Figure, has the following depth of excavation at the four corners and the intersection of the diagonals : 2.85 m at A, 2.45 m at B, 3.15 m at C, 3.55 m at D and 2.95 m at E.

Find the volume of earth excavation from the pit (range of value may be given).



- Ans**
- ☒ 1. 1865 to 1875 m³
 - ☒ 2. 2685 to 2700 m³
 - ☒ 3. 2285 to 2300 m³
 - ☒ 4. 2845 to 2860 m³

Question ID : 6549784895

Status : Not Answered

Chosen Option : --

Q.68 The samples of burnt clay bricks from 5 different agencies (A1 to A5) are tested and the results are tabulated as follows. The criteria to be adopted correspond to the usage of bricks of class 15 and above, as per IS 1077. Which samples are recommended for wall construction?

Id	Water absorption (%)	Average Compressive strength (kN/m ²)
A1	20	20000
A2	12	15500
A3	24	9100
A4	10	28000
A5	14	12000

- Ans**
- ☒ 1. Only A2 and A4
 - ☒ 2. Only A3 and A5
 - ☒ 3. A1, A2, A3 and A5
 - ☒ 4. Only A1, A3 and A5

Question ID : 6549784890

Status : Answered

Chosen Option : 1

Q.69 The category of fluids in which shear stress is linearly related to the velocity gradient is known as:

- Ans**
- ☒ 1. dilatant
 - ☒ 2. Newtonian
 - ☒ 3. ideal
 - ☒ 4. pseudo plastic

Question ID : 6549784921

Status : Answered

Chosen Option : 2

Q.70 According to IS 456 : 2000, the minimum grade of concrete required for plain concrete and reinforced cement concrete works, under exposure condition "very severe" are ____ and ____ respectively.

- Ans
- ☒ 1. M15, M40
 - ☒ 2. M10, M25
 - ☒ 3. M20, M35
 - ☒ 4. M25, M40

Question ID : 6549784963

Status : Answered

Chosen Option : 3

Q.71 The degree of compaction of a soil is characterised by its:

- Ans
- ☒ 1. consistency
 - ☒ 2. compressibility
 - ☒ 3. dry density
 - ☒ 4. saturated unit weight

Question ID : 6549784916

Status : Answered

Chosen Option : 3

Q.72 A common dimensionless parameter used in fluid mechanics is:

- Ans
- ☒ 1. specific weight
 - ☒ 2. kinematic viscosity
 - ☒ 3. co-efficient of discharge
 - ☒ 4. angular velocity

Question ID : 6549784923

Status : Answered

Chosen Option : 1

Q.73 The magnetic bearing of a survey line is found to be $33^{\circ} 40'$. If the declination is $3^{\circ} 40'$ E, the true bearing is:

- Ans
- ☒ 1. $30^{\circ} 00'$
 - ☒ 2. $41^{\circ} 00'$
 - ☒ 3. $33^{\circ} 40'$
 - ☒ 4. $37^{\circ} 20'$

Question ID : 6549784907

Status : Not Attempted and
Marked For Review

Chosen Option : --

Q.74 A levelling work was carried out along a falling gradient using a dumpy level and a levelling staff of 3 m height. The following successive readings were taken 1.55, 2.655, 0.54, 1.68 m. The level was shifted after the second reading. What is the correct order of booking the readings in the field book?

(BS: back sight, FS: Fore sight, IS: Intermediate sight)

- Ans**
- ☒ 1. BS, IS, FS, BS
 - ☒ 2. BS, IS, IS, FS
 - ☒ 3. BS, FS, BS, FS
 - ☒ 4. BS, FS, IS, FS

Question ID : 6549784910

Status : Not Answered

Chosen Option : --

Q.75 As per IS 800 : 2007, cross-sections, in which the extreme fibre in compression can reach yield stress, but cannot develop the plastic moment of resistance, due to local buckling, are known as:

- Ans**
- ☒ 1. compact
 - ☒ 2. slender
 - ☒ 3. semi-compact
 - ☒ 4. plastic

Question ID : 6549784975

Status : Answered

Chosen Option : 2

Q.76 A gravity dam resists the external forces by:

- Ans**
- ☒ 1. its self-weight
 - ☒ 2. buttresses which transfer load to foundation
 - ☒ 3. arch action to abutments
 - ☒ 4. shear strength of soil

Question ID : 6549784930

Status : Answered

Chosen Option : 1

Q.77 The departure of a survey line of a traverse is defined as:

- Ans
- ☒ 1. the projection of the line in any reference direction
 - ☒ 2. its coordinate length measured in the north -south meridian
 - ☒ 3. its coordinate length measured at right angles to the meridian direction
 - ☒ 4. its coordinate length measured parallel to an assumed meridian direction

Question ID : 6549784904
Status : Answered
Chosen Option : 3

Q.78 Artificial harbours are constructed by providing structures which extend from the land to the sea so as to create a calm area for the berthing of vessels. Such structures are known as:

- Ans
- ☒ 1. breakwater
 - ☒ 2. groin
 - ☒ 3. wharf
 - ☒ 4. jetty

Question ID : 6549784942
Status : Answered
Chosen Option : 2

Q.79 In the case of a dumpy level, the two peg test is performed to ensure that:

- Ans
- ☒ 1. line of collimation of the telescope is parallel to the bubble tube axis
 - ☒ 2. horizontal cross hairs is parallel to the bubble tube axis
 - ☒ 3. horizontal cross hairs is in a plane perpendicular to the vertical axis
 - ☒ 4. the axis of the bubble tube is perpendicular to the vertical axis

Question ID : 6549784908
Status : Answered
Chosen Option : 1

Q.80 A prism square is used to:

Ans ☒ 1. set out a horizontal circular curve.

☒ 2.

set out a line at 45° to a survey line, without any linear measurement

☒ 3. get an enlarged view of station marks

☒ 4. set a line at right angles to a survey line

Question ID : 6549784903

Status : Answered

Chosen Option : 4

Q.81 A town has a projected population of 80,000 spread over an area of 0.6 km^2 . Find the design discharge for the separate sewer line by assuming rate of water supply of 200 litre/capita/day and out of this total supply only 75% reaches in sewer as wastewater. Assume a peak factor of 2.

Ans ☒ 1. $0.14 \text{ m}^3/\text{s}$

☒ 2. $0.07 \text{ m}^3/\text{s}$

☒ 3. $0.28 \text{ m}^3/\text{s}$

☒ 4. $0.56 \text{ m}^3/\text{s}$

Question ID : 6549784953

Status : Not Answered

Chosen Option : --

Q.82 Among the following treatment units, anaerobic decomposition takes place in:

Ans ☒ 1. oxidation pond

☒ 2. activated sludge process

☒ 3. Imhoff tank

☒ 4. trickling filter

Question ID : 6549784947

Status : Answered

Chosen Option : 3

Q.83 The base width of an elementary profile of a gravity dam of height H is B . If G is the specific gravity of the material and C co-efficient of uplift, the relationship for no tension development at the heel of dam is:

Ans

☐ 1. $B = \frac{H}{(G-C)}$

☐ 2. $B = \frac{H}{C\sqrt{G-C}}$

☐ 3. $B = H\sqrt{G-C}$

☒ 4. $B = \frac{H}{\sqrt{G-C}}$

Question ID : 6549784936

Status : Answered

Chosen Option : 3

Q.84 Which of the following pairs is correctly matched with respect to type of stone, based on its formation?

Ans

☒ 1. Limestone : sedimentary rock

☐ 2. Basalt : Metamorphic rock

☐ 3. Granite : Argillaceous rock

☐ 4. Sandstone : Igneous rock

Question ID : 6549784887

Status : Answered

Chosen Option : 1

Q.85 A Cippolletti weir used to measure discharge in an open channel is a:

Ans

☐ 1. triangular weir with central angle 90°

☐ 2. trapezoidal weir with side slope 4 Horizontal : 1 vertical

☒ 3.

trapezoidal weir with side slope 1 vertical : (1/4) horizontal

☐ 4. rectangular weir with sharp edges

Question ID : 6549784926

Status : Not Answered

Chosen Option : --

Q.86 Lacustrine soils are those which are:

- Ans
- ☐ 1. transported by rivers and streams
 - ☐ 2. deposited in sea beds
 - ☐ 3. transported by wind
 - ☒ 4. deposited in lake beds

Question ID : 6549784913

Status : Answered

Chosen Option : 4

Q.87 For sewage treatment using an oxidation pond, when it gets overloaded, a chemical that is added to stimulate the algal growth is:

- Ans
- ☐ 1. sodium chloride
 - ☐ 2. bleaching powder
 - ☐ 3. calcium hydroxide
 - ☒ 4. sodium nitrate

Question ID : 6549784948

Status : Answered

Chosen Option : 3

Q.88 Under limit state of collapse in flexure, the ratio of limiting values of the depth of neutral axis to the depth of beam ($x_{u,max}/d$) for a reinforced concrete beam with Fe415 grade steel, is:

- Ans
- ☐ 1. 0.46
 - ☐ 2. 0.53
 - ☒ 3. 0.48
 - ☐ 4. 0.55

Question ID : 6549784970

Status : Answered

Chosen Option : 3

Q.89 The area under a hyetograph represents:

- Ans
- ☐ 1. total runoff received in the period
 - ☐ 2. total intensity of rainfall received in the period
 - ☒ 3. total precipitation received in that period
 - ☐ 4. average intensity of rainfall received in the period

Question ID : 6549784932

Status : Answered

Chosen Option : 2

Q.90 The value of Poisson's ratio of concrete lies approximately in the range:

- Ans
- ☐ 1. 0.4 to 0.47
 - ☐ 2. 0.31 to 0.35
 - ☒ 3. 0.15 to 0.2
 - ☐ 4. 0.25 to 0.3

Question ID : 6549784962

Status : Answered

Chosen Option : 3

Q.91 The difference in 7 days compressive strength of cubes or cylinders prepared with impure and pure waters should not differ by more than:

- Ans
- ☐ 1. 20%
 - ☒ 2. 10%
 - ☐ 3. 5%
 - ☐ 4. 12%

Question ID : 6549784883

Status : Not Answered

Chosen Option : --

Q.92 The common characteristics of building material under stress are given under List 1 and the corresponding properties are given under List 2. Match the items under List 1 with those under List 2 using the codes in the lists.

List 1

- A. Ductility
- B. Brittleness
- C. Toughness
- D. Malleability

List 2

- 1. Material can withstand heavy shock loads
- 2. Material can be hammered into sheets without rupture
- 3. Material can be drawn out into wires without necking down
- 4. Material fail suddenly without warning

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

Question ID : 6549784889

Status : Answered

Chosen Option : 1

Q.93 The width of carriageway for a two lane road with raised kerbs, as recommended by IRC is:

- Ans
- ☐ 1. 7.0 m
 - ☐ 2. 5.5 m
 - ☐ 3. 8.5 m
 - ☒ 4. 7.5 m

Question ID : 6549784939

Status : Answered

Chosen Option : 4

Q.94 A cantilever beam of span L carries a clockwise moment M at the free end. The bending moment diagram is:

- Ans
- ☐ 1. triangle with zero bending moment at the free end and bending moment = $\frac{M}{L}$ at the support
 - ☐ 2. triangle with zero bending moment at support and bending moment = M at free end
 - ☐ 3. rectangle with a constant bending moment = $\frac{M}{L}$
 - ☒ 4. rectangle with a constant bending moment = M

Question ID : 6549784958

Status : Answered

Chosen Option : 4

Q.95 A person has got a land property in an urban residential area where it is proposed to build a multi-storied commercial complex. The valuation of the landed property is NOT necessary for:

- Ans
- ☒ 1. taking permission for the construction of a commercial building from the local body
 - ☐ 2. rent fixation
 - ☐ 3. security for loans or mortgage, when the loans are taken
 - ☐ 4. assessment of tax on the property

Question ID : 6549784897

Status : Not Answered

Chosen Option : --

Q.96 Which of the following statements about gap grading of aggregates is true?

- Ans
- ☒ 1. In gap grading, one or more intermediate fractions of particles are absent.
 - ☐ 2. In gap grading, the grading curve is smooth.
 - ☐ 3. In gap grading, all the particles are of uniform size.
 - ☐ 4. Gap graded has wide distribution of all grain sizes present.

Question ID : 6549784884

Status : Answered

Chosen Option : 1

Q.97 Bending moment coefficients for slabs spanning in two directions at right angle and simply supported on all four sides are given in the table.

α_x	0.062	0.074	0.084
α_y	0.062	0.061	0.059
L_y/L_x	1.0	1.1	1.2

If effective longer and shorter span of the slab are 4.4 m and 4 m respectively and factored load acting is 8 kN/m^2 , ultimate bending moment per metre width acting in two directions will be:

- Ans
- ☒ 1. 9.47 kN-m and 12.72 kN-m
 - ☒ 2. 11.46 kN-m and 8.45 kN-m
 - ☒ 3. 11.46 kN-m and 9.47 kN-m
 - ☒ 4. 9.47 kN-m and 7.81 kN-m

Question ID : 6549784972

Status : Not Answered

Chosen Option : --

Q.98 The net annual letting value of property which is obtained after deducting the amount spent on yearly repairs from the gross income is known as:

- Ans
- ☒ 1. salvage value
 - ☒ 2. scrap value
 - ☒ 3. book value
 - ☒ 4. rateable value

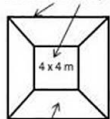
Question ID : 6549784900

Status : Answered

Chosen Option : 4

Q.99 An open pond as shown in the Figure has been constructed. It is in the form of a square of side 4 m at the bottom, having a depth of 3 m from the ground level. The side slope of the pond is 2 : 1 (horizontal to vertical). It is proposed to provide a lining using geotextiles to the bottom and sides of pond to reduce the seepage loss. If the cost of geotextile material is ₹600 /- per m^2 and the cost of laying the material is ₹50 /- per m^2 . Determine the estimated cost (in ₹) for lining the pond. (Approximate to the nearest value) (Take $\sqrt{45} = 6.7082$)

(Square cross section at top & bottom)



- Ans
- ☒ 1. 1,56,388/-
 - ☒ 2. 88,400/-
 - ☒ 3. 1,84,813/-
 - ☒ 4. 1,74,425/-

Question ID : 6549784896

Status : Not Answered

Chosen Option : --

Q.100 An irrigation canal is trapezoidal in section with bottom width 1 m and depth of 2 m. side slope 1.5 H : 1 V is formed in cutting. The cross – section area of the canal is:

Ans

 1. 8 m^2

 2. 6.5 m^2

 3. 8.2 m^2

 4. 7 m^2

Question ID : 6549784934

Status : Answered

Chosen Option : 1