Junior Engineer Civil Mechanical and Electrical Examination 2023 Paper I

| Roll Number |  |
| :--- | :--- |
| Candidate Name |  |
| Venue Name | iON Digital Zone iDZ 2 Mathura Road |
| Exam Date | 11/10/2023 |
| Exam Time | 9:00 AM - 11:00 AM |
| Subject | Junior Engineer 2023 Civil Paper I |

## Section : General Intelligence and Reasoning

Q. 1 Select the option that represents the letters that, when placed from left to right in the blanks below, will complete the letter series.

Ans
JHH_HH_HHJ_
X 1. H HJJ
X 2. HJHJ
2. HJJH

X4.HJHH

Question ID : 264330144615
Option 1 ID : 264330566716
Option 2 ID : 264330566715
Option 3 ID : 264330566717
Option 4 ID : 264330566718
Status: Answered
Chosen Option: 3
Q. 2 A girl starts from her house and drives 10 km south. Then turns left and drives 20 km . She then takes a left and drives 20 km . Then, turning to her left and she drives 5 km . She takes a final left turn, drives 10 km and stops at her final destination. How far and towards which direction should she drive in order to reach her home?
Ans
X 1.15 km , east
2. 15 km , south
3. 15 km , west
4. 15 km , north
Q. 3 Select the option that is related to the third word in the same way as the second word is related to the first word.
(The words must be considered as meaningful English words and must not be related to each other based on the number of letters/number of consonants/vowels in the word)
Attraction : Repulsion :: Vertical : ?
Ans
$X$ 1. Line
$X$ 2. Circle
3. Diagonal
4. Horizontal
Q. 4 Select the option that is related to the third word in the same way as the second word is related to the first word. (The words must be considered as meaningful English words and must not be related to each other based on the number of letters/number of consonants/vowels in the word)

Robbers : Gang :: Players : ?
Ans

1. Field
2. Group
3. Team
4. Game
Q. 5 Which letter-cluster will replace the question mark (?) to complete the given series?

JPWL, MGAF, PXEZ, ?, VFMN
Ans
X 1. RPIT
2. SOIT

X 3. SPIT
$\times 4$. ROIT
Q. 6 In a certain code language, "KTG" is written as " 38 " and "MAY" is written as " 39 ". How will "DBC" be written in that language?
Ans
$\times 1.12$

- 2.11

3. 9
4.8
Q. 7 Select the number from among the given options that can replace the question mark
(?) in the following series.
2, 3, 6, 18, ?, 1944
Ans
$\times 1.126$
$\times 2.118$
$\times 3.112$

- 4.108

Option 1 ID : $\mathbf{2 6 4 3 3 0 3 6 4 1 0 2}$
Option 2 ID : 264330364101
Option 3 ID : $\mathbf{2 6 4 3 3 0 3 6 4 1 0 4}$
Option 4 ID : $\mathbf{2 6 4 3 3 0 3 6 4 1 0 3}$
Status: Answered
Chosen Option : $\mathbf{4}$
Q. 8 Select the set in which the numbers are related in the same way as are the numbers of the following set.
(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g., 13 -Operations on 13 such as adding/subtraction/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)
$(9,162,6)$
(12, 72, 2)
Ans $\quad$ (1. $(13,126,14)$
2. $(21,189,3)$

X $3 .(4,94,5)$
X4. $(19,562,8)$
Q. 9 If '+' means ' - ', '-' means ' $x$ ', ' $x$ ' means ' $\div$ ', ' $\div$ 'means ' + ', what will come in place of the question mark?
$50-6 \div 8+24 \times 6=?$
Ans

1. 104
2. 304
3. 404
4. 604
Q. 10 Which of the following numbers will replace the question mark(?) in the given series?

73, 68, 70, 65, ?, 62, 64
Ans
$\times 1.71$
$\times 2.69$
X 3.63

- 4.67
Q. 11 ' $R+S$ ' means ' $R$ is the mother of $S$ ',
' $R$ * $S$ ' means ' $R$ is the father of $S$ ',
' $R$ - $S$ ' means ' $R$ is the husband of $S$ ', and
' $R$ \$ S' means ' $R$ is the daughter of S'.
If $E \$ F-G+H$, how is $E$ related to $H$ ?
Ans
< 1. Daughter
X 2. Sister's daughter
- 3. Sister
$\times 4$. Son
Q. 12 Select the option that represents the correct order of the given words as they would appear in an English dictionary.

1. Crumble
2. Character
3. Crevice
4. Crunchy
5. Cushion
6. Charlatan

Ans
X 1. 2, 6, 1, 3, 4, 5
X 2.6,2,3, 4, 1, 5
2. $2,6,3,1,4,5$

X4.6,3,2,1,4,5

Question ID : 264330129471
Option 1 ID : 264330507251
Option 2 ID : 264330507252
Option 3 ID : 264330507250
Option 4 ID : $\mathbf{2 6 4 3 3 0 5 0 7 2 5 3}$
Status: Answered
Q. 13 Select the option figure that will replace the question mark (?) in the given figure to complete the pattern.


Ans

$\times 2$


$\times 4$.

Q. 14 Select the figure from the options that can replace the question mark (?) and complete the pattern.


Ans

Q. 15 Select the letter-cluster from among the given options that can replace the question mark (?) in the following series.

WARD, WERD, ? , WORD, WURD
Ans
X 1.WLRD
2. WIRD

X 3. WJRD
4. WKRD
Q. 16 Select the option that is related to the third word in the same way as the second word is related to the first word. (The words must be considered as meaningful English words and must not be related to each other based on the number of letters/number of consonants/vowels in the word)

Clay : Pottery :: Sand : ?
Ans
$X$ 1. Shore
X 2. Crystals
2. Glass

X 4. Paper
Q. 17 Select the pair that follows the same pattern as that followed by the given two sets of pairs. Both pairs follow the same pattern.
GIK : TRP
NPR: MKI
Ans

1. DFH :WUS
2. EGI : UWY
3. NPQ :CEG
4. VTR : PNL
Q. 18 Select the letter-cluster from among the given options that can replace the question mark (?) in the following series.

BOMP, DPOQ, ?, HRSS,
Ans
X 1. FQQS
X 2. FQRR
X 3.FPQR
4. FQQR

## Q. 19 In a certain code language, 'ALMOND' is coded as 4-48-52-60-56-16 and 'SHEEP' is

coded as 76-32-20-20-64. How will 'CASHEW' be coded in the same language?
Ans

1. 12-4-76-32-20-92
2. 12-4-76-32-12-92
3. 14-4-76-32-20-84
4. 30-12-74-24-12-92
Q. 20 Three statements are followed by three conclusions numbered I, II and III. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts. Decide which of the given conclusions logically follow/s from the given statements.

Statements:
No pumpkin is a guava.
No guava is a pea.
Some peas are potatoes.
Conclusions:
(I) Some pumpkins are potatoes.
(II) Some peas are pumpkins.
(III) Some pumpkins are not potatoes.

Ans
X 1. Only conclusion II follows
Х 2. None of the conclusions follow
3. Either conclusion I or conclusion III follows

X4. Only conclusion I follows
Q. 21 How many triangles are there in the given figure?


Ans

1. 10
2. 9
3. 8
4.7
Q. 22 A \# B means ' $A$ is the sister of $B$ '
$A @ B$ means ' $A$ is the brother of $B$ '
$A$ \& $B$ means ' $A$ is the wife of $B$ '
$A \% B$ means ' $A$ is the daughter of $B$ '
If $R$ \# $\mathbf{P}$ @ $\mathbf{Q} \% \mathrm{Z} \& \mathrm{X}$, then how is P related to X ?
Ans
4. Son
5. Father
6. Brother
7. Sister
Q. 23 Two statements are given followed by two conclusions numbered I and II. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:
All birds are cows.
Some cows are dogs.
Conclusions:
I. Some dogs are birds.
II. Some cows are birds.

Ans

1. Neither conclusion I nor II follows
2. Only conclusion II follows
3. Only conclusion I follows
4. Both conclusions I and II follow
Q. 24 Select the option that represents the correct order of the given words as they would appear in an English dictionary.
5. Frighten
6. Filigree
7. Festive
8. Familiar
9. Filibuster
10. Freight

Ans
X 1.4, 3, 2, 5, 6, 1
X2.4,3,5, 2, 1, 6

- $3.4,3,5,2,6,1$

X4.4,5,3,2, 1, 6
Q. 25 Select the option that is related to the third term in the same way as the second term is related to the first term and the sixth term is related to the fifth term.
12:137:: 8 : ? :: 5 : 18
Ans
$\times 1.43$
X2. 61

- 3.57
$\times 4.49$
Q. 26 Select the option figure that will replace the question mark (?) in the figure given below to complete the pattern.


Ans

$\times 2$

$\times 3$.

$\times 4$.


Question ID : 264330129659
Option 1 ID : $\mathbf{2 6 4 3 3 0 5 0 8 0 0 3}$
Option 2 ID : 264330508005
Option 3 ID : 264330508002
Option 4 ID : $\mathbf{2 6 4 3 3 0 5 0 8 0 0 4}$
Status: Answered
Chosen Option : 1
Q. 27 If A denotes ' + ', B denotes ' $x$ ', C denotes ' - ', and $D$ denotes ' $\because$ ', then what will come in place of '?' in the following equation?
(81 D 9) B 3 A $3=3$ B ?
Ans
X 1.30
$\times 2.20$

- 3.10
4.15
Q. 28 Eight people are sitting in two parallel rows containing four people each in such a way that there is equal distance between adjacent persons.
In the first row, A, B, C and D are seated and all of them are facing the south.
In the second row, $\mathrm{W}, \mathrm{X}, \mathrm{Y}$ and Z are seated and all of them are facing the north.
Thus, each person faces another person from the other row.
The person facing $\mathbf{Z}$ is sitting third to the left of $A$. $W$ is sitting second to the left of $Z$. $B$
is the only neighbour of $C$ and sits at extreme end. $D$ is facing the one who is the
immediate neighbour of $Y$ and $X$.
Who amongst the following faces $\mathbf{Z}$ ?
Ans

1. B

X2. C
$\times 3 . \mathrm{A}$
X4. D
Q. 29 Which of the following terms will replace the question mark (?) in the given series? ABDE, FGIJ, KLNO, PQST, ?

Ans
X 1. VWXY
2. UVXY

X 3. UVWZ
X 4. VWYX
Status : Answered
Q. 30 If ' + ' means ' - ', ‘ - ' means ' $x$ ', ' $x$ ' means ' $\div$ ', ‘ $\div$ ' means ' + ', then what will come in place of the question mark (?) in the following equation?
$114 \div 85 \times 5-4+33=$ ?
Ans
$\times 1.136$
$\times 2.161$
$\times 3.158$

- 4.149

Q． 31 Select the correct mirror image of the given combination when the mirror is placed at MN as shown below．

GFO？
Ans2入トら ロー



Q. 32 The sequence of folding a piece of paper and the manner in which the folded paper has been cut is shown below. Choose a figure which would most closely resemble the unfolded form of the paper.


Ans


Ans

## 

$\times 2$.

## 



Q. 34 Ram departs from his home at 5:00 a.m. and starts running towards the north for 50 km , then turns right and runs again for 50 km . He takes a right turn again and runs for 30 km . Lastly, he turns right and runs for 50 km . How far is he from his home?

Ans
. 1.20 km
X2. 30 km
X 3.50 km
X 4.40 km
Q. 35 Select the option that represents the correct order of the given words as they would appear in an English dictionary.

1. Forty
2. Fortify
3. Forum
4. Forte
5. Fortitude

Ans

1. 42513
2. 34521
3. 35421
4. 45231
Q. 36 In the following statements $A, B, C, D$ and $E$ denotes $+,-, x, \div$ and $=$, respectively.

Which of the statement is correct?
Ans

1. 8A6C5D15E14B4
2. 8A6C5D15B14E4
3. 8A6C3D15E14B4
4. 8A6C5D15E24B4
Q. 37 Select the set in which the numbers are related in the same way as are the numbers of the following set.
(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 - Operations on 13 such as adding /subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)
$(6,5,25)$
$(8,3,37)$
Ans
5. $(9,1,44)$
$\times 2 .(8,7,32)$
X 3. $(2,6,45)$
$\times 4 .(6,4,75)$
Q. 38 Select the option that is related to the sixth letter-cluster in the same way as the first letter-cluster is related to the second letter-cluster and the third letter-cluster is related to the fourth letter-cluster.

JOS : GMR : : YHL : VFK :: ? : PMD
Ans

1. SOE
$\times$ 2. TSE
2. SOF
3. TPE
Q. 39 Select the correct mirror image of the given combination when the mirror is placed at line MN as shown.

AJK34V9 $\left.\right|_{\mathrm{N}} ^{\mathrm{M}}$
Ans

1. evaexia
(2. 6^tEXIV
2. $6 \forall \downarrow \varepsilon \times r \forall$
3. eadexia
Q. 40 Seven friends M, N, O, P, Q, R and S, each has scored different marks in the first semester examination. Only two people scored more than $Q$. P scored more than Q but less than $\mathbf{O}$. $\mathbf{M}$ scored more than $\mathbf{R}$ but less than $\mathbf{S}$. Only 3 students scored more than $\mathbf{S}$. $\mathbf{N}$ scored the least among all. The scores of how many students are between the scores of $P$ and $R$ ?
Ans
1.4
-2. 2
4. 3
4.1
Q. 41 Select the option that indicates the correct arrangement of the given words in a logical and meaningful order.
5. Grasshopper
6. Whale
7. Beetle
8. Crocodile
9. Frog

Ans
X 1.2,3, 5, 4, 1
X 2.4, 2, 5, 1, 3
X $3.3,5,4,2,1$

- $4.3,1,5,4,2$
Q. 42 Select the figure from the options that can replace the question mark (?) and complete the given pattern.


Ans

$\times 4$
Q. 43 Select the figure from the options that can replace the question mark (?) and complete the pattern.


Ans
$\times 1$
$\times 2$.

, 3.

$\times 4$.


Question ID : 26433068400
Option 1 ID : 264330268113
Option 2 ID : 264330268112
Option 3 ID : 264330268114
Option 4 ID : 264330268115
Status: Answered
Chosen Option : 3
Q. 44 Select the option that is related to the fifth term in the same way as the second term is related to the first term and the fourth term is related to the third term.
26:375:: 41:600:: 53:?
Ans
$\times 1.785$
2.780
$\times 3.765$
$\times 4.790$
Q. 45 Select the word-pair in which the two words are related in the same way as are the two words in the given pair.
(The words must be considered as meaningful English words and must not be related to each other based on the number of letters/number of consonants/vowels in the word.)
Sweet Potato : Root
Ans
X 1. Milk : Protein
2. Pepper: Spice

X 3. Butter : Milk
X4. Wheat: Pulse
Q. 46 In a certain code language, 'MADRAS' is written as ' 112 ' and 'JAMMU' is written as ' 82 '. How will 'PUNJAB' be written in that language?
Ans
$\times 1.112$
2. 115
3. 109
4. 104
Q. 47 Which of the following numbers will replace the question mark (?) in the given series? 573, 562, 549, 532, 513, 490, ?, 430
Ans
$\times 1.431$
2. 451
3. 441
4. 461
Q. 48 In a college debate, six friends divided into 2 equal teams from Savita, Kavita, Namita,

Diya, Piya, and Riya compete with each other and are sitting in two rows, facing each other. Piya is not at the end of any rows. Kavita is the neighbour of Riya. Diya is second to the left of Riya. Namita the neighbour of Piya is sitting diagonally opposite Diya. Which of the following are sitting diagonally opposite to each other?
Ans

1. Riya and Savita

X 2. Diya and Piya
X 3. Savita and Piya
4. Piya and Kavita
Q. 49 In a certain code language, 'WALK' is written as '77' and 'DRIVE' is written as '102'. How will 'SWIM' be written in that language?
Ans
X 1.25
$\times 2.54$
$\times 3.69$

- 4.60
Q. 50 Select the option that is related to the third term in the same way as the second term is related to the first term and the sixth term is related to the fifth term.
21: 152 :: 19 : ? :: 11 : 82
Ans
+1.128

2. 138

X 3.182
4. 183

Question ID : 26433078940
Option 1 ID : 264330309774
Option 2 ID : 264330309773
Option 3 ID : 264330309775
Option 4 ID : 264330309772
Status: Answered
Chosen Option : 2

## Section : General Awareness

## Q. 1 Which of the following is a capital goods industry?

Ans $\times 1$. Manufacturing of tools
2. Manufacturing of television
3. Manufacturing of plants and machineries
4. Manufacturing of dyes
Q. 2 Match the following columns.

## Colum-A (Enzyme)

i. Ptyalin
ii. Pepsin
iii. Alkaline phosphatase
iv. Maltase

## Column-B (Secreted from)

a. Small intestine
b. Salivary glands
c. Stomach
d. Liver

Ans

1. i-b, ii-c, iii-d, iv-a
2. i-a, ii-b, iii-c, iv-d

X 3. i-a, ii-c, iii-b, iv-d
4. i-d, ii-c, iii-b, iv-a
Q. 3 Who decided to go ahead with his plans of invasion of Afghanistan resulting in the first Anglo-Afghan War?
Ans
X 1. Lord Ellenborough
2. Lord Lytton
3. Lord Dalhousie
4. Lord Auckland
Q. 4 The $7^{\text {th }}$ Commonwealth youth games will be held in:

Ans
X 1.2026
2. 2023
$\times 3.2022$
4. 2028
Q. 5 Which of the following Magadha Emperors annexed Anga into his Empire?

Ans

1. Mahapadma Nanda
2. Bimbisara
3. Ajatashatru
4. Udayin

Question ID : 264330112127
Option 1 ID : $\mathbf{2 6 4 3 3 0 4 4 0 5 9 6}$
Option 2 ID : $\mathbf{2 6 4 3 3 0 4 4 0 5 9 3}$
Option 3 ID : 264330440594
Option 4 ID : 264330440595
Status: Marked For Review
Chosen Option : 1
Q. 6 Which of the following crops is an example of a Rabi crop?

Ans
$\times 1$. Rice
2. Maize
3. Groundnut
4. Mustard

Question ID: 264330116451
Option 1 ID : 264330457890
Option 2 ID : 264330457892
Option 3 ID : $\mathbf{2 6 4 3 3 0 4 5 7 8 8 9}$
Option 4 ID : $\mathbf{2 6 4 3 3 0 4 5 7 8 9 1}$
Status: Answered
Chosen Option : 1
Q. 7 Which of the following programmes was launched on 15 August 1983 with an objective to provide guarantee of employment to at least one member of the landless households for about 100 days in a year?
Ans

1. Training to Rural Youth for Self Employment (TRYSEM)
2. Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)
3. Jawahar Rozgar Yojana (JRY)
4. Rural-Landless Employment Guarantee Programme (RLEGP)

Question ID : 264330119826
Option 1 ID : 264330469582
Option 2 ID : 264330469579
Option 3 ID : 264330469581
Option 4 ID : $\mathbf{2 6 4 3 3 0 4 6 9 5 8 0}$
Status: Answered
Chosen Option : 2
Q. 8 Who accidentally discovered the synthesis of ether in 1850, by reacting alcohols with alkyl iodides in the presence of sulphuric acid?
Ans

1. Leopold Gmelin
2. Carl Wilhelm Scheele
3. Alexander William Williamson
4. Jabir Ibn Hayyan
Q. 9 Kongampattu AV Murugaiyan, was conferred the Padma Shri Award in 2022 for his relentless pursuit in playing the:
Ans
5. bulbultara
6. thavil
7. violin
8. kinnera
Q. 10 As per Amendment of article 51A clause (k) said, "who is a parent or guardian to provide opportunities for education to his child or, as the case may be, ward between the age of $\qquad$ years."

Ans
1.6 to 14 years
2. 1 to 15 years
3. 7 to 18 years
4. 5 to 15 years
Q. 11 Which of the following is a non-benzenoid compound?

Ans

1. Tropone
2. Aniline
3. Naphthalene
4. Benzene
Q. 12 The Abhinandan Saroja National Award 2021 was conferred on which of the following dancers?
Ans
5. Rama Vaidyanathan
6. Surupa Ganguly
7. Aparna Satheesan
8. Yamini Reddy

## Q. 13 Who among the following mentioned that 'Collective Responsibility can be achieved

 only through the instrumentality of the Prime Minister'?Ans
X 1. C Rajagopalachari
2. Lal Bahadur Shastri

X 3. Jawaharlal Nehru
4. Dr BR Ambedkar
Q. 14 What does the 'Print Range' option allow you to specify when printing slides in PowerPoint?

Ans

1. The range of slides to be printed
2. The order of the slides to be printed

X 3. The orientation of the slides to be printed
$\times$
4. The number of copies to be printed
Q. 15 The interspecies interaction that has a favourable influence on the participating species' per capita reproduction and/or survivability is called:

Ans
X 1. adaptation
2. mutualism
3. symbiosis
4. parasitism
Q. 16 Match the column-A with column-B.

Column-A (Elements) Column-B (Group in Periodic Table)
a. Hydrogen
i. Group-13
b. Helium
ii. Group-2
c. Beryllium
d. Boron
iii. Group-1
iv. Group-18

Ans
X 1. a-iv, b-iii, c-ii, d-i
2. a-iii, b-iv, c-ii, d-i

X 3. a-i, b-ii, c-iii, d-iv
X 4. a-i, b-iii, c-ii, d-iv
Q. 17 Select the INCORRECT statement about HDL.

Ans
$X 1$. It is considered as good cholesterol.
2. 'HDL' stands for High-Density Lipoprotein.
3. High levels of HDL cholesterol raise the risk for heart diseases and stroke.
4. It absorbs cholesterol in the blood and carries it back to the liver.
Q. 18 Which of the following measures of money supply is considered least liquid?

Ans
X 1. M3
2. M4
3. M2
4. M1

1. $p_{\text {Total }}=p_{1}+p_{2}+p_{3}+$ $\qquad$ (at constant V, P)
2. $\mathrm{p}_{\text {Total }}=\mathrm{p}_{1}+\mathrm{p}_{2}+\mathrm{p}_{3}+$ $\qquad$ (at constant T, n)
3. $p_{\text {Total }}=p_{1}+p_{2}+p_{3}+$ $\qquad$ (at constant T, P)
4. $p_{\text {Total }}=p_{1}+p_{2}+p_{3}+$ $\qquad$ (at constant T, V)
Q. 20 Perennial snow is a characteristic of the cold climate group which is denoted as $\qquad$ letter code according to the Köppen classification of climate types.
Ans
X1.BSk
5. EF
$\times 3$. Aw
6. Cfb
Q. 21 In November 2022, who among the following was appointed as the brand ambassador of Uttarakhand government?
Ans
X 1. Rishabh Pant
7. Prasoon Joshi
8. Jubin Nautiyal
9. Abhinav Bindra
Q. 22 According to the 2011 census, Daman and Diu has the lowest sex ratio among all union territories of India with only $\qquad$ females per 1000 males.

Ans
$\times 1.777$
$\times 2.818$

- 3.618
$\times 4.534$
1. Basis of credit and liquidity

2. Medium of exchange
3. Standard of deferred payments
4. Measure of value
Q. 24 The parliamentary elections, Presidential and Vice Presidential elections and the office of the Election Commission come under which list of the Constitution of India?
Ans
X 1. State list
5. Union list
6. Residual List
7. Concurrent list
Q. 25 How many children in total were conferred the Pradhan Mantri Rashtriya Bal Puraskar, 2023 by the President of India, Droupadi Murmu on 23 January 2023?
Ans
$\times 1.12$
$\times 2.13$

- 3.11
$\times 4.10$

Question ID : 264330132577
Option 1 ID : 264330519405
Option 2 ID : 264330519406
Option 3 ID : 264330519404
Option 4 ID : $\mathbf{2 6 4 3 3 0 5 1 9 4 0 3}$
Status: Not Answered
Chosen Option: --
Q. 26 In 1910, who applied the newly developed method of radioactive dating to minerals in the first attempt to quantitatively estimate the age of the Earth?
Ans

1. Arthur Holmes
2. Alfred Wegener
3. Friedrich Mohs
4. Clair C Patterson
Q. 27 Under which Amendment Act has the electorate been widened by lowering the age to 18 years?
Ans
$\times 1.42^{\text {nd }}$
$\times 2.72^{\text {nd }}$

- $3.61^{\text {st }}$
$\times 4.76{ }^{\text {th }}$
Q. 28 The weather in India, during winter months, is impacted by the distribution of surface pressure from $\qquad$ —.

Ans

1. central and western Asia
2. central and southern Asia
3. western and eastern Asia
4. central and northern Asia
Q. 29 Where was the 44th Chess Olympiad held?

Ans
X 1. Moscow
X 2. London
$X$ 3. Bengaluru
4. Chennai
Q. 30 What is the rate of the heating and cooling of the oceanic water compared to land?

Ans
(1. Moderate
2. Slower
3. Similar
4. Faster
Q. 31 Which of the following amendments made the Fundamental Duty of parents to provide education to their children between the age of 6 and 14 years?
Ans

1. $86^{\text {th }}$ Amendment Act, 2002
2. $83^{\text {rd }}$ Amendment Act, 2000

X 3. $85^{\text {th }}$ Amendment Act, 2002
4. $84^{\text {th }}$ Amendment Act, 2001
Q. 32 According to the Census 2011, arrange the following states/union territories on the basis of literacy rates, in ascending order.
A) Mizoram
B) Lakshadweep
C) Kerala

Ans

1. (C), (B), (A)
2. (B), (A), (C)
3. (A), (C), (B)
4. (A), (B), (C)
Q. 33 As per Finance Bill 2023 receipts arising from life insurance policies issued on or after 1 April 2023 shall be considered as income from other sources if the premium paid exceeds $\qquad$ each year.
Ans
X 1. ₹15,00,000
5. ₹10,00,000
6. ₹ $5,00,000$
7. ₹2,50,000
Q. 34 Prabha Atre is commonly associated with which Gharana?

Ans

1. Kirana Gharana

X 2. Agra Gharana
X 3. Gwalior Gharana
4. Bhindi bazar Gharana
$\qquad$ -
Ans

1. sugar
2. alloys
3. air
4. water
Q. 36 Which of the following is the riverine port in India that has also been a witness to India's struggle for independence, World Wars I and II and socio-cultural changes taking place in the country?
Ans
5. Paradip Port
6. Jawaharlal Nehru Port
7. Syama Prasad Mookerjee Trust
8. Mundra Port
Q. 37 Which is the most common type of budding yeast, capable of fermenting sugar into carbon dioxide and alcohol and commonly used in baking and brewing?
Ans
9. Schizosaccharomyces pombe
10. Candida albicans
11. Saccharomyces cerevisiae
12. Saccharomyces boulardii
Q. 38 Select the correct combination of Indian classical dance and their respective dancer.

Ans $\quad$ 1. Kelucharan Mohapatra - Mohiniyattam
2. Sharodi Saikia - Kathakali
3. Anita Ratnam - Bharatanatyam
4. Pallavi Krishnan - Manipuri
there.
Ans
X 1. Athirajendra Chola
2. Vijayalaya
3. Rajendra I
4. Virarajendra Chola
Q. 40 Syyed Ahmed Barelvi was the founder of which Muslim Reform Movement?

Ans $\quad$ 1. Aligarh movement
2. Deoband movement
3. Ahmediya movement
4. Wahabi movement
Q. 41 When replying to or forwarding an email, what should you check before sending to ensure accuracy?
Ans

1. The email font style
2. The email sender's name
3. The email attachment
4. The email subject line
Q. 42 Match the animals with the forests in which they are found.

Forests

1. Montane forests
2. Thorn forest and scrubs
3. Mangrove Forests

Ans
X1.1-a, 2-b, 3-c
2. 1-b, 2-a, 3-c
2. 1-b, 2-a, 3-c
$\times 3.1-c, 2-a, 3-b$

X 4. 1-b, 2-c, 3-a

## Animals

a. Camel
b. Yak
c. Crocodile

Question ID : 264330132724
Option 1 ID : 264330519991
Option 2 ID : 264330519992
Option 3 ID : 264330519994
Option 4 ID : $\mathbf{2 6 4 3 3 0 5 1 9 9 9 3}$
Status: Answered
Chosen Option : 1
Q. 43 How many shrines exist in the Panchayatana style of architecture?

Ans
$\times 1.7$
< 2.3

- 3.9
4.5

Question ID : 26433072654
Option 1 ID : 264330284878
Option 2 ID : 264330284876
Option 3 ID : 264330284879
Option 4 ID : 264330284877
Status: Answered
Chosen Option: 1
Q. 44 Who among the following was appointed as the new Economic Affairs Secretary in April 2021?
Ans

1. Ajay Seth
2. Chetan Vaidya
3. Anantha Nageswaran
4. Chintan Vaishnav
Q. 45 The centralisation of the administration of India took place under which Act?

Ans
X 1. Charter Act of 1813
2. Charter Act of 1853
3. Charter Act of 1793
4. Charter Act of 1833
Q. 46 What does air drainage do in cold climate?

Ans
$X$ 1. It filters out better quality air.
2. It keeps dust particles elevated.
3. It keeps the soil warm.
4. It protects plants from frost damages.

Question ID : 264330137312
Option 1 ID : 264330537878
Option 2 ID : 264330537877
Option 3 ID : 264330537875
Option 4 ID : 264330537876
Status : Not Answered
Chosen Option : --
Q. 47 Which of the following is a genetically modified plant?

Ans

1. Bt cotton

X 2. Native potato
X 3. Sugarcane
4. Wild banana

Question ID : 264330109937
Option 1 ID : 264330432025
Option 2 ID : 264330432027
Option 3 ID : 264330432026
Option 4 ID : $\mathbf{2 6 4 3 3 0 4 3 2 0 2 8 ~}$
Status: Answered
Chosen Option: 1
Q. 48 Who among the following was conferred a Lifetime Achievement Honour in the year 2023 by the India-UK Achievers Honours in London for his contribution to economic and political life?
Ans
X 1. Narendra Modi
2. Manmohan Singh
3. Urjit Patel
4. Raghuram Rajan
Q. 49 Prior to the 1991 Census of India, the concept of literacy was defined as essentially illiterate children below the age of $\qquad$ years.
Ans

1. 8
2. 7
3.6
3. 5

X 1. Cadila Healthcare Limited
2. MSD Pharmaceuticals Pvt Ltd

X 3. Cipla Limited
4. Sun Pharmaceutical Industries Limited

## Section : General Engineering Civil and Structural

Q. 1 If the normal and shear stress corresponding the failure are plotted, then a curve is obtained. The plot or curve is called the $\qquad$ _.

Ans

1. strength envelope
2. parabolic curve
3. failure line
4. phreatic line
Q. 2 Formation of $\qquad$ type(s) of rocks involves biological activity in addition to complex mechanical or chemical processes.
Ans
5. sedimentary and metamorphic
6. sedimentary
7. metamorphic
8. igneous

## Q. 3 The angle of the divergent portion of a Venturi meter is kept less than the angle of the converging portion to <br> $\qquad$ -.

Ans

1. increase the velocity of the flow in the direction of the flow at the diverging part
2. avoid a situation wherein the flow may become compressible
3. minimise the loss of energy caused by flow separation
4. decrease the pressure in the direction of the flow at the diverging part
Q. 4 If the actual velocity of jet at the vena contracta in an orifice meter is ' V ', the depth of the centre of orifice below the free surface is ' $h$ ' and ' $g$ ' is the gravitational acceleration, then the coefficient of velocity ' $\mathrm{C}_{\mathrm{v}}$ ' is:

Ans
X 1. 2Vgh / 300
2. $4 \mathrm{~V} /(2 \mathrm{gh})^{3 / 2}$
3. $\mathrm{V} /(2 \mathrm{gh})^{1 / 2}$
4. $2 \mathrm{gh} /(\mathrm{V})^{1 / 2}$

Question ID : 264330158932
Option 1 ID : 264330623089
Option 2 ID : 264330623090
Option 3 ID : 264330623087
Option 4 ID : $\mathbf{2 6 4 3 3 0 6 2 3 0 8 8}$
Status: Answered
Chosen Option: $\mathbf{3}$
Q. 5 As per IS 456, the stripping time of the soffit formwork to slabs (props to be refixed immediately after removal of formwork) is $\qquad$ -.

Ans

1. 2 days
2. 1 day
3. 3 days
4. 28 hours

Question ID : 264330157705
Option 1 ID : 264330618180
Option 2 ID : 264330618179
Option 3 ID : 264330618181
Option 4 ID : 264330618182
Status: Answered
Chosen Option: 3
Q. 6 For $\qquad$ , measuring is required individually in order to provide extra rates of associated components.
Ans

1. honeycomb brickwork
2. earthwork
3. brickwork in arches
4. reinforced brickwork
Q. 7 To measure vertical angles, the theodolite must be levelled with reference to $\qquad$ .
Ans
5. the altitude bubble on the telescope

X 2. the bubble tube on the plate level
3 3. the altitude bubble on both the telescope and the index frame
4. the altitude bubble on the index frame
Q. 8 As per IS 456:2000, which of the statement regarding longitudinal reinforcement in the RCC column is INCORRECT?
Ans $\quad$ 1. Minimum diameter of longitudinal bars shall not be less than 12 mm .
2. Minimum 8 longitudinal bars is to be provided in a column having helical
reinforcement within the helical region.
X 3. Minimum 6 longitudinal bars is to be provided in a circular column.
4. Minimum 4 longitudinal bars is to be provided in a rectangular column.
Q. 9 A simple U-tube manometer connected to a pipe in which liquid is flowing with a uniform speed will give $\qquad$ -.

Ans

1. absolute pressure
2. atmospheric pressure
3. vacuum pressure
4. gauge pressure
Q.10 A vehicle was stopped by fully jamming the breaks in 1.8 s and the skid marks measured 9 m . Determine the average skid resistance. Take $\mathrm{g}=10 \mathrm{~m} / \mathrm{s}^{2}$.
Ans
$\times 1.2 .78$
$\times 2.0 .15$

- 3. 0.556

X4. 0.278
Q. 11 In which process of manufacturing of cement are the raw materials ground, mixed and fed to the rotary kiln in the dry state?

Ans

1. Moist process
2. Wet process
3. Dry process
4. Grinding process
5. The trunnion axis must be perpendicular to the line of sight.
6. The axis of the altitude level must be parallel to the line of collimation.
$X$
7. The axis of the plate level must be perpendicular to the vertical axis.
8. The axis of the striding level must be perpendicular to the transit axis.
Q. 13 Consider the following distances:
$d_{1}=$ distance travelled by the vehicle after applying the breaks.
$d_{2}=$ distance travelled by overtaking vehicle, during reaction time for overtaking.
$d_{3}=$ distance travelled by overtaking vehicle, during total overtaking time.
$d_{4}=$ distance travelled by overtaken vehicle, during total overtaking time.
The Overtaking Sight Distance, on a road with one-way traffic will be equal to:
Ans
$X_{1} \cdot d_{1}+d_{2}+d_{3}+d_{4}$
X2. $d_{1}+d_{2}+d_{3}$
X ${ }^{3} . d_{3}+d_{4}$
$\checkmark$ 4. $\mathrm{d}_{2}+\mathrm{d}_{3}$
Q.14 A BG track is laid with a sleeper density of N+3. The width of the sleeper is 20.25 cm . Find the minimum depth of the ballast cushion.
Ans
$\times 1.61 \mathrm{~cm}$
X 2. 20.375 cm
X 3.10 .125 cm

- 4.30 .5 cm
Q. 15 As per IS 456-2000, the flexural strength of a rectangular section of a singly reinforced RCC beam does NOT depend on which of the given options?
Ans

1. Grade of steel
2. Depth of beam
3. Temperature
4. Grade of concrete
Q. 16 The gross command area for a distributary is 10,000 ha and $80 \%$ of this is culturable. The intensity of irrigation is $50 \%$ for wheat and $30 \%$ for rice. Determine the total area cultivated by wheat and rice.
Ans
X 1.2400 ha
5. 4000 ha
6. 8000 ha
7. 6400 ha
Q. 17 Register of arrears of wages due to work people is recorded in $\qquad$
Ans
8. part II of the muster roll
9. part III of the wage record
10. part III of the muster roll
11. part II of the wage record
Q. 18 If the pipes are connected in parallel, the total loss of head is:

Ans $\quad$ 1. equal to the reciprocal of the sum of head losses in each pipe
2. equal to the sum of the squares of head losses in each pipe
3. the same in each pipe
4. equal to the sum of head losses in each pipe of the following statement is/are correct?
I. The wall that is taken first is treated as the length, though the length may be lesser.
II. The wall with longer length has to be taken as the long wall.

Ans

1. Only statement I is true
2. Both statements I and II are false
3. Both statements I and II are true
4. Only statement II is true
Q. 20 Which of the following is manufactured from particles of wood or other lingo cellulose materials, which are agglomerated, formed and pressed together using an organic binder together in the presence of heat, pressure or moisture?
Ans
X 1. Fibre board
5. Particle board
6. Plywood
7. Block board
Q. 21 In the double integration method for a simply supported beam subjected to UDL over its entire span, the slope and deflection calculation will require:
Ans
8. only the boundary condition
9. the boundary condition as well as the symmetry condition
10. only the symmetry condition
11. the boundary condition as well as the continuity condition
Q. 22 Miscellaneous expenses such as office expenses, stationery, postal expenses, etc., falls under
12. additional expenses
13. overhead expenses
14. extra expenses
15. surcharge expenses
Q. 23 A new system of sanitation is needed over the old conservancy system because:

Ans $\quad$ 1. the new system pollutes the city's water supplies
X 2. both the systems of sanitation have an equal chance of polluting water supplies
3. the old system may pollute the city's water supplies

X 4. the system of sanitation has no relation with the city's water supplies
Q. 24 A beam cross section has shape of an angle section as given below. Which of the following cross sections has the same nature of shear stress distribution as that of the below angle section?


Ans


Cross-Section
$\checkmark 2$.


T-Section
$\times 3$.


I-Section
$\times 4$.


Triangular
Q. 25 The value of slope at fixed support of a cantilever beam of length- L, flexural rigidity-

El, subjected to a point load ' $P$ ' at its mid span, and another point load ' $P$ ' at its free
end, is:
Ans
$\times 1 \cdot \frac{3 . \mathrm{PL}}{4 . \mathrm{EI}}$
$\times 2$ PL
2.EI
$X$
$\frac{\text { PL }}{4 . \mathrm{EI}}$
4. zero
Q.26 A rectangular channel 3 m wide carries water at a depth of 1.2 m . The bed slope of the channel is 0.0025 . Calculate the hydraulic radius of the channel.
Ans
X 1.0 .627 m
2. 0.637 m
3. 0.667 m
4. 0.617 m
Q. 27 Select the correct statement regarding the $1^{\text {st }}$ and $2^{\text {nd }}$ moment of area of a circular lamina with radius ' $R$ '.
Ans

1. $1^{\text {st }}$ moment of area is always +ve and $2^{\text {nd }}$ moment of area is always -ve.
2. $1^{\text {st }}$ moment of area and $2^{\text {nd }}$ moment of area are always +ve.
3. $1^{\text {st }}$ moment of area is always -ve and $2^{\text {nd }}$ moment of area is always +ve.
4. $1^{\text {st }}$ moment of area is may be either -ve or +ve based on the chosen reference axes,
but $2^{\text {nd }}$ moment of area is always +ve.
Q. 28 In expansion joints, the loads are transferred through:

Ans

1. dowel bars
2. tie bars
3. longitudinal bars
4. aggregates
Q. 29 The carbon credit system helps $\qquad$ .

Ans

1. reduce water pollution caused by chemicals
2. reduce noise pollution
3. reduce soil pollution caused by agricultural wastes
4. reduce greenhouse gas emissions

Question ID : 264330160674
Option 1 ID : 264330630028
Option 2 ID : 264330630030
Option 3 ID : $\mathbf{2 6 4 3 3 0 6 3 0 0 2 9}$
Option 4 ID : $\mathbf{2 6 4 3 3 0 6 3 0 0 2 7}$
Status: Answered
Chosen Option : 4
Q. 30 Rankine theory considers the stress in a soil mass when it reaches in the state of

Ans
X1. limited equilibrium
2. plastic equilibrium
3. general state of equilibrium
4. local state of equilibrium
Q. 31 Consider the given statements.

I: Rate of material used for construction includes the cost of transport.
II: For material that is supplied departmentally, cost of carriage from godown to work rate shall be added.
Which of the statements is/are true?
Ans

1. Both statements I and II are true
2. Only statement II is true
3. Both statements I and II are false
4. Only statement I is true
$\qquad$ to capture, store, retrieve, analyse and display the spatial data.
5. only multi-level and multi-period database systems
6. multi-sector, multi-level and multi-period database systems
7. only multi-sector and multi-level database systems
8. only a multi-sector database system
Q. 33 Hollow pre-cast concrete blocks possess good thermal insulation because of the:

Ans $\times 1$. seepage resistance
2. outside air near the block
3. air entrapped within the block
4. resistance to efflorescence
Q. 34 Select the correct option for the given statements.

Statement 1: Due to their low strength, particle boards are less durable than plywood or solid wood. However, using laminates or veneers on the surface can aid to improve durability.
Statement 2: A layer of melamine can be applied to the top surface of particle boards to make them fire-resistant.

Ans
X1. Both statement 1 and statement 2 are false
2. Statement 1 is true and statement 2 is false
3. Statement 1 is false and statement 2 is true
4. Both statement 1 and statement 2 are true
Q. 35 Which of the following types of soil have excellent workability as a construction material?
Ans
$\times 1$. Silty sand
2. Well graded gravel
3. Clayey sand
4. Silty gravel
Q. 36 When the precipitation of a storm reaches the ground, it must fill up a basin, which is
lower than its surroundings, before it can flow over the surface. The volume of water trapped in the basin, which is lower than its surroundings, is called

Ans
X 1. basin storage
2. dead storage
3. depression storage
4. sub-surface storage
Q. 37 During a cement mortar plastering of a brick wall, the ratio of $1: 4$ corresponds to

Ans
$\qquad$
$x$

1. Cement : Coarse aggregate
2. Cement : Sand
3. Lime: Cement
4. Cement: Water
Q. 38 Determine the total pressure on a circular plate of diameter 2 m , which is placed vertically in water in such a way that the Centre of the plate is 2.5 m below the free surface of the water.
Ans
5. 77048 N
6. 72058 N
7. 70058 N
8. 71058 N
Q. 39 Proper experimental knowledge about the porosity and water absorption capacity of a coarse aggregate is required as its affects the durability of concrete because of:
I. Freezing and thawing
II. Reaction with chemically reactive fluids
III. Increasing the workability of concrete

Ans
X 1. Only (i)
2. Only (ii)

X 3. Both (i) and (ii)
4. (i), (ii), and (iii)
Q. 40 Which of the following methods is most accurate for the determination of the water content of cohesionless soil?
Ans

1. Pycnometer method
2. Torsion Balance moisture meter method
3. Calcium carbide method
4. Oven drying method

## Q. 41 Which of the following statements is INCORRECT?

Ans
$X 1$. Thermal power houses are the main contributors to $\mathrm{SO}_{2}$ emissions.
2. Municipal drainage systems emit $\mathrm{H}_{2} \mathrm{~S}$ gas.
3. Incomplete combustion of carbonaceous fuels releases carbon dioxide as the major pollutant.
X 4. Welding operations may release nitrogen oxide.
Q. 42 Which term indicates the stages in which the total predetermined cost of construction of the project is to be spread over?
Ans

1. Cost planning
2. Budget planning
3. Cost determination
4. Financial planning
Q. 43 A current meter is a device used for measuring the:

Ans
$X$ 1. pressure of the fluid
2. velocity of the flow of the fluid
3. surface tension of the fluid
4. viscosity of the fluid
Q. 44 Which of the following is NOT a type of municipal solid waste based on source?

Ans

1. Industrial refuse
2. House refuse
3. Street refuse
4. Trade refuse
Q. 45 A trapezoidal canal carries a discharge of 40 cumec and has the permissible mean velocity of $0.95 \mathrm{~m} / \mathrm{s}$. The bed width of the canal is $\qquad$ Take the side slope of the canal as 1:1 and the width/depth ratio as 6.5.
Ans
X 1.17 .40 m
5. 16.40 m
6. 14.50 m
7. 15.40 m

Question ID : 264330158570
Option 1 ID : 264330621642
Option 2 ID : 264330621639
Option 3 ID : 264330621641
Option 4 ID : $\mathbf{2 6 4 3 3 0 6 2 1 6 4 0}$
Status: Answered
Chosen Option: 4
Q. 46 Trapezoidal sections with rounded corners for large canals or triangular sections with circular bottoms for small canals are the most suitable sections for
$\qquad$
Ans

1. lined
2. unlined
3. semi-lined
4. earthen
Q. 47 When designing steel structures, the effective length of battened compression members should be $\qquad$ —.

Ans

1. increased by $10 \%$
2. decreased by $10 \%$
3. decreased by $20 \%$
4. increased by $20 \%$
Q. 48 As a precaution in cold weather concreting, cement containing $\qquad$ should be selected.
Ans
5. lower C3S and lower C2S
6. lower C3S and higher C2S
$\times 3$. higher C3S and higher C2S
7. higher C3S and lower C2S
Q. 49 In plane table surveys, the orientation of the table only by back sighting is preferred when $\qquad$ .
Ans
8. the traverse is too long
9. the plane table can be set on a point already plotted on the sheet
10. speed is more important than accuracy
11. there is no second point for orientation

## Q. 50 In case of a turbulent flow in a pipe, the shear stress is:

Ans $\times 1$. maximum at the centre and decreases linearly towards the wall
2. maximum at the midway between the centre line and the wall
3. maximum at the centre and decreases logarithmically towards the wall
4. maximum at the wall and decreases linearly to zero at the centre
Q. 51 Which of the following is NOT a property of coir fibres?

Ans
(1. Elasticity
2. Ease to carry
3. Resistance to dynamic loading
4. Long service span
Q. 52 Which of the following terms describes the location, type, mark, length and bending details of each bar in a structure's reinforcing drawing?
Ans

1. Bar bending schedule
2. Work charged establishment
3. Material statement
4. Sundries
Q. 53 Which of the following compounds is responsible for slow hardening, less heat of hydration, and greater resistance to the chemical attack in OPC Cement?
Ans

- 1. $C_{3} A$

2. $\mathrm{C}_{2} \mathrm{~S}$
3. $\mathrm{C}_{3} \mathrm{~S}$
4. $\mathrm{C}_{4} \mathrm{AF}$

Question ID : 264330157850
Option 1 ID : 264330618762
Option 2 ID : 264330618760
Option 3 ID : 264330618761
Option 4 ID : $\mathbf{2 6 4 3 3 0 6 1 8 7 5 9}$
Status: Answered
Chosen Option : 2
Q. 54 The $C_{d}$ value of an orifice of $d / D=0.5(d=$ diameter of orifice and $D=$ diameter of the pipe) lies in the range $\qquad$ -.
Ans
X 1.0 .70 to 0.80
2. 0.60 to 0.62
3. 0.81 to 0.94
4. 0.95 to 0.98
Q. 55 Which of the following is NOT a retarding admixture?

Ans

1. Sugar
2. Starch
3. Calcium chloride
4. Calcium sulphate
Q. 56 The ratio of the total length of streams of all orders within a basin to its area is called

Ans
X 1. stream density
2. drainage density
3. catchment density
4. stream order
Q. 57 The type of signal in which the timings of the phase and cycle are changed according to traffic demand is called $\qquad$ .
Ans

1. manually operated signal
2. fixed time signal
3. pedestrian signal
4. actuated traffic signal
Q. 58 Which of the following statements about carbon footprint is INCORRECT?

Ans
X 1. If you prefer to drive all the time, your carbon footprint will be higher.
2. Carbon footprint is of the following three types: primary, secondary and tertiary.
3. Manufacturing and transportation of consumer goods form a part of the secondary carbon footprint.
4. If you choose to walk or cycle, you lessen your carbon footprint.
Q. 59 Which of the following accelerating admixtures is harmful for reinforced concrete and pre-stressed concrete?
Ans

1. Calcium chloride
2. Silicates

X 3. Carbonates
4. Fluorosilicates
Q. 60 The painting of walls, doors and windows is measured in $\qquad$ -.
Ans

1. pound
2. cubic metre
3. gram
4. square metre

Question ID : 264330159814
Option 1 ID : $\mathbf{2 6 4 3 3 0 6 2 6 6 0 5}$
Option 2 ID : 264330626604
Option 3 ID : 264330626606
Option 4 ID : $\mathbf{2 6 4 3 3 0 6 2 6 6 0 3}$
Status: Answered
Chosen Option: $\mathbf{4}$
Q. 61 Which of the given options does NOT include solid waste?

Ans

1. Sewage
2. Garbage
3. Plastic waste
4. Street sweepings

Question ID : 26433096545
Option 1 ID : 264330378919
Option 2 ID : 264330378917
Option 3 ID : $\mathbf{2 6 4 3 3 0 3 7 8 9 1 8}$
Option 4 ID : 264330378920
Status: Answered
Chosen Option : 4
Q. 62 Punching shear may occur in loose sand with density less than $\qquad$ -.
Ans

1. $35 \%$

- 2. $65 \%$

X 3. $45 \%$
4. $55 \%$
$\qquad$ _,
Where
$M_{u}=$ Ultimate flexural strength of beam
$\mathrm{Mu}, \mathrm{lim}=$ limiting moment of resistance of a beam
Ans
X 1 . Over reinforced section
X 2. under reinforced section
$\chi$ 3. Singly reinforced section
4. Doubly reinforced section
Q. 64 Which of the following materials is a sustainable and green building material that can be used in construction?
Ans

1. Mortar
2. Brick
3. Concrete
4. Bamboo
Q. 65 An underground water tank is to be designed. Which of the following cases is considered most appropriate for the analysis of its wall?
Ans
5. The underground water tank is full
6. The underground water tank is empty
7. The underground water tank is $\frac{3}{4}$ full
8. The underground water tank is half full
$\qquad$ .
X 1.15\%
9. $20 \%$
. $3.25 \%$
10. 10\%
Q. 67 Arrange the following steps for painting of surfaces in a sequential manner.
11. First coat
12. Final coat
13. Prime coat
14. Surface preparation

Ans
X 1.3,1, 2, 4
2. 4, 1, 3, 2
3. $4,3,1,2$
4.3,2, 1, 4
Q. 68 Minimum shear reinforcement is provided in an RCC beam under which of the following conditions?
Ans

1. Nominal shear stress is greater than maximum shear stress
2. Nominal shear stress is greater than design shear strength of concrete but less than
maximum shear stress
3. Nominal shear stress is less than design shear strength of concrete
4. Nominal shear stress is greater than design shear strength of concrete
Q. 69 Which of the following test apparatus is used to determine initial setting time and final setting time?
Ans
5. Vicat's apparatus
6. Soundness test
7. Air permeability test
8. Sieve test
Q. 70 Which of the following is a purpose served by lintel?

Ans

1. To join the foundation
2. To join the column at sill level
3. To support the slab
4. To support the wall above the opening
Q. 71 The air vessel in a reciprocating pump is:

Ans

1. fitted in the delivery pipe
2. fitted outside the system
3. not fitted
4. fitted ahead of the pump

Question ID : 264330158980
Option 1 ID : 264330623279
Option 2 ID : 264330623281
Option 3 ID : $\mathbf{2 6 4 3 3 0 6 2 3 2 8 2}$
Option 4 ID : $\mathbf{2 6 4 3 3 0 6 2 3 2 8 0}$
Status: Answered
Chosen Option : 4
Q. 72 Identify the correct statements regarding theodolite.
i.The axis of the plate level must lie in a plane parallel to the vertical axis.
ii.The horizontal axis must be perpendicular to the vertical axis.
iii.The vertical circle vernier must read zero when the line of collimation is horizontal.
iv.The axis of the altitude level must be perpendicular to the line of collimation.

Ans
$\times 1$. Only $i$ and iv
人 2. i, ii, iii and iv
X 3. Only i and iii
4. Only ii and iii
Q. 73 Which of the following is NOT a disadvantage of using rods and bars as a tension member of steel structures?
Ans
$\times 1$. Sag under own weight
2. Tensile strength
3. Inadequate stiffness
4. High slenderness ratio safe driving during night is known as $\qquad$ .

1. reflector unit marking
2. kerb marking
3. pavement marking
4. object marking
Q. 75 Which of the following scales may NOT give accurate measurements of a plan drawn on a paper, due to shrinkage after few years?
Ans
5. Graphical scale
6. Engineer's scale and graphical scale
7. Representative fraction and graphical scale
8. Engineer's scale and representative fraction
Q. 76 A tacheometer was set at a station and the readings were taken on two points, which were 100 m and 150 m apart and had staff intercepts of 3.98 m and 5.98 m , respectively. If an externally focusing tacheometer was used for the observation, then the values of focal length (f), stadia interval (i) and distance (d) between the objective and the vertical axis of the instrument could be $\qquad$ .
Ans
X 1. $\mathrm{f}=0.3 \mathrm{~m}, \mathrm{i}=0.12 \mathrm{~mm}, \mathrm{~d}=20 \mathrm{~cm}$
9. $\mathrm{f}=0.3 \mathrm{~m}, \mathrm{i}=12 \mathrm{~mm}, \mathrm{~d}=20 \mathrm{~cm}$

X $3 . \mathrm{f}=0.3 \mathrm{~m}, \mathrm{i}=1.2 \mathrm{~mm}, \mathrm{~d}=20 \mathrm{~cm}$
4. $f=0.2 \mathrm{~m}, \mathrm{i}=12 \mathrm{~mm}, \mathrm{~d}=30 \mathrm{~cm}$
Q. 77 Which of the following is NOT a way by which traffic volume data is presented?

Ans

1. AADT in traffic engineering
2. The pattern of traffic
3. Modal average
4. Traffic Variation charts
5. $2,600 \mathrm{~km}$
6. $2,700 \mathrm{~km}$

X 3. 2,800 km
4. $2,900 \mathrm{~km}$
Q. 79 Based on the slenderness ratio, a steel column is found to be an intermediate column. The failure of such a column is visible as:
Ans

1. only buckling
2. only crushing
3. a mixed mode of buckling and crushing
4. The steel column will not fail but remain unstable.
Q.80 A 0.3 m diameter pipe carries oil of specific gravity 0.8 at flow velocity of $1.5 \mathrm{~m} / \mathrm{s}$ and the pressure at a point $A$ is $20 \mathrm{kN} / \mathrm{m}^{2}$ (gauge). If the point $A$ is 3 m above the datum line, calculate the approximate total energy at point $A$ in meters of oil.
Ans
X 1.5 .25 m
5. 5.95 m
6. 5.65 m
7. 6.31 m
Q. 81 A magnetic compass can be used to measure $\qquad$ .

Ans

1. both magnetic meridian and magnetic bearing
2. magnetic meridian, magnetic bearing and arbitrary bearing
3. magnetic bearing only
4. magnetic meridian only
5. period
6. wave velocity
7. frequency
Q. 83 According to the Air (Prevention and Control of Pollution) Act, 1981, how is the term 'Emission' defined?
Ans
8. Only the solid particles coming out of an outlet
9. Only the gaseous substance coming out of an outlet
10. Any solid or liquid or gaseous substance coming out of any chimney, duct or flue or any other outlet
11. Only the liquid substance coming out of an outlet
Q. 84 The maximum shear stress (in $\mathrm{N} / \mathrm{mm}^{2}$ ) in a reinforced concrete beam of M - 25 grade as per IS 456-2000 is given as:
Ans
$\times 1.3 .4$
12. 3.5
-3. 3.1
13. 2.8
Q. 85 What is the relation between the delivery head of the centrifugal pump and the shaft speed ( N )?
Ans
14. The delivery head is directly proportional to N .
15. The delivery head is inversely proportional to N .
16. The delivery head is inversely proportional to $\mathrm{N}^{2}$.
17. The delivery head is directly proportional to $\mathrm{N}^{2}$.
$\qquad$ -.
Ans
X 1.1 hour
18. 1 minute
19. 1 millisecond
20. 1 second

Question ID : 264330160584
Option 1 ID : 264330629670
Option 2 ID : 264330629668
Option 3 ID : 264330629669
Option 4 ID : $\mathbf{2 6 4 3 3 0 6 2 9 6 6 7}$
Status: Answered
Chosen Option : 2
Q. 87 An RCC beam of width 250 mm and effective depth 450 mm is subjected to a nominal shear stress of $1.25 \mathrm{~N} / \mathrm{mm}^{2}$. What is the value of shear force due to design load coming on the section?
Ans
X 1.1406 .25 kN
2. 14.0625 kN
3. 140.625 kN
4. 1.40625 kN
Q. 88 The number of days for which a crop remains in a field is known as crop period. The crop period is also defined as the number of days between $\qquad$ -.

Ans

1. sowing and harvesting of a crop
2. preparation of land and last watering before harvesting a crop
3. sowing and the last watering before harvesting a crop
4. preparation of land and sowing
Q. 89 Which of the following statements regarding Portland Pozzolana Cement (PPC) is INCORRECT?
Ans
5. The long-term strength of PPC beyond a couple of months is higher than that of ordinary Portland cement if enough moisture is available for continued pozzolanic action.
6. PPC produces more heat of hydration than ordinary Portland cement.
7. PPC is useful in marine and hydraulic structures.
8. Fly ash is a pozzolanic material used for the manufacture of PPC.
Q. 90 Which of the following options represents the satellite-based positioning systems run by Russia?
Ans 1.TSIKADA and GLONASS
9. TSIKADA and GPS
10. TRANSIT and GLONASS
11. GPS and GLONASS
Q. 91 The maximum value of the radius of gyration is obtained if a material $\qquad$ -.
Ans $\times 1$. is placed at the centroid
12. is placed nearest the centroid
13. is placed farthest from the centroid
14. has the maximum area
Q. 92 For a railway track, the width of the formation depends upon which of the following?
i. Type of sleepers
ii. Type of ballast
iii. Type of gauge
iv. Number of tracks, i.e. single or double track

Ans
X 1. Both i and ii
2. Both iii and iv
3. Both i and iv
4. Both ii and iii
Q. 93 Sprinkler irrigation is the best method of irrigation for standing crops in in fields.
Ans

1. undulating sandy soil
2. heavy soil with low infiltration rate
3. alluvial soil
4. level surface
Q. 94 For field compaction of soil, in cohesive soil the combination of tamping action and kneading action on soil is achieved by:
Ans
5. frog rammers
6. pneumatic-tyred rollers
7. sheep foot rollers
8. vibroflotation
Q. 95 If the cohesion value of soil is zero, the Mohr envelope will pass through:

Ans $\quad$ 1. some distance on positive $y$-axis
2. The origin
3. some distance on negative $x$-axis
4. some distance on positive $x$-axis
Q. 96 As per Indian Standard code (IS-456), what should be the minimum clear cover provided during the design of a water tank during moderate exposure conditions?
Ans

1. 30 mm
2. 10 mm
3. 45 mm
4. 75 mm

Question ID : 26433099387
Option 1 ID : 264330390164
Option 2 ID : 264330390163
Option 3 ID : 264330390161
Option 4 ID : 264330390162 Status: Answered
Chosen Option : 1
Q. 97 For cast in situ lining, identify the false statement.

Ans

1. It has a longer life than that of any other type.
2. The recurring maintenance charges are high.
3. It is most resistant to erosion.
4. It has a higher initial cost.
Q. 98 Select the correct option for the given statements.

Statement 1: Direction of the movement of a storm over the catchment area has a definite effect on the runoff.
Statement 2: If the storm moves against the flow direction, then the base period will be comparatively more and less peak flow may be expected.
Ans
$\chi 1$. Statement 1 is true and statement 2 is false
2. Both statement 1 and statement 2 are true, but statement 2 is not the correct explanation of statement 1
3. Both statement 1 and statement 2 are true, and statement 2 is the correct
explanation of statement 1
4. Statement 1 is false and statement 2 is true
Q. 99 Which of the following traffic sources will cause noise of the highest level during operation?
Ans

1. Road traffic
2. Rail traffic
3. Inland water traffic
4. Jet aircraft at the take-off stage

Question ID : 26433099407
Option 1 ID : 264330390243
Option 2 ID : 264330390242
Option 3 ID : 264330390244
Option 4 ID : 264330390241
Status: Answered
Q. 100 The following observations were made in an open-traverse compass survey. Bearing of Line $A B$ is $S 35^{\circ} 30^{\prime} \mathrm{E}$, whereas the included angles measured clockwise at stations $B, C, D$ and $E$ are $105^{\circ} 20^{\prime}, 265^{\circ} 50^{\prime}, 20^{\circ} 10^{\prime}$ and $325^{\circ} 40^{\prime}$, respectively. The bearing of Line $C D$ is $\qquad$ —.
Ans
X $1 . \mathrm{S} 24^{\circ} 20^{\prime} \mathrm{W}$
$\times 2 . \mathrm{S} 65^{\circ} 40^{\prime} \mathrm{W}$
X $3 . S 65^{\circ} 40^{\prime} \mathrm{E}$
4. S $24^{\circ} 20^{\prime} \mathrm{E}$

