HPCL Engineer

Previous Year Paper
(Civil)
23 Dec, 2023

हिन्दुस्तान पेट्रोलियम कॉर्पोरेशन लिमिटेड
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HINDUSTAN PETROLEUM CORPORATION LIMITED
REGISTERED OFFICE : 17, JAMSHEDJI TATA ROAD, MUMBAI - 400 020.

Participant ID	
Participant Name	
Test Center Name	
Test Date	23/12/2023
Test Time	2:00 PM - 4:30 PM
Subject	Civil Engineer

Section : **English Language**

Q.1 **Fill in the blank with the correct word from the below options.**

Without water _____ animal can survive. In desert regions the greatest threat to life is drying up.

Ans ✗ 1. all

 ✗ 2. none

 ✗ 3. each

 ✔ 4. no

Question ID : **630680507270**
Option 1 ID : **6306801982537**
Option 2 ID : **6306801982539**
Option 3 ID : **6306801982540**
Option 4 ID : **6306801982538**
Status : **Answered**
Chosen Option : **4**

Q.2 **Choose the most appropriate one-word substitution for the below word.**

"A story in which animals or objects speak and give wholesome moral lesson"

Ans ✔ 1. Fable

 ✗ 2. Legend

 ✗ 3. Anthology

 ✗ 4. Pamphlet

Question ID : **630680507264**
Option 1 ID : **6306801982516**
Option 2 ID : **6306801982514**
Option 3 ID : **6306801982515**
Option 4 ID : **6306801982513**
Status : **Answered**
Chosen Option : **1**

Q.3 Select the most appropriate SYNONYM of the given word below.

Shove

Ans ✔ 1. Push

✘ 2. Flow

✘ 3. Comfort

✘ 4. Relaxed

Question ID : **630680507269**

Option 1 ID : **6306801982534**

Option 2 ID : **6306801982533**

Option 3 ID : **6306801982536**

Option 4 ID : **6306801982535**

Status : **Not Answered**

Chosen Option : **--**

Q.4 In the following question a part of the statement is given in brackets. You are required to replace the text with correct Idioms given in the options.

If you have done something wrong, you have to (accept unpleasant consequences of your actions). There's no escaping out of it.

Ans ✘ 1. hold your horses

✔ 2. face the music

✘ 3. jump the gun

✘ 4. hit the book

Question ID : **630680507267**

Option 1 ID : **6306801982525**

Option 2 ID : **6306801982528**

Option 3 ID : **6306801982526**

Option 4 ID : **6306801982527**

Status : **Answered**

Chosen Option : **1**

Q.5 In the following question a part of the statement is given in brackets. You are required to replace the text with correct Idioms given in the options.

I was very tensed before my exam, but I was (extremely happy) when I finished my exam.

Ans ✘ 1. cut corners

✘ 2. left out in the cold

✔ 3. on cloud nine

✘ 4. blow hot and cold

Question ID : **630680507266**

Option 1 ID : **6306801982523**

Option 2 ID : **6306801982521**

Option 3 ID : **6306801982524**

Option 4 ID : **6306801982522**

Status : **Answered**

Chosen Option : **3**

Q.6 Select the most appropriate adjective from the given option to fill in the blanks for the given sentence.

They ate some _____ food.

Ans ✔ 1. delicious

✖ 2. deliciously

✖ 3. ideal

✖ 4. fantastically

Question ID : **630680507261**
Option 1 ID : **6306801982503**
Option 2 ID : **6306801982501**
Option 3 ID : **6306801982504**
Option 4 ID : **6306801982502**
Status : **Answered**
Chosen Option : **1**

Q.7 Choose the most logical order of the sentences from among the four given choices to construct a coherent paragraph.

Climate change is an unprecedented global crisis driven by human activities, primarily greenhouse gas emissions.
A) Urgent action is needed to mitigate its effects and build resilience for a sustainable future.
B) Its far-reaching impacts threaten ecosystems, economies, and livelihoods worldwide.
C) It necessitates international cooperation, innovative policies, and sustainable practices to preserve our planet for future generations. Taking up this challenge is not a choice but an ethical imperative for humanity's survival.
D) Addressing climate change demands immediate and comprehensive action at the global level.

Ans ✖ 1. ADCB

✖ 2. CDAB

✖ 3. ABDC

✔ 4. BADC

Question ID : **630680507263**
Option 1 ID : **6306801982509**
Option 2 ID : **6306801982512**
Option 3 ID : **6306801982510**
Option 4 ID : **6306801982511**
Status : **Answered**
Chosen Option : **3**

Q.8 Choose the most appropriate one-word substitution for the below word.

"something that is no longer produced or used; out of date"

Ans ✖ 1. Operative

✖ 2. Recent

✖ 3. Secret

✔ 4. Obsolete

Question ID : **630680507265**
Option 1 ID : **6306801982519**
Option 2 ID : **6306801982517**
Option 3 ID : **6306801982520**
Option 4 ID : **6306801982518**
Status : **Answered**
Chosen Option : **4**

Q.9 Select the most appropriate SYNONYM of the given word below.

Influx

Ans ✗ 1. Affluent

✗ 2. Abate

✗ 3. sack

✓ 4. Rush

Question ID : **630680507268**
Option 1 ID : **6306801982530**
Option 2 ID : **6306801982532**
Option 3 ID : **6306801982531**
Option 4 ID : **6306801982529**
Status : **Answered**
Chosen Option : **2**

Q.10 Fill in the blank with the correct word from the below options.

One of nature's masterpieces among creatures equipped to deal with desert life is the hardy camel. Stories range the desert lands far and wide about _____ endurance feats by camels.

Ans ✗ 1. total

✗ 2. popular

✗ 3. little

✓ 4. remarkable

Question ID : **630680507272**
Option 1 ID : **6306801982546**
Option 2 ID : **6306801982545**
Option 3 ID : **6306801982547**
Option 4 ID : **6306801982548**
Status : **Answered**
Chosen Option : **2**

Q.11 Select the most appropriate adjective from the given option to fill in the blanks for the given sentence.

That is an _____ film.

Ans ✗ 1. interested

✗ 2. identical

✗ 3. ideally

✓ 4. interesting

Question ID : **630680507260**
Option 1 ID : **6306801982497**
Option 2 ID : **6306801982498**
Option 3 ID : **6306801982499**
Option 4 ID : **6306801982500**
Status : **Answered**
Chosen Option : **4**

Q.12 Choose the most logical order of the sentences from among the four given choices to construct a coherent paragraph.

The pursuit of scientific knowledge has played a significant role in shaping our understanding of the world around us.
A) The notion that science is solely responsible for answering life's most profound questions is a reductionist one.
B) Science is but one way of studying the universe, and while it has made significant contributions to our understanding of the world, it is not the only approach.
C) Yet, the notion that science can provide a final answer to all of life's questions is a misguided one.
D) While scientific inquiry has contributed immensely to our understanding of the universe, it is only one of many approaches to comprehending the complexities of existence.

Ans ✔ 1. CDAB

✘ 2. DCAB

✘ 3. ABCD

✘ 4. BCAD

Question ID : **630680507262**
Option 1 ID : **6306801982506**
Option 2 ID : **6306801982505**
Option 3 ID : **6306801982508**
Option 4 ID : **6306801982507**
Status : **Not Answered**
Chosen Option : **--**

Q.13 Fill in the blank with the correct word from the below options.

One of nature's masterpieces among creatures equipped to _____ with desert life is the hardy camel.

Ans ✘ 1. attain

✔ 2. cope

✘ 3. resist

✘ 4. assist

Question ID : **630680507271**
Option 1 ID : **6306801982544**
Option 2 ID : **6306801982543**
Option 3 ID : **6306801982541**
Option 4 ID : **6306801982542**
Status : **Answered**
Chosen Option : **2**

Comprehension:

Choose the most appropriate one-word substitution for the below word.

The practice of damming rivers to create reservoirs has a long history, with examples dating back to Roman times. Over the years, the reasons for damming rivers have evolved, with three main purposes being human consumption, irrigation, and industrial use. However, while damming rivers provides many benefits, it also causes significant problems, especially in underdeveloped countries.

One of the primary advantages of damming rivers is to provide a reliable water source during droughts. Rainfall is never uniform enough to provide a steady flow of water, but reservoirs can hold water for extended periods, which can be used during dry weather. Dams also help control the flow of floodwater in mountainous areas, which can destroy crops, homes, and animal and human life. Dams can also retain large quantities of water for controlled use, working from sea to river and vice versa.
Another significant advantage of damming rivers is the production of hydroelectric power. By channeling water through conduits and using it as mechanical power for turbines, dams can produce vast amounts of energy. The reservoir water is also used in nuclear power stations for cooling and other purposes, with the water being returned to the river or sea afterward. Dams can also provide a constant depth for rivers, making them navigable by large vessels and benefiting a country's communication system.
On the downside, damming a river can cause significant problems. A great area of land, with its trees, flora and fauna, farms, and houses, has to be inundated. Neither the residents who have to resettle elsewhere nor environmentalists appreciate this. The problem is more acute when the countryside being spoilt is environmentally unique. Creating an artificial lake inevitably changes the character of a large area, with farmland destroyed, and natural scenery despoiled, in some people's opinion. People also have to move, which can be inconvenient.

SubQuestion No : 14

Q.14 Select the most appropriate SYNONYM of the given word below.

Reliable

Ans ✗ 1. False

✗ 2. Disputed

✗ 3. Uncertain

✔ 4. Dependable

Question ID : **630680507276**
Option 1 ID : **6306801982558**
Option 2 ID : **6306801982559**
Option 3 ID : **6306801982557**
Option 4 ID : **6306801982560**
Status : **Answered**
Chosen Option : **4**

Comprehension:

Choose the most appropriate one-word substitution for the below word.

The practice of damming rivers to create reservoirs has a long history, with examples dating back to Roman times. Over the years, the reasons for damming rivers have evolved, with three main purposes being human consumption, irrigation, and industrial use. However, while damming rivers provides many benefits, it also causes significant problems, especially in underdeveloped countries.

One of the primary advantages of damming rivers is to provide a reliable water source during droughts. Rainfall is never uniform enough to provide a steady flow of water, but reservoirs can hold water for extended periods, which can be used during dry weather. Dams also help control the flow of floodwater in mountainous areas, which can destroy crops, homes, and animal and human life. Dams can also retain large quantities of water for controlled use, working from sea to river and vice versa.

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SubQuestion No : 15

Q.15 Identify the suitable title for the passage.

Ans ✔️ 1. The Pros and Cons of Damming Rivers for Human Use

❌ 2. Floods and its issues

❌ 3. Dams- wastage of money

❌ 4. Need to create more reservoirs

Question ID : **630680507274**
Option 1 ID : **6306801982551**
Option 2 ID : **6306801982550**
Option 3 ID : **6306801982552**
Option 4 ID : **6306801982549**
Status : **Answered**
Chosen Option : **1**

Comprehension:

Choose the most appropriate one-word substitution for the below word.

The practice of damming rivers to create reservoirs has a long history, with examples dating back to Roman times. Over the years, the reasons for damming rivers have evolved, with three main purposes being human consumption, irrigation, and industrial use. However, while damming rivers provides many benefits, it also causes significant problems, especially in underdeveloped countries.

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SubQuestion No : 16

Q.16 Select the most appropriate SYNONYM of the given word below.

Inevitably

Ans ✔ 1. Unavoidable

✘ 2. Guiltless

✘ 3. Steady

✘ 4. Avertable

Question ID : **630680507277**
Option 1 ID : **6306801982562**
Option 2 ID : **6306801982563**
Option 3 ID : **6306801982561**
Option 4 ID : **6306801982564**
Status : **Answered**
Chosen Option : **1**

Comprehension:

Choose the most appropriate one-word substitution for the below word.

The practice of damming rivers to create reservoirs has a long history, with examples dating back to Roman times. Over the years, the reasons for damming rivers have evolved, with three main purposes being human consumption, irrigation, and industrial use. However, while damming rivers provides many benefits, it also causes significant problems, especially in underdeveloped countries.

One of the primary advantages of damming rivers is to provide a reliable water source during droughts. Rainfall is never uniform enough to provide a steady flow of water, but reservoirs can hold water for extended periods, which can be used during dry weather. Dams also help control the flow of floodwater in mountainous areas, which can destroy crops, homes, and animal and human life. Dams can also retain large quantities of water for controlled use, working from sea to river and vice versa.

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On the downside, damming a river can cause significant problems. A great area of land, with its trees, flora and fauna, farms, and houses, has to be inundated. Neither the residents who have to resettle elsewhere nor environmentalists appreciate this. The problem is more acute when the countryside being spoilt is environmentally unique. Creating an artificial lake inevitably changes the character of a large area, with farmland destroyed, and natural scenery despoiled, in some people's opinion. People also have to move, which can be inconvenient.

SubQuestion No : 17

Q.17 Identify the central theme of the passage.

Ans ✗ 1. One of the primary advantages of damming rivers is to provide a reliable water source during droughts.

✔ 2. It talks about the advantages and disadvantages of creating dams to prevent flood and other natural calamities.

✗ 3. Dam's creation does not have any disadvantages at all; it is being created for the betterment of human beings only.

✗ 4. It talks about the issues caused by dams to the navigation of large vessels and thus affecting country's communication system.

Question ID : **630680507275**
Option 1 ID : **6306801982555**
Option 2 ID : **6306801982556**
Option 3 ID : **6306801982554**
Option 4 ID : **6306801982553**
Status : **Answered**
Chosen Option : **2**

Section : **Quantitative Aptitude**

Q.1 The difference between simple interest and compound on Rs. 1400 for one year at 10% per annum reckoned half-yearly is:

Ans ✗ 1. Rs. 5

✔ 2. Rs. 3.5

✗ 3. Rs. 2.75

✗ 4. Rs. 4

Question ID : **630680507607**
Option 1 ID : **6306801983872**
Option 2 ID : **6306801983869**
Option 3 ID : **6306801983871**
Option 4 ID : **6306801983870**
Status : **Not Answered**
Chosen Option : **--**

Q.2 $2x+3y = 38$ and $\frac{x+y}{y} = \frac{15}{8}$, then find the value of $6x +7y$.

Ans
✗ 1. 102

✗ 2. 65

✔ 3. 98

✗ 4. 78

Question ID : **630680507613**
Option 1 ID : **6306801983893**
Option 2 ID : **6306801983896**
Option 3 ID : **6306801983894**
Option 4 ID : **6306801983895**
Status : **Answered**
Chosen Option : **3**

Q.3 A pair of linear equations which has a unique solution x = 4, y = -5 is

Ans
✗ 1. $x + y = -1; 3x - 4y = -5$

✗ 2. $2x - y = 1; 3x + 2y = 3$

✔ 3. $2x + 4y = -12; 4x + 3y = 1$

✗ 4. $x - 4y - 14 = 0; 5x - y - 13 = 0$

Question ID : **630680507626**
Option 1 ID : **6306801983945**
Option 2 ID : **6306801983947**
Option 3 ID : **6306801983946**
Option 4 ID : **6306801983948**
Status : **Answered**
Chosen Option : **3**

Q.4 If the value of $\theta + \varphi = \frac{\pi}{2}$, and cosec $\theta = 2$, what will be the value of $\sin\varphi$?

Ans
✗ 1. $\dfrac{2}{\sqrt{3}}$

✔ 2. $\dfrac{\sqrt{3}}{2}$

✗ 3. $\sqrt{3}$

✗ 4. 2

Question ID : **630680507637**
Option 1 ID : **6306801983992**
Option 2 ID : **6306801983990**
Option 3 ID : **6306801983989**
Option 4 ID : **6306801983991**
Status : **Answered**
Chosen Option : **2**

Q.5 The table given below shows the selling price and cost price of five different articles

Article	Selling Price	Cost Price
Grinder	2500	2800
Iron	1800	1600
Lamp	1200	900
Induction	2000	2400
Fan	800	480

Find the gain percentage of Fan.

Ans ✔ 1. 66.67%

✘ 2. 56.56%

✘ 3. 70%

✘ 4. 60 %

Question ID : **630680507609**
Option 1 ID : **6306801983879**
Option 2 ID : **6306801983877**
Option 3 ID : **6306801983880**
Option 4 ID : **6306801983878**
Status : **Answered**
Chosen Option : **1**

Q.6 If 3, 9, and 27 are in proportion, what is the fourth proportional?

Ans ✘ 1. 134

✔ 2. 81

✘ 3. 99

✘ 4. 66

Question ID : **630680507620**
Option 1 ID : **6306801983924**
Option 2 ID : **6306801983922**
Option 3 ID : **6306801983923**
Option 4 ID : **6306801983921**
Status : **Answered**
Chosen Option : **2**

Q.7 What is the value of $2^5 \times 2^5 \times 2^{100}$.

Ans ✘ 1. 2^{250}

✘ 2. 2^{25000}

✘ 3. 2^{5500}

✔ 4. 2^{110}

Question ID : **630680507611**
Option 1 ID : **6306801983887**
Option 2 ID : **6306801983886**
Option 3 ID : **6306801983885**
Option 4 ID : **6306801983888**
Status : **Answered**
Chosen Option : **4**

Q.8 Simplify the expression $5 + 2 \times (9 - 4)^2 \div 5$.

Ans
✅ 1. 15
❌ 2. 12
❌ 3. 11
❌ 4. 7

Question ID : **630680507612**
Option 1 ID : **6306801983889**
Option 2 ID : **6306801983890**
Option 3 ID : **6306801983891**
Option 4 ID : **6306801983892**
Status : **Answered**
Chosen Option : **1**

Q.9 Two pipes A & B can fill a tank in 8 min & 12 min respectively. Both the pipes are opened together but after 3 min, pipe A is turned off. What is the total time required to fill the tank

Ans
✅ 1. 4.5
❌ 2. 5
❌ 3. 4
❌ 4. 3.5

Question ID : **630680507622**
Option 1 ID : **6306801983931**
Option 2 ID : **6306801983932**
Option 3 ID : **6306801983930**
Option 4 ID : **6306801983929**
Status : **Answered**
Chosen Option : **1**

Q.10 If $\frac{1}{3}$ is a root of the quadratic equation $x^2 - mx - \frac{10}{9} = 0$, then value of m is:

Ans
❌ 1. 5
❌ 2. 2
❌ 3. 4
✅ 4. 3

Question ID : **630680507629**
Option 1 ID : **6306801983960**
Option 2 ID : **6306801983957**
Option 3 ID : **6306801983959**
Option 4 ID : **6306801983958**
Status : **Answered**
Chosen Option : **4**

Q.11 If $\tan \theta / \cot \theta = 3$, what will be the value of $\sin \theta + \cos \theta$?

Ans

✗ 1. $\dfrac{\sqrt{3}}{2}$

✓ 2. $\dfrac{(1+\sqrt{3})}{2}$

✗ 3. 1

✗ 4. 2

Question ID : **630680507636**
Option 1 ID : **6306801983985**
Option 2 ID : **6306801983988**
Option 3 ID : **6306801983986**
Option 4 ID : **6306801983987**
Status : **Answered**
Chosen Option : **2**

Q.12 The point which lies on the x-axis at a distance of 8 units in the negative direction of the x-axis is.

Ans

✗ 1. (8,0)

✗ 2. (0,8)

✓ 3. (-8,0)

✗ 4. (0,-8)

Question ID : **630680507632**
Option 1 ID : **6306801983969**
Option 2 ID : **6306801983971**
Option 3 ID : **6306801983970**
Option 4 ID : **6306801983972**
Status : **Answered**
Chosen Option : **3**

Q.13 A cylindrical cistern whose radius is 8 cm is partly filled with water. If a conical block of iron whose radius is 3.2 cm and height is 9 cm is wholly immersed in the water, by how much will the water level rise? (take $\pi = \frac{22}{7}$)

Ans

✗ 1. 0.66 cm

✗ 2. 0.52 cm

✗ 3. 0.83 cm

✓ 4. 0.48 cm

Question ID : **630680507631**
Option 1 ID : **6306801983967**
Option 2 ID : **6306801983966**
Option 3 ID : **6306801983968**
Option 4 ID : **6306801983965**
Status : **Answered**
Chosen Option : **4**

Q.14 The average age of husband, wife and their child 2 years ago was 24 years and that of wife and the child 4 years ago was 18 years. The present age of the husband is:

Ans ✗ 1. 38 years

✗ 2. 26 years

✗ 3. 29 years

✓ 4. 34 years

Question ID : **630680507605**
Option 1 ID : **6306801983863**
Option 2 ID : **6306801983861**
Option 3 ID : **6306801983864**
Option 4 ID : **6306801983862**
Status : **Answered**
Chosen Option : **4**

Q.15 Maria deposited Rs. 5000 in a bank account that offers a simple interest rate. After 4 years, she received Rs. 1600 as interest. What is the annual rate of interest?

Ans ✗ 1. 9%

✗ 2. 9.5%

✓ 3. 8%

✗ 4. 8.5%

Question ID : **630680507606**
Option 1 ID : **6306801983867**
Option 2 ID : **6306801983868**
Option 3 ID : **6306801983865**
Option 4 ID : **6306801983866**
Status : **Answered**
Chosen Option : **3**

Q.16 A fish tank has 16 male fish and 18 female fish. The probability of fish taken out is a male fish:

Ans ✗ 1. $\dfrac{4}{17}$

✗ 2. $\dfrac{9}{17}$

✓ 3. $\dfrac{8}{17}$

✗ 4. $\dfrac{16}{17}$

Question ID : **630680507627**
Option 1 ID : **6306801983951**
Option 2 ID : **6306801983952**
Option 3 ID : **6306801983950**
Option 4 ID : **6306801983949**
Status : **Answered**
Chosen Option : **3**

Q.17 Find the average of square of even numbers from 1 to 9.

Ans
- ✗ 1. 18
- ✗ 2. 46
- ✔ 3. 30
- ✗ 4. 32

Question ID : **630680507604**
Option 1 ID : **6306801983857**
Option 2 ID : **6306801983860**
Option 3 ID : **6306801983858**
Option 4 ID : **6306801983859**
Status : **Answered**
Chosen Option : **3**

Q.18 The product of two consecutive positive integers is 12882. To find the integers, this can be represented in the form of quadratic equation as

Ans
- ✗ 1. $x^2 + x + 12882 = 0$
- ✔ 2. $x^2 + x - 12882 = 0$
- ✗ 3. $2x^2 + x - 12882 = 0$
- ✗ 4. $x^2 - 2x - 12882 = 0$

Question ID : **630680507630**
Option 1 ID : **6306801983961**
Option 2 ID : **6306801983962**
Option 3 ID : **6306801983964**
Option 4 ID : **6306801983963**
Status : **Answered**
Chosen Option : **1**

Q.19 A mixture contains alcohol and water in the ratio of 4 : 1. If 5 liters of water is added to the mixture, then the ratio becomes 4 : 7. Find the quantity of alcohol in the given mixture?

Ans
- ✗ 1. 3 liters
- ✔ 2. $\frac{10}{3}$ liters
- ✗ 3. $\frac{3}{10}$ liters
- ✗ 4. 10 liters

Question ID : **630680507619**
Option 1 ID : **6306801983918**
Option 2 ID : **6306801983919**
Option 3 ID : **6306801983920**
Option 4 ID : **6306801983917**
Status : **Answered**
Chosen Option : **2**

Q.20 If side of the square is increased by 3 cm, then its area increases by 153 sq.cm. What is the perimeter of original square?

Ans
✗ 1. 24 cm

✗ 2. 48 cm

✗ 3. 102 cm

✔ 4. 96 cm

Question ID : **630680507634**
Option 1 ID : **6306801983977**
Option 2 ID : **6306801983978**
Option 3 ID : **6306801983980**
Option 4 ID : **6306801983979**
Status : **Answered**
Chosen Option : **4**

Q.21 Not taking all stoppages into the account, the speed of the bus is 44kmph and including stoppages, it is 32 kmph. For how many minutes does the bus stop per hour?

Ans
✗ 1. 14.23 minutes

✔ 2. 16.38 minutes

✗ 3. 12 minutes

✗ 4. 11 minutes

Question ID : **630680507623**
Option 1 ID : **6306801983935**
Option 2 ID : **6306801983936**
Option 3 ID : **6306801983934**
Option 4 ID : **6306801983933**
Status : **Not Answered**
Chosen Option : **--**

Q.22 A tier has two punctures. The first punctures alone would have made the tier flat in 14 min and the second alone would have done it in 7 min. if air leaks out at a constant rate, how long does it take both the punctures together to make it flat?

Ans
✗ 1. 6.27 minutes

✔ 2. 4.67 minutes

✗ 3. 5.67 minutes

✗ 4. 5.34 minutes

Question ID : **630680507621**
Option 1 ID : **6306801983928**
Option 2 ID : **6306801983925**
Option 3 ID : **6306801983926**
Option 4 ID : **6306801983927**
Status : **Answered**
Chosen Option : **2**

Q.23 In a rectangle, diagonal is 6 times of its breadth. The ratio of length to breadth is:

Ans
  ✔ 1. $\sqrt{35}:1$
  ✘ 2. $\sqrt{35}:2$
  ✘ 3. 35 : 2
  ✘ 4. 35 : 1

Question ID : **630680507635**
Option 1 ID : **6306801983981**
Option 2 ID : **6306801983984**
Option 3 ID : **6306801983983**
Option 4 ID : **6306801983982**
Status : **Answered**
Chosen Option : **1**

Q.24 If the price of a product is increased by 28%, by what percentage should it be decreased to return to the original price?

Ans
  ✘ 1. 31%
  ✘ 2. 25.2%
  ✘ 3. 29.2%
  ✔ 4. 21.87%

Question ID : **630680507615**
Option 1 ID : **6306801983904**
Option 2 ID : **6306801983901**
Option 3 ID : **6306801983903**
Option 4 ID : **6306801983902**
Status : **Answered**
Chosen Option : **4**

Q.25 A trader expects a gain of 24 % on his cost price. If in a week his sale is of Rs. 580, then what is his profit?

Ans
  ✔ 1. Rs. 112.26
  ✘ 2. Rs. 108.78
  ✘ 3. Rs. 103.45
  ✘ 4. Rs. 106.55

Question ID : **630680507616**
Option 1 ID : **6306801983908**
Option 2 ID : **6306801983907**
Option 3 ID : **6306801983905**
Option 4 ID : **6306801983906**
Status : **Answered**
Chosen Option : **1**

Q.26 Find the marked price if selling price = Rs 2261 and Discount = 15%.

Ans
✗ 1. Rs.2560

✗ 2. Rs.2780

✗ 3. Rs.2890

✓ 4. Rs.2660

Question ID : **630680507618**
Option 1 ID : **6306801983913**
Option 2 ID : **6306801983915**
Option 3 ID : **6306801983916**
Option 4 ID : **6306801983914**
Status : **Answered**
Chosen Option : **4**

Q.27 The sides of a triangle are 6 cm, 10 cm and 14 cm. Determine the radius of the inscribed circle.

Ans
✗ 1. $\sqrt{2}$ cm

✗ 2. 2 cm

✗ 3. 3 cm

✓ 4. $\sqrt{3}$ cm

Question ID : **630680507633**
Option 1 ID : **6306801983976**
Option 2 ID : **6306801983974**
Option 3 ID : **6306801983973**
Option 4 ID : **6306801983975**
Status : **Not Answered**
Chosen Option : **--**

Q.28 A shopkeeper sells his goods at cost price but uses a weight of 966 grams for a kg. weight. What is his gain percent?

Ans
✗ 1. 2.78%

✗ 2. 2.56%

✓ 3. 3.52%

✗ 4. 3.12%

Question ID : **630680507617**
Option 1 ID : **6306801983910**
Option 2 ID : **6306801983909**
Option 3 ID : **6306801983912**
Option 4 ID : **6306801983911**
Status : **Answered**
Chosen Option : **3**

Q.29 A man travels at the speed of 6 kmph towards the office and comes back at the speed of 7 kmph. If it takes him 13 hours for going to and coming back from office. How far is office from the home?

Ans ✔ 1. 42 km

✗ 2. 38 km

✗ 3. 32 km

✗ 4. 28 km

Question ID : **630680507624**
Option 1 ID : **6306801983940**
Option 2 ID : **6306801983939**
Option 3 ID : **6306801983938**
Option 4 ID : **6306801983937**
Status : **Answered**
Chosen Option : **1**

Q.30 A sum of money becomes Rs. 4761 at a rate of 15% compounded annually for 2 years. The sum of money is.

Ans ✗ 1. Rs. 2700

✗ 2. Rs. 3300

✗ 3. Rs. 2300

✔ 4. Rs. 3600

Question ID : **630680507608**
Option 1 ID : **6306801983874**
Option 2 ID : **6306801983875**
Option 3 ID : **6306801983873**
Option 4 ID : **6306801983876**
Status : **Answered**
Chosen Option : **4**

Q.31 The table given below shows the selling price and cost price of five different articles

Article	Selling Price	Cost Price
Grinder	2500	2800
Iron	1800	1600
Lamp	900	1200
Induction	2000	2400
Fan	800	480

Find the discount percentage of Lamp.

Ans ✔ 1. 25%

✗ 2. 75%

✗ 3. 35%

✗ 4. 15%

Question ID : **630680507610**
Option 1 ID : **6306801983883**
Option 2 ID : **6306801983881**
Option 3 ID : **6306801983882**
Option 4 ID : **6306801983884**
Status : **Answered**
Chosen Option : **1**

Q.32 In a deck of 52 playing cards, there are 4 suits (hearts, diamonds, clubs, spades), each with cards numbered 2 through 10, and face cards (jack, queen, king) along with an ace. Consider drawing a single card from the deck. What is the probability of drawing a card with a number less than 5?

Ans

✗ 1. $\dfrac{13}{4}$

✗ 2. $\dfrac{1}{4}$

✓ 3. $\dfrac{4}{13}$

✗ 4. $\dfrac{4}{5}$

Question ID : **630680507628**
Option 1 ID : **6306801983954**
Option 2 ID : **6306801983955**
Option 3 ID : **6306801983953**
Option 4 ID : **6306801983956**
Status : **Answered**
Chosen Option : **3**

Q.33 A fraction becomes $\frac{1}{3}$ when 2 is subtracted from the numerator and it becomes $\frac{1}{5}$ when 8 is added to its denominator. The fraction obtained is:

Ans

✗ 1. $\dfrac{2}{5}$

✗ 2. $\dfrac{5}{2}$

✓ 3. $\dfrac{1}{-3}$

✗ 4. $\dfrac{1}{3}$

Question ID : **630680507625**
Option 1 ID : **6306801983943**
Option 2 ID : **6306801983944**
Option 3 ID : **6306801983942**
Option 4 ID : **6306801983941**
Status : **Answered**
Chosen Option : **3**

Q.34 The difference between two numbers is 300. If 6 % of one number is 15 % of the other number, then find the two numbers

Ans
✗ 1. 400,700

✗ 2. 100,400

✗ 3. 500,800

✓ 4. 200,500

Question ID : **630680507614**
Option 1 ID : **6306801983898**
Option 2 ID : **6306801983897**
Option 3 ID : **6306801983900**
Option 4 ID : **6306801983899**
Status : **Answered**
Chosen Option : **4**

Section : **Intellectual Potential Test**

Q.1 Select the correct option based on the statements and sequence of actions given below.

Statement: Dengue has engulfed the majority of the population in Delhi in the year-2023 and there has been cases of deaths also.

Courses of Action:
I. Precautionary measures should be taken every year before the onset of diseases in the form of fogging and awareness campaigns.
II. Medical facilities are also need to be upgraded as the diseases are changing their mutant variations and becoming more and more fatal.

Ans
✗ 1. Only II follows

✓ 2. Both I and II follow

✗ 3. Neither I nor II follows

✗ 4. Only I follows

Question ID : **630680507425**
Option 1 ID : **6306801983142**
Option 2 ID : **6306801983143**
Option 3 ID : **6306801983144**
Option 4 ID : **6306801983141**
Status : **Answered**
Chosen Option : **2**

Q.2 How is Rishav's father's wife's father's wife related to Rishav?

Ans
✗ 1. Grandmother

✗ 2. Aunty

✗ 3. Mother

✓ 4. Maternal grandmother

Question ID : **630680507407**
Option 1 ID : **6306801983071**
Option 2 ID : **6306801983069**
Option 3 ID : **6306801983070**
Option 4 ID : **6306801983072**
Status : **Answered**
Chosen Option : **4**

Q.3 If 'A' means ' multiplied by", 'B' means 'divided by', 'C' means 'minus' and 'D' means ''plus''' ', then what will be the value of following expression?

3 A 6 C 6 B 2 D 4 = ?

Ans ✔ 1. 19

✘ 2. 21

✘ 3. 18

✘ 4. 20

Question ID : **630680507428**
Option 1 ID : **6306801983154**
Option 2 ID : **6306801983156**
Option 3 ID : **6306801983153**
Option 4 ID : **6306801983155**
Status : **Answered**
Chosen Option : **1**

Q.4 Read the given statement(s) 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 statement(s).

Statements:
Some science are business.
All business are sociology
Some sociology are yoga

Conclusion:
I. Some yoga are business.
II. Some sociology are business.
III. Some sociology are science.
IV. Some yoga are science.

Ans ✘ 1. Only I and II

✘ 2. Only III and IV

✘ 3. Only I and IV

✔ 4. Only II and III

Question ID : **630680507409**
Option 1 ID : **6306801983077**
Option 2 ID : **6306801983079**
Option 3 ID : **6306801983080**
Option 4 ID : **6306801983078**
Status : **Answered**
Chosen Option : **4**

Q.5 Ravi is standing facing north and starts walking towards north from a point A and after walking 10 km he turns to his right and again walks 5 km and reaches a point B. From point B Ravi again turns to his left and walks 5 km and reaches another point C. From point C, Ravi again turns to his left and walks 5 km to reach point D and ends his journey. In which direction is Ravi standing from the point where he started his journey?

Ans ✘ 1. South

✘ 2. East

✘ 3. West

✔ 4. North

Question ID : **630680507410**
Option 1 ID : **6306801983082**
Option 2 ID : **6306801983084**
Option 3 ID : **6306801983083**
Option 4 ID : **6306801983081**
Status : **Answered**
Chosen Option : **4**

Q.6 Which option will replace the question mark based on the country and its capital?

Bangladesh : Dhaka :: England : ?

Ans ✗ 1. Lords

✔ 2. London

✗ 3. Thames city

✗ 4. Sydney

Question ID : **630680507421**
Option 1 ID : **6306801983126**
Option 2 ID : **6306801983127**
Option 3 ID : **6306801983128**
Option 4 ID : **6306801983125**
Status : **Answered**
Chosen Option : **2**

Q.7 In a certain code language, FACE is written as GADE and ROSE is written as SOTE. How TIME will be written in the same code language?

Ans ✗ 1. EMIT

✗ 2. SILE

✗ 3. TINE

✔ 4. UINE

Question ID : **630680507405**
Option 1 ID : **6306801983064**
Option 2 ID : **6306801983063**
Option 3 ID : **6306801983062**
Option 4 ID : **6306801983061**
Status : **Answered**
Chosen Option : **4**

Q.8 Read the given statement(s) 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 statement(s).

Statements:
Some Cobras are Rabbits.
All baboons are tortoise.
All Rabbits are Baboons.

Conclusions:
I. Some Cobras are baboons
II. All baboons are rabbits
III. All tortoise are cobras
IV. All baboons are cobras

Ans ✗ 1. Only IV

✗ 2. Only II

✗ 3. Only III

✔ 4. Only I

Question ID : **630680507408**
Option 1 ID : **6306801983076**
Option 2 ID : **6306801983074**
Option 3 ID : **6306801983075**
Option 4 ID : **6306801983073**
Status : **Answered**
Chosen Option : **4**

Q.9 **What will come in place of the question marks (?) to make the series given below logically complete?**

37, 34, 38, 35, 39, 36, 40, ??

Ans ✗ 1. 38, 42

✗ 2. 42, 38

✗ 3. 41, 37

✓ 4. 37, 41

Question ID : **630680507430**
Option 1 ID : **6306801983163**
Option 2 ID : **6306801983164**
Option 3 ID : **6306801983161**
Option 4 ID : **6306801983162**
Status : **Answered**
Chosen Option : **4**

Q.10 **How many such letters are there in the series which are immediately preceded by numbers?**

7 S # 6 N @ 8 D # 5 % H ^ 6 B 8 & G 5 $ 4 B @ 4 V 1 #

Ans ✗ 1. 7

✗ 2. 5

✓ 3. 6

✗ 4. 8

Question ID : **630680507415**
Option 1 ID : **6306801983103**
Option 2 ID : **6306801983101**
Option 3 ID : **6306801983102**
Option 4 ID : **6306801983104**
Status : **Answered**
Chosen Option : **3**

Q.11 **If all the symbols are removed from the series, what will be the eleventh element from the left?**

@ 8 M 6 B 4 # 7 N V % 6 ! H 8 # 3 J 5 V D 8 V & B 4 @

Ans ✗ 1. J

✗ 2. H

✗ 3. 3

✓ 4. 8

Question ID : **630680507411**
Option 1 ID : **6306801983088**
Option 2 ID : **6306801983087**
Option 3 ID : **6306801983085**
Option 4 ID : **6306801983086**
Status : **Answered**
Chosen Option : **4**

Q.12 Which of the following options is different from the other three options on the basis of cities and their respective states?

Ans ✗ 1. Agra

  ✓ 2. Haridwar

  ✗ 3. Gorakhpur

  ✗ 4. Varanasi

Question ID : **630680507420**
Option 1 ID : **6306801983121**
Option 2 ID : **6306801983124**
Option 3 ID : **6306801983123**
Option 4 ID : **6306801983122**
Status : **Answered**
Chosen Option : **2**

Q.13 Which of the following options will replace the question mark?

1 : 49 :: 2 :?

Ans ✗ 1. 81

  ✓ 2. 64

  ✗ 3. 36

  ✗ 4. 25

Question ID : **630680507431**
Option 1 ID : **6306801983168**
Option 2 ID : **6306801983165**
Option 3 ID : **6306801983166**
Option 4 ID : **6306801983167**
Status : **Answered**
Chosen Option : **2**

Q.14 If the rank of a boy in that group is 5th from the top and 18th from the bottom, then calculate the number of boys required in the group to make the total number of this group 40..

Ans ✗ 1. 17

  ✗ 2. 20

  ✗ 3. 19

  ✓ 4. 18

Question ID : **630680507402**
Option 1 ID : **6306801983049**
Option 2 ID : **6306801983052**
Option 3 ID : **6306801983051**
Option 4 ID : **6306801983050**
Status : **Answered**
Chosen Option : **4**

Q.15 Which of the following options is different from the other three options?

Ans ✗ 1. Kuchipudi

✗ 2. Odissi

✓ 3. Lavani

✗ 4. Bharatanatyam

Question ID : **630680507419**
Option 1 ID : **6306801983118**
Option 2 ID : **6306801983119**
Option 3 ID : **6306801983117**
Option 4 ID : **6306801983120**
Status : **Answered**
Chosen Option : **4**

Q.16 Which of the following pair is similar to the expression given below?

354: 453

Ans ✗ 1. 456: 356

✗ 2. 726: 274

✓ 3. 456: 870

✗ 4. 733: 753

Question ID : **630680507432**
Option 1 ID : **6306801983169**
Option 2 ID : **6306801983170**
Option 3 ID : **6306801983172**
Option 4 ID : **6306801983171**
Status : **Answered**
Chosen Option : **3**

Q.17 In a certain code language, PARLE is written as APREL and APPLE is written as PAPEL. How MARCH will be written in the same code?

Ans ✗ 1. HCRAM

✗ 2. HCRMA

✗ 3. AMHCR

✓ 4. AMRHC

Question ID : **630680507406**
Option 1 ID : **6306801983067**
Option 2 ID : **6306801983068**
Option 3 ID : **6306801983065**
Option 4 ID : **6306801983066**
Status : **Answered**
Chosen Option : **4**

Q.18 If 'A' means ' multiplied by", 'B' means 'divided by', 'C' means 'minus' and 'D' means ''plus''' ', then what will be the value of following expression?

6 A 7 C 26 B 13 D 8 =

Ans ✗ 1. 45

✗ 2. 47

✗ 3. 46

✔ 4. 48

Question ID : **630680507427**
Option 1 ID : **6306801983149**
Option 2 ID : **6306801983151**
Option 3 ID : **6306801983150**
Option 4 ID : **6306801983152**
Status : **Answered**
Chosen Option : **4**

Q.19 If 'A' means ' multiplied by", 'B' means 'divided by', 'C' means 'minus' and 'D' means ''plus''' ', then what will be the value of following expression?

8 A 3 C 16 B 4 D 7 = ?

Ans ✔ 1. 27

✗ 2. 28

✗ 3. 26

✗ 4. 25

Question ID : **630680507426**
Option 1 ID : **6306801983145**
Option 2 ID : **6306801983148**
Option 3 ID : **6306801983146**
Option 4 ID : **6306801983147**
Status : **Answered**
Chosen Option : **1**

Q.20 Which among the following option is correct on the basis of the statements and conclusions given below(Statement is based on hights of 5 person namely Sunil,Rahul Rakesh,Vikash,Mansi)?

Statement :- Sunil>Rahul>Rakesh>Vikash>Mansi
Conclusion I:- Sunil is the shortest.
Conclusion II:- Mansi is taller than Sunil

Ans ✔ 1. Neither conclusion I nor II

✗ 2. Only II conclusion follow

✗ 3. Both conclusion I and II

✗ 4. Only I conclusion follow

Question ID : **630680507417**
Option 1 ID : **6306801983112**
Option 2 ID : **6306801983110**
Option 3 ID : **6306801983111**
Option 4 ID : **6306801983109**
Status : **Answered**
Chosen Option : **1**

Q.21 Which of the following options is different from the other three options?

Ans ✗ 1. Onion

✗ 2. Potato

✗ 3. Brinjal

✓ 4. Apple

Question ID : **630680507418**
Option 1 ID : **6306801983114**
Option 2 ID : **6306801983113**
Option 3 ID : **6306801983116**
Option 4 ID : **6306801983115**
Status : **Answered**
Chosen Option : **4**

Q.22 On the basis of the statement given below, identify the total amount spent by a college in a year.

Statement I:- The College sold 10 articles worth Rs 200 in a year.
Statement II:- The College sold 20 Pens worth total Rs 20 in a year.

Ans ✗ 1. Only statement II is required to answer.

✓ 2. Both the statements are insufficient to answer.

✗ 3. Both Statement I and Statement II are required to answer the question.

✗ 4. Only statement I is required to answer.

Question ID : **630680507422**
Option 1 ID : **6306801983131**
Option 2 ID : **6306801983132**
Option 3 ID : **6306801983130**
Option 4 ID : **6306801983129**
Status : **Answered**
Chosen Option : **2**

Q.23 How many such symbols are there in the series which are immediately preceded by numbers?

6 V B 4 # 7 2 H ! 5 @ 6 C 7 M # 5 H 6 # D 5 $ B 9 # 6 J

Ans ✗ 1. 6

✗ 2. 3

✗ 3. 4

✓ 4. 5

Question ID : **630680507414**
Option 1 ID : **6306801983100**
Option 2 ID : **6306801983097**
Option 3 ID : **6306801983098**
Option 4 ID : **6306801983099**
Status : **Answered**
Chosen Option : **4**

Q.24 If P>Q>R>S>T>U>V, then which among the following is biggest in this series?

Ans
- ✗ 1. Q
- ✗ 2. V
- ✗ 3. U
- ✓ 4. P

Question ID : **630680507416**
Option 1 ID : **6306801983107**
Option 2 ID : **6306801983106**
Option 3 ID : **6306801983105**
Option 4 ID : **6306801983108**
Status : **Answered**
Chosen Option : **4**

Q.25 In a class with total 32 students, Vimla's rank from the top is 16. Find Vimla's rank from the bottom?

Ans
- ✗ 1. 18
- ✓ 2. 17
- ✗ 3. 20
- ✗ 4. 19

Question ID : **630680507403**
Option 1 ID : **6306801983055**
Option 2 ID : **6306801983056**
Option 3 ID : **6306801983053**
Option 4 ID : **6306801983054**
Status : **Answered**
Chosen Option : **2**

Q.26 5 friends s namely Abhishek, Binodni, Rati, Kush and Priya are sitting in a straight line facing north. Abishek is sitting on the extreme left side. Binodni is sitting immediately after Abhishek. Kush is sitting exactly between Binodni and Priya. If Priya is sitting immediately before Rati, then who is sitting in the middle of the line?

Ans
- ✗ 1. Abhishek
- ✗ 2. Priya
- ✓ 3. Kush
- ✗ 4. Binodni

Question ID : **630680507400**
Option 1 ID : **6306801983041**
Option 2 ID : **6306801983044**
Option 3 ID : **6306801983043**
Option 4 ID : **6306801983042**
Status : **Answered**
Chosen Option : **3**

Q.27 If all the letters are removed from the series, what will be the ninth element from the right?

% 6 ! H 8 * 6 k 9 F ! A # 5 @ 6 C 7 M # 5 H % 6 G B # 9

Ans ✗ 1. 5

✔ 2. @

✗ 3. 7

✗ 4. 6

Q.28 What will come in place of the question marks (?) to make the series given below logically complete?

43, 48, 41, 46, 39, 44, 37, ??

Ans ✗ 1. 45, 38

✔ 2. 42, 35

✗ 3. 38, 45

✗ 4. 35, 42

Q.29 Which of the following pair is similar to the expression given below?

14 : 21 : 28

Ans ✗ 1. 7 : 13 : 19

✗ 2. 5 : 15 : 21

✔ 3. 13 : 23 : 33

✗ 4. 6 : 14 : 23

Q.30 How many symbols are there in the series which are followed by letters?

J # D 4 $ 8 M ^ 6 V B 4 # 7 6 Z ^ B 4 M @ 6 B 4 # N 7 &

Ans ✗ 1. 6

✗ 2. 5

✓ 3. 3

✗ 4. 4

Question ID : **630680507412**
Option 1 ID : **6306801983092**
Option 2 ID : **6306801983091**
Option 3 ID : **6306801983089**
Option 4 ID : **6306801983090**
Status : **Answered**
Chosen Option : **3**

Q.31 What will come in the place of question marks (??) to make the following series logically complete?

AC 21, EG 24, IK 27, MO 30 ??

Ans ✗ 1. SR 33

✓ 2. QS 33

✗ 3. RS 33

✗ 4. SQ 33

Question ID : **630680507423**
Option 1 ID : **6306801983136**
Option 2 ID : **6306801983134**
Option 3 ID : **6306801983135**
Option 4 ID : **6306801983133**
Status : **Answered**
Chosen Option : **2**

Q.32 Rank of Bindiya is five from the top and 24 from the bottom of the list that shows qualified candidates. Find the total number of qualified candidates.

Ans ✗ 1. 26

✗ 2. 27

✗ 3. 29

✓ 4. 28

Question ID : **630680507404**
Option 1 ID : **6306801983057**
Option 2 ID : **6306801983058**
Option 3 ID : **6306801983060**
Option 4 ID : **6306801983059**
Status : **Answered**
Chosen Option : **4**

Q.33 5 friends s namely Abhishek, Binodni, Rati, Kush and Priya are sitting in a straight line facing north. Abishek is sitting on the extreme left side. Binodni is sitting immediately after Abhishek. Kush is sitting exactly between Binodni and Priya. If Priya is sitting immediately before Rati, then who is sitting at the extreme right-hand side of the line?

Ans ✗ 1. Binodni

✗ 2. Abhishek

✓ 3. Rati

✗ 4. Kush

Question ID : **630680507401**
Option 1 ID : **6306801983046**
Option 2 ID : **6306801983045**
Option 3 ID : **6306801983048**
Option 4 ID : **6306801983047**
Status : **Answered**
Chosen Option : **3**

Q.34 Select the correct option based on the statements and sequence of actions given below.
Statement: A group of ten students caught doing ragging of a junior student in a college.

Courses of Action:
I. The rules of the ragging should be strictly implemented by the management authorities of the college.
II. Management authorities should also conduct research why students do ragging.

Ans ✓ 1. Both I and II follows

✗ 2. Only II follow

✗ 3. Neither I nor II follows

✗ 4. Only I follow

Question ID : **630680507424**
Option 1 ID : **6306801983139**
Option 2 ID : **6306801983138**
Option 3 ID : **6306801983140**
Option 4 ID : **6306801983137**
Status : **Answered**
Chosen Option : **1**

Section : **Domain Knowledge**

Q.1 Which of the following statement is correct regarding PERT in construction management?

I. PERT is a network planning models

II. PERT is named as program evaluation and review technique

Ans ✗ 1. Neither I nor II

✓ 2. Both I and II

✗ 3. Only I

✗ 4. Only II

Question ID : **630680506876**
Option 1 ID : **6306801981012**
Option 2 ID : **6306801981011**
Option 3 ID : **6306801981009**
Option 4 ID : **6306801981010**
Status : **Answered**
Chosen Option : **2**

Q.2 Reduced bearing of any line is 'θ' and length is 'l', then what will be the latitude of line?

Ans

✗ 1. $L = -l \tan\theta$

✗ 2. $L = +l \sin\theta$

✔ 3. $L = +l \cos\theta$

✗ 4. $L = -l \cot\theta$

Question ID : **630680506934**
Option 1 ID : **6306801981243**
Option 2 ID : **6306801981241**
Option 3 ID : **6306801981242**
Option 4 ID : **6306801981244**
Status : **Answered**
Chosen Option : **3**

Q.3 A rectangular bar of cross-sectional area 20000 mm² is subjected to an axial load of 30 kN, section is inclined at an angle of 45° with normal cross-section of the bar, what will be the shear stress on a section?

Ans

✔ 1. 0.75 N/mm^2

✗ 2. 0.95 N/mm^2

✗ 3. 0.65 N/mm^2

✗ 4. 0.45 N/mm^2

Question ID : **630680506867**
Option 1 ID : **6306801980974**
Option 2 ID : **6306801980973**
Option 3 ID : **6306801980975**
Option 4 ID : **6306801980976**
Status : **Answered**
Chosen Option : **1**

Q.4 If the velocity gradient of a fluid is 24000 sec⁻¹, force required to move a fluid between plate is 3 N/m², what will be the fluid viscosity between the plates?

Ans

✔ 1. $1.25 \times 10^{-4} \frac{Ns}{m^2}$

✗ 2. $1.93 \times 10^{-4} \frac{Ns}{m^2}$

✗ 3. $1.97 \times 10^{-5} \frac{Ns}{m^2}$

✗ 4. $2.67 \times 10^{-3} \frac{Ns}{m^2}$

Question ID : **630680506899**
Option 1 ID : **6306801981101**
Option 2 ID : **6306801981104**
Option 3 ID : **6306801981102**
Option 4 ID : **6306801981103**
Status : **Answered**
Chosen Option : **1**

Q.5 Which of the following statement is correct regarding camber in road design?

I. Camber is the slope provided to the road surface in the transverse direction

II. The purpose of camber to drain off the rain water from the road surface

Ans ✗ 1. Only I

✔ 2. Both I and II

✗ 3. Neither I nor II

✗ 4. Only II

Question ID : **630680506919**
Option 1 ID : **6306801981181**
Option 2 ID : **6306801981183**
Option 3 ID : **6306801981184**
Option 4 ID : **6306801981182**
Status : **Answered**
Chosen Option : **2**

Q.6 The statistical methods are used to determine the bacterial density that has the maximum probability with the given set of constants, which represent as _____.

Ans ✔ 1. MPN

✗ 2. SPN

✗ 3. BOD

✗ 4. COD

Question ID : **630680506909**
Option 1 ID : **6306801981141**
Option 2 ID : **6306801981144**
Option 3 ID : **6306801981142**
Option 4 ID : **6306801981143**
Status : **Answered**
Chosen Option : **1**

Q.7 In sieve analysis, the portion of soil sample retained on sieve (+4.75 mm size) is termed as the _____.

Ans ✗ 1. Sieve fraction

✗ 2. Sedimentation fraction

✗ 3. Aperture fraction

✔ 4. Gravel fraction

Question ID : **630680506886**
Option 1 ID : **6306801981052**
Option 2 ID : **6306801981051**
Option 3 ID : **6306801981049**
Option 4 ID : **6306801981050**
Status : **Answered**
Chosen Option : **4**

Q.8 Which of the following is type of false ceiling in building?

I. Aluminum frame ceiling

II. Concrete frame ceiling

Ans ✗ 1. Both I and II

✓ 2. Only I

✗ 3. Only II

✗ 4. Neither I nor II

Question ID : **630680506940**
Option 1 ID : **6306801981267**
Option 2 ID : **6306801981265**
Option 3 ID : **6306801981266**
Option 4 ID : **6306801981268**
Status : **Answered**
Chosen Option : **2**

Q.9 Which of the following is correct equation of Weber's number (W_e)? (where F_i = inertia force, F_s = surface tension force)

Ans ✗ 1. $W_e = \dfrac{F_i}{F_s}$

✗ 2. $W_e = F_i . F_s$

✗ 3. $W_e = \sqrt{\dfrac{F_i^2}{F_s^2}}$

✓ 4. $W_e = \sqrt{\dfrac{F_i}{F_s}}$

Question ID : **630680506903**
Option 1 ID : **6306801981117**
Option 2 ID : **6306801981120**
Option 3 ID : **6306801981119**
Option 4 ID : **6306801981118**
Status : **Answered**
Chosen Option : **4**

Q.10 Which of the following statement is correct regarding assumption of 'limit state of collapse' in RCC design?

I. The tensile strength of the concrete is ignored

II. For design purposes the partial safety factor γ_m, equal to 1.75 shall be applied

Ans
✔ 1. Only I

✘ 2. Only II

✘ 3. Both I and II

✘ 4. Neither I nor II

Question ID : **630680506880**
Option 1 ID : **6306801981025**
Option 2 ID : **6306801981026**
Option 3 ID : **6306801981027**
Option 4 ID : **6306801981028**
Status : **Answered**
Chosen Option : **1**

Q.11 The turbidity of water depends upon the which of the following factor?

I. Fineness of particles present in water

II. Concentration of particles present in water

Ans
✘ 1. Only II

✔ 2. Both I and II

✘ 3. Only I

✘ 4. Neither I nor II

Question ID : **630680506907**
Option 1 ID : **6306801981134**
Option 2 ID : **6306801981135**
Option 3 ID : **6306801981133**
Option 4 ID : **6306801981136**
Status : **Answered**
Chosen Option : **2**

Q.12 The ratio of shear stress to the corresponding shear strain with in the elastic limit is known as _____.

I. Modulus of rigidity

II. Shear modulus

Ans
✔ 1. Both I and II

✘ 2. Neither I nor II

✘ 3. Only II

✘ 4. Only I

Question ID : **630680506862**
Option 1 ID : **6306801980955**
Option 2 ID : **6306801980956**
Option 3 ID : **6306801980954**
Option 4 ID : **6306801980953**
Status : **Answered**
Chosen Option : **1**

Q.13 What is the value of camber recommended by the IRC for high type bituminous surface in heavy rain fall area?

Ans
✔ 1. 1 in 50

✘ 2. 1 in 40

✘ 3. 1 in 33

✘ 4. 1 in 25

Question ID : **630680506923**
Option 1 ID : **6306801981197**
Option 2 ID : **6306801981200**
Option 3 ID : **6306801981199**
Option 4 ID : **6306801981198**
Status : **Answered**
Chosen Option : **3**

Q.14 Which of the following material can be used for formwork?

I. Timber

II. Steel

III. Plywood

Ans
✔ 1. I, II and III

✘ 2. Only I and III

✘ 3. Only II and III

✘ 4. Only I and II

Question ID : **630680506937**
Option 1 ID : **6306801981256**
Option 2 ID : **6306801981255**
Option 3 ID : **6306801981254**
Option 4 ID : **6306801981253**
Status : **Answered**
Chosen Option : **4**

Q.15 Ratio of map distance to the corresponding ground distance is independent of unit of measurement and it is called _____.

Ans
✘ 1. Numerical scales

✔ 2. Representative fraction

✘ 3. Engineer's scale

✘ 4. Plan

Question ID : **630680506931**
Option 1 ID : **6306801981230**
Option 2 ID : **6306801981231**
Option 3 ID : **6306801981232**
Option 4 ID : **6306801981229**
Status : **Answered**
Chosen Option : **2**

Q.16 A _____ is an error that, under the same conditions, will always be of the same size and sign.

Ans ✗ 1. Compensating errors

✔ 2. Cumulative error

✗ 3. Mistakes

✗ 4. Accidental errors

Question ID : **630680506930**
Option 1 ID : **6306801981225**
Option 2 ID : **6306801981227**
Option 3 ID : **6306801981228**
Option 4 ID : **6306801981226**
Status : **Answered**
Chosen Option : **2**

Q.17 _____ can be defined as time dependent increase in strain of a solid body under constant or controlled stress.

Ans ✗ 1. Shrinkage

✗ 2. Compaction

✔ 3. Creep

✗ 4. Elasticity

Question ID : **630680506874**
Option 1 ID : **6306801981003**
Option 2 ID : **6306801981004**
Option 3 ID : **6306801981002**
Option 4 ID : **6306801981001**
Status : **Answered**
Chosen Option : **3**

Q.18 Arrange the steps of 'DOE method of concrete mix design' from first to last.

I. Find the target mean strength from the specified characteristic strength

II. Calculate the water/cement ratio

III. Find the cement content knowing the water/cement ratio and water content

IV. Proportion of fine aggregate is determined in total aggregate

V. Find out the total aggregate content

VI. Decide water content for the required workability, expressed in terms of slump or vebe time

Ans ✗ 1. I, IV, VI, V, III, II

✗ 2. II, V, VI, IV, III, I

✗ 3. II, IV, V, III, VI, I

✔ 4. I, II, VI, III, V, IV

Question ID : **630680506871**
Option 1 ID : **6306801980989**
Option 2 ID : **6306801980992**
Option 3 ID : **6306801980990**
Option 4 ID : **6306801980991**
Status : **Not Answered**
Chosen Option : **--**

Q.19 In Bernoulli's equation $\frac{p}{\rho g} + \frac{v^2}{2g} + z = constant, \frac{v^2}{2g}$ represent _____.

Ans
- ✗ 1. pressure head
- ✗ 2. potential head
- ✗ 3. datum head
- ✔ 4. kinetic head

Question ID : **630680506900**
Option 1 ID : **6306801981107**
Option 2 ID : **6306801981106**
Option 3 ID : **6306801981108**
Option 4 ID : **6306801981105**
Status : **Answered**
Chosen Option : **4**

Q.20 According to IS456: 2000, the maximum compressive strain in concrete in axial compression is taken as _____, in limit state of collapse.

Ans
- ✗ 1. 0.004
- ✔ 2. 0.002
- ✗ 3. 0.009
- ✗ 4. 0.003

Question ID : **630680506881**
Option 1 ID : **6306801981030**
Option 2 ID : **6306801981029**
Option 3 ID : **6306801981031**
Option 4 ID : **6306801981032**
Status : **Answered**
Chosen Option : **2**

Q.21 Which of the following statement is correct regarding 'working from whole to part'?

I. The idea of working from whole to part prevent the accumulation of errors

II. Working from whole to part control and localise minor errors

Ans
- ✔ 1. Both I and II
- ✗ 2. Neither I nor II
- ✗ 3. Only I
- ✗ 4. Only II

Question ID : **630680506929**
Option 1 ID : **6306801981223**
Option 2 ID : **6306801981224**
Option 3 ID : **6306801981221**
Option 4 ID : **6306801981222**
Status : **Answered**
Chosen Option : **1**

Q.22 Which of the following is NOT the type of transverse joint in rigid pavement?

Ans

✗ 1. Construction joints

✓ 2. Warping joints

✗ 3. Contraction joints

✗ 4. Expansion joints

Question ID : **630680506926**
Option 1 ID : **6306801981211**
Option 2 ID : **6306801981212**
Option 3 ID : **6306801981209**
Option 4 ID : **6306801981210**
Status : **Answered**
Chosen Option : **1**

Q.23 _____ is a colourless, odourless and toxic gas, produced when organic materials like natural gas coal or wood are incompletely burnt.

Ans

✗ 1. Sulphur di oxide

✓ 2. Carbon monoxide

✗ 3. Carbon di oxide

✗ 4. Nitrogen di oxide

Question ID : **630680506918**
Option 1 ID : **6306801981178**
Option 2 ID : **6306801981179**
Option 3 ID : **6306801981177**
Option 4 ID : **6306801981180**
Status : **Answered**
Chosen Option : **2**

Q.24 Which of the following statement is correct regarding triaxial test equipment in soil testing?

I. The test equipment specially consists of a high pressure cylindrical cell

II. Cylindrical cell is fitted between the base and the top cap

Ans

✗ 1. Both I and II

✗ 2. Neither I nor II

✗ 3. Only I

✓ 4. Only II

Question ID : **630680506893**
Option 1 ID : **6306801981079**
Option 2 ID : **6306801981080**
Option 3 ID : **6306801981077**
Option 4 ID : **6306801981078**
Status : **Answered**
Chosen Option : **1**

Q.25 As per IS456: 2000, the minimum number of longitudinal bars provided in a column shall be _____ in rectangular column and _____ in circular columns.

Ans
✗ 1. 7, 4

✗ 2. 3, 5

✓ 3. 4, 6

✗ 4. 4, 8

Question ID : **630680506882**
Option 1 ID : **6306801981034**
Option 2 ID : **6306801981035**
Option 3 ID : **6306801981033**
Option 4 ID : **6306801981036**
Status : **Answered**
Chosen Option : **3**

Q.26 Which of the following is type of filter in purification of water?

I. Slow sand filter

II. Rapid sand filter

III. Pressure filter

Ans
✓ 1. I, II and III

✗ 2. Only I and III

✗ 3. Only II and III

✗ 4. Only I and II

Question ID : **630680506911**
Option 1 ID : **6306801981152**
Option 2 ID : **6306801981151**
Option 3 ID : **6306801981150**
Option 4 ID : **6306801981149**
Status : **Answered**
Chosen Option : **1**

Q.27 In the context of painting of new woodwork, which of the following is the process of sealing the knots by suitable means so that the resin from the knots may not destroy the paint film by way of cracking, peeling or brown discoloration?

Ans
✗ 1. Stopping

✗ 2. Priming

✗ 3. Finishing

✓ 4. Knotting

Question ID : **630680506941**
Option 1 ID : **6306801981271**
Option 2 ID : **6306801981270**
Option 3 ID : **6306801981269**
Option 4 ID : **6306801981272**
Status : **Answered**
Chosen Option : **2**

Q.28 Which of the following is disinfection method of water treatment?

I. Boiling of water

II. Treatment with ozone

Ans ✗ 1. Only II

✗ 2. Neither I nor II

✓ 3. Both I and II

✗ 4. Only I

Question ID : **630680506913**
Option 1 ID : **6306801981158**
Option 2 ID : **6306801981160**
Option 3 ID : **6306801981159**
Option 4 ID : **6306801981157**
Status : **Answered**
Chosen Option : **3**

Q.29 The pressure gradient at the exit at which the upward force is just equal to the submerged weight of the soil is called _____.

Ans ✗ 1. Upward gradient

✗ 2. Submerged gradient

✓ 3. Critical gradient

✗ 4. Disturbed gradient

Question ID : **630680506891**
Option 1 ID : **6306801981071**
Option 2 ID : **6306801981070**
Option 3 ID : **6306801981069**
Option 4 ID : **6306801981072**
Status : **Answered**
Chosen Option : **3**

Q.30 As per IS456: 2000, what is the value of $\frac{x_{umax}}{d}$ for Fe 415 steel?

Ans ✗ 1. 0.364

✓ 2. 0.479

✗ 3. 0.459

✗ 4. 0.531

Question ID : **630680506878**
Option 1 ID : **6306801981020**
Option 2 ID : **6306801981018**
Option 3 ID : **6306801981019**
Option 4 ID : **6306801981017**
Status : **Answered**
Chosen Option : **2**

Q.31 If the height of a hallow cone is 10 m, what will the distance of center of gravity from its vertex?

Ans

✗ 1. 5.78 m

✗ 2. 9.65 m

✓ 3. 6.67 m

✗ 4. 3.57 m

Question ID : **630680506859**
Option 1 ID : **6306801980943**
Option 2 ID : **6306801980944**
Option 3 ID : **6306801980942**
Option 4 ID : **6306801980941**
Status : **Not Answered**
Chosen Option : **--**

Q.32 For a right circular solid cone, the distance of center of gravity from the base is _____. (where h = height of solid cone)

Ans

✗ 1. $\dfrac{3}{5}h$

✗ 2. $\dfrac{1}{6}h$

✗ 3. $\dfrac{3}{4}h$

✓ 4. $\dfrac{1}{4}h$

Question ID : **630680506858**
Option 1 ID : **6306801980939**
Option 2 ID : **6306801980940**
Option 3 ID : **6306801980937**
Option 4 ID : **6306801980938**
Status : **Answered**
Chosen Option : **4**

Q.33 Which of the following statement is correct regarding critical depth (h_c)?

I. Critical depth is defined as that depth of flow of water at which the specific energy is maximum
II. The mathematical expression of critical depth is obtained by differentiating the specific energy equation with respect to depth of flow

Ans

✗ 1. Both I and II

✓ 2. Only II

✗ 3. Neither I nor II

✗ 4. Only I

Question ID : **630680506904**
Option 1 ID : **6306801981123**
Option 2 ID : **6306801981122**
Option 3 ID : **6306801981124**
Option 4 ID : **6306801981121**
Status : **Answered**
Chosen Option : **2**

Q.34 _____ is designed for the projects involving many activities with on-time completion.

Ans ✔ 1. Critical path method

✘ 2. IS code method

✘ 3. DOE method

✘ 4. Rankine's method

Question ID : **630680506877**
Option 1 ID : **6306801981013**
Option 2 ID : **6306801981014**
Option 3 ID : **6306801981016**
Option 4 ID : **6306801981015**
Status : **Answered**
Chosen Option : **1**

Q.35 Sedimentation analysis is used when the soil fraction is finer than _____.

Ans ✘ 1. 85 μ size

✘ 2. 95μ size

✘ 3. 100 μ size

✔ 4. 75μ size

Question ID : **630680506887**
Option 1 ID : **6306801981056**
Option 2 ID : **6306801981054**
Option 3 ID : **6306801981053**
Option 4 ID : **6306801981055**
Status : **Answered**
Chosen Option : **4**

Q.36 In the context of standard penetration test, what is the relation between N and N_o during correction for overburden?
(where N = actual value of penetration resistance; N_o = corrected value of penetration resistance; C_n = normalising correction factor)

Ans ✔ 1. $N_o = C_n . N$

✘ 2. $N_o = C_n . N^2$

✘ 3. $N_o = C_n + N$

✘ 4. $N_o = \dfrac{C_n}{N}$

Question ID : **630680506895**
Option 1 ID : **6306801981086**
Option 2 ID : **6306801981088**
Option 3 ID : **6306801981087**
Option 4 ID : **6306801981085**
Status : **Answered**
Chosen Option : **1**

Q.37 The process of passing the water through the beds of granular materials is known as _____.

Ans ✔ 1. Filtration

✘ 2. Chlorination

✘ 3. Infiltration

✘ 4. Disinfection

Question ID : **630680506910**
Option 1 ID : **6306801981146**
Option 2 ID : **6306801981145**
Option 3 ID : **6306801981147**
Option 4 ID : **6306801981148**
Status : **Answered**
Chosen Option : **1**

Q.38 Which of the following statement is correct regarding negative skin friction?

I. Negative skin friction is a downward drag acting on a pile due to the downward movement of the surrounding compressible soil relative to the pile

II. The magnitude of negative friction for granular soil is 'p.c.L_f' (where p = perimeter of the pile, c = cohesion of soil in zone of L_f, L_f = depth of fill or soil which is moving vertically)

Ans ✘ 1. Only II

✘ 2. Both I and II

✔ 3. Only I

✘ 4. Neither I nor II

Question ID : **630680506897**
Option 1 ID : **6306801981094**
Option 2 ID : **6306801981095**
Option 3 ID : **6306801981093**
Option 4 ID : **6306801981096**
Status : **Answered**
Chosen Option : **2**

Q.39 Which of the following statement is correct regarding 'Air quality index'?

I. The Air Quality index is also referred as the Pollutant Standard Index

II. Air quality index is a number used by the air quality monitoring agencies to inform the public about the quality of air in their vicinity

Ans ✘ 1. Only II

✔ 2. Both I and II

✘ 3. Neither I nor II

✘ 4. Only I

Question ID : **630680506916**
Option 1 ID : **6306801981170**
Option 2 ID : **6306801981171**
Option 3 ID : **6306801981172**
Option 4 ID : **6306801981169**
Status : **Answered**
Chosen Option : **2**

Q.40 A cylinder of soil fails under an axial vertical stress of 140 kN/m^2, when it is laterally unconfined, the failure plane makes an angle of 45° with the horizontal. What will be the value of cohesion of soil sample?

Ans

✗ 1. 60 kN/m^2

✗ 2. 80 kN/m^2

✔ 3. 70 kN/m^2

✗ 4. 50 kN/m^2

Question ID : **630680506894**
Option 1 ID : **6306801981083**
Option 2 ID : **6306801981081**
Option 3 ID : **6306801981082**
Option 4 ID : **6306801981084**
Status : **Answered**
Chosen Option : **3**

Q.41 Ribbed bolts are also known as _____.

Ans ✗ 1. Turned bolts

✔ 2. Fluted bolts

✗ 3. Unfinished bolts

✗ 4. High strength bolts

Question ID : **630680506884**
Option 1 ID : **6306801981041**
Option 2 ID : **6306801981043**
Option 3 ID : **6306801981042**
Option 4 ID : **6306801981044**
Status : **Not Answered**
Chosen Option : **--**

Q.42 Which of the following statement is correct regarding 'Plywood'?

I. A wood panel glued under pressure from an odd number of layers of veneers is known as plywood

II. BWR grade and MR grade is classification of plywood based on grade

Ans ✗ 1. Only I

✗ 2. Only II

✗ 3. Neither I nor II

✔ 4. Both I and II

Question ID : **630680506935**
Option 1 ID : **6306801981245**
Option 2 ID : **6306801981246**
Option 3 ID : **6306801981248**
Option 4 ID : **6306801981247**
Status : **Not Answered**
Chosen Option : **--**

Q.43 Stopping distance depends on which of the following factor?

I. Efficiency of brakers

II. Speed of vehicle

III. Total reaction time of driver

Ans ✔ 1. I, II and III

✗ 2. Only I and II

✗ 3. Only II and III

✗ 4. Only I and III

Question ID : **630680506921**
Option 1 ID : **6306801981192**
Option 2 ID : **6306801981189**
Option 3 ID : **6306801981190**
Option 4 ID : **6306801981191**
Status : **Answered**
Chosen Option : **3**

Q.44 In the context of water distribution system, which of the following is also known as tree system?

Ans ✗ 1. Ring system

✗ 2. Radial system

✔ 3. Dead end system

✗ 4. Grid iron system

Question ID : **630680506912**
Option 1 ID : **6306801981155**
Option 2 ID : **6306801981156**
Option 3 ID : **6306801981153**
Option 4 ID : **6306801981154**
Status : **Answered**
Chosen Option : **2**

Q.45 Which of the following type of leveling is also known as fly leveling?

Ans ✗ 1. Cross-sectioning

✗ 2. Precise leveling

✔ 3. Differential leveling

✗ 4. Profile leveling

Question ID : **630680506932**
Option 1 ID : **6306801981234**
Option 2 ID : **6306801981236**
Option 3 ID : **6306801981235**
Option 4 ID : **6306801981233**
Status : **Answered**
Chosen Option : **3**

Q.46 The analysis of a two way slab is done using which of the following method?

I. Marcus's method

II. Pigeaud's method

Ans
- ✗ 1. Only II
- ✗ 2. Neither I nor II
- ✔ 3. Both I and II
- ✗ 4. Only I

Question ID : **630680506883**
Option 1 ID : **6306801981038**
Option 2 ID : **6306801981040**
Option 3 ID : **6306801981039**
Option 4 ID : **6306801981037**
Status : **Answered**
Chosen Option : **3**

Q.47 As per BIS (Bureau of Indian standards), the aggregate impact testing machine consists of a metal base and a cylindrical steel cup of internal diameter _____ and depth _____ in which the aggregate specimen is placed.

Ans
- ✗ 1. 102 mm, 40 mm
- ✔ 2. 102 mm, 50 mm
- ✗ 3. 90 mm, 50 mm
- ✗ 4. 150 mm, 60 mm

Question ID : **630680506928**
Option 1 ID : **6306801981218**
Option 2 ID : **6306801981220**
Option 3 ID : **6306801981217**
Option 4 ID : **6306801981219**
Status : **Not Answered**
Chosen Option : **--**

Q.48 Water proofing material should have which of the following properties?

Ans
- ✗ 1. It should be dimensionally unstable
- ✗ 2. It should be subjected with deliquescent salts
- ✔ 3. It should be strong and durable
- ✗ 4. It should be pervious

Question ID : **630680506939**
Option 1 ID : **6306801981262**
Option 2 ID : **6306801981263**
Option 3 ID : **6306801981264**
Option 4 ID : **6306801981261**
Status : **Answered**
Chosen Option : **3**

Q.49 Which of the following type of stresses is produced due to temperature variation in concrete pavement?

I. Warping stresses

II. Frictional stresses

Ans ✔ 1. Both I and II

✗ 2. Neither I nor II

✗ 3. Only I

✗ 4. Only II

Question ID : **630680506927**
Option 1 ID : **6306801981215**
Option 2 ID : **6306801981216**
Option 3 ID : **6306801981213**
Option 4 ID : **6306801981214**
Status : **Answered**
Chosen Option : **1**

Q.50 The ratio of plastic moment 'M_p' of a member by yield strength 'σ_y' of its material is called _____.

Ans ✗ 1. Semi plastic section modulus

✗ 2. Elastoplastic section modulus

✔ 3. Plastic section modulus

✗ 4. Elastic section modulus

Question ID : **630680506885**
Option 1 ID : **6306801981048**
Option 2 ID : **6306801981047**
Option 3 ID : **6306801981045**
Option 4 ID : **6306801981046**
Status : **Answered**
Chosen Option : **3**

Q.51 Which of the following statement is correct regarding the CBR test in highway engineering?

I. The CBR test is an empirical penetration test

II. The CBR test is carried out in the laboratory on soil specimens compacted to desired density and soaked in water

Ans ✗ 1. Neither I nor II

✗ 2. Only II

✗ 3. Only I

✔ 4. Both I and II

Question ID : **630680506925**
Option 1 ID : **6306801981208**
Option 2 ID : **6306801981206**
Option 3 ID : **6306801981205**
Option 4 ID : **6306801981207**
Status : **Not Answered**
Chosen Option : **--**

Q.52 When overtaking sight distance cannot be provided, _____ is provided to give limited overtaking opportunities to fast vehicles.

Ans ✗ 1. head light sight distance

✗ 2. stopping sight distance

✗ 3. safe overtaking sight distance

✔ 4. intermediate sight distance

Question ID : **630680506920**
Option 1 ID : **6306801981185**
Option 2 ID : **6306801981187**
Option 3 ID : **6306801981188**
Option 4 ID : **6306801981186**
Status : **Answered**
Chosen Option : **4**

Q.53 As per IS456: 2000, what is period of removal of props to beam and arches which is spanning upto 6 m?

Ans ✗ 1. 21 days

✗ 2. 7 days

✗ 3. 3 days

✔ 4. 14 days

Question ID : **630680506942**
Option 1 ID : **6306801981273**
Option 2 ID : **6306801981275**
Option 3 ID : **6306801981276**
Option 4 ID : **6306801981274**
Status : **Answered**
Chosen Option : **2**

Q.54 Which of the following method is used to determine in-situ density of soil?

I. Sand replacement method

II. Core cutter method

Ans ✗ 1. Neither I nor II

✗ 2. Only I

✔ 3. Both I and II

✗ 4. Only II

Question ID : **630680506888**
Option 1 ID : **6306801981060**
Option 2 ID : **6306801981057**
Option 3 ID : **6306801981059**
Option 4 ID : **6306801981058**
Status : **Answered**
Chosen Option : **3**

Q.55 In the context of soil classification system, what is the A-line equation in Casagrande's plasticity chart? (where, I_P = plasticity index w_L = liquid limit)

Ans

✗ 1. $I_P = 0.79\ (w_L - 20)$

✗ 2. $I_P = 0.89\ (w_L + 30)$

✔ 3. $I_P = 0.73\ (w_L - 20)$

✗ 4. $I_P = 0.56\ (w_L - 20)$

Question ID : **630680506890**
Option 1 ID : **6306801981065**
Option 2 ID : **6306801981068**
Option 3 ID : **6306801981066**
Option 4 ID : **6306801981067**
Status : **Answered**
Chosen Option : **3**

Q.56 A solid shaft of 'D' mm diameter is used to transmit torque, if maximum shear stress induced to the shaft is 'τ' N/mm², what will the maximum torque transmitted by the shaft?

Ans

✗ 1. $\pi \tau . D^3 N - mm$

✗ 2. $\dfrac{\pi}{16} \tau . D^2 N - mm$

✔ 3. $\dfrac{\pi}{16} \tau . D^3 N - mm$

✗ 4. $\dfrac{\pi}{4} \tau . D^3 N - mm$

Question ID : **630680506866**
Option 1 ID : **6306801980969**
Option 2 ID : **6306801980971**
Option 3 ID : **6306801980972**
Option 4 ID : **6306801980970**
Status : **Answered**
Chosen Option : **3**

Q.57 Which of the following is primary air pollutants?

Ans

✗ 1. O_3

✔ 2. Oxides of sulphur

✗ 3. Peroxy-aceyle-nitrate

✗ 4. H_2SO_4

Question ID : **630680506917**
Option 1 ID : **6306801981174**
Option 2 ID : **6306801981176**
Option 3 ID : **6306801981175**
Option 4 ID : **6306801981173**
Status : **Answered**
Chosen Option : **4**

Q.58 In which of the following fluid the shear stress is directly proportional to the rate of shear strain?

Ans ✗ 1. Non-Newtonian fluid

✔ 2. Newtonian fluid

✗ 3. Ideal fluid

✗ 4. Ideal plastic fluid

Question ID : **630680506898**
Option 1 ID : **6306801981098**
Option 2 ID : **6306801981097**
Option 3 ID : **6306801981099**
Option 4 ID : **6306801981100**
Status : **Answered**
Chosen Option : **2**

Q.59 Which of the following formula we can use to calculate the cement content in mix design?

Ans ✔ 1. $Cement\ content = \dfrac{water\ used}{w/c\ ratio}$

✗ 2. Cement content = w/c ratio × water used

✗ 3. $Cement\ content = \dfrac{w/c\ ratio}{water\ used}$

✗ 4. Cement content = w/c ratio − water used

Question ID : **630680506872**
Option 1 ID : **6306801980995**
Option 2 ID : **6306801980993**
Option 3 ID : **6306801980994**
Option 4 ID : **6306801980996**
Status : **Answered**
Chosen Option : **1**

Q.60 Which of the following is correct relation between shear force (F) and bending moment (M)?

Ans ✗ 1. $M = \dfrac{dF}{dx}$

✔ 2. $F = \dfrac{dM}{dx}$

✗ 3. $F = \dfrac{d^2M}{dx^2}$

✗ 4. $M = \dfrac{d^2F}{dx^2}$

Question ID : **630680506861**
Option 1 ID : **6306801980949**
Option 2 ID : **6306801980950**
Option 3 ID : **6306801980951**
Option 4 ID : **6306801980952**
Status : **Answered**
Chosen Option : **2**

Q.61 As per IS303 and 10701, what is recommended thickness (mm) of '3 ply' plywood board for structural purpose?

Ans

✗ 1. 16 mm

✔ 2. 4 mm

✗ 3. 9 mm

✗ 4. 6 mm

Question ID : **630680506936**
Option 1 ID : **6306801981250**
Option 2 ID : **6306801981251**
Option 3 ID : **6306801981249**
Option 4 ID : **6306801981252**
Status : **Not Answered**
Chosen Option : **--**

Q.62 Which of the following is dimension less number?

I. Froude's number

II. Euler's number

Ans

✗ 1. Only II

✗ 2. Neither I nor II

✔ 3. Both I and II

✗ 4. Only I

Question ID : **630680506902**
Option 1 ID : **6306801981114**
Option 2 ID : **6306801981116**
Option 3 ID : **6306801981115**
Option 4 ID : **6306801981113**
Status : **Answered**
Chosen Option : **3**

Q.63 As per IS456: 2000, for 28 days age at loading, what will be the creep coefficient?

Ans

✗ 1. 1.9

✗ 2. 1.1

✗ 3. 2.6

✔ 4. 1.6

Question ID : **630680506875**
Option 1 ID : **6306801981008**
Option 2 ID : **6306801981007**
Option 3 ID : **6306801981005**
Option 4 ID : **6306801981006**
Status : **Answered**
Chosen Option : **2**

Q.64 According to IS code method, what is the formula of reduction factor during effect of water table on bearing capacity of soil. (where, R_w = reduction factor)
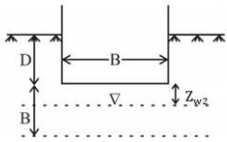
Ans

✔ 1. $R_w = 0.5\left(1 + \dfrac{Z_{w2}}{B}\right)$

✘ 2. $R_w = 0.5\left(1 + \dfrac{Z_{w2}}{D}\right)$

✘ 3. $R_w = 0.5\left(1 - \dfrac{Z_{w2}}{B}\right)$

✘ 4. $R_w = 0.5\left(\dfrac{Z_{w2}}{D}\right)$

Question ID : **630680506896**
Option 1 ID : **6306801981092**
Option 2 ID : **6306801981091**
Option 3 ID : **6306801981090**
Option 4 ID : **6306801981089**
Status : **Answered**
Chosen Option : **1**

Q.65 _____ can be defined as 'the rise of water level, which takes place due to the transformation of the unstable shooting flow to the stable streaming flow'.

Ans

✔ 1. Hydraulic jump

✘ 2. Hydrograph

✘ 3. Critical depth

✘ 4. Alternate depth

Question ID : **630680506906**
Option 1 ID : **6306801981131**
Option 2 ID : **6306801981132**
Option 3 ID : **6306801981129**
Option 4 ID : **6306801981130**
Status : **Answered**
Chosen Option : **1**

Q.66 Which of the following statement is correct regarding activated sludge process?

I. The activated sludge process provides an method of treating either raw sewage or settled sewage

II. The sewage effluent from primary sedimentation tank is utilised in activated sludge process

Ans ✗ 1. Only I

✔ 2. Both I and II

✗ 3. Only II

✗ 4. Neither I nor II

Question ID : **630680506915**
Option 1 ID : **6306801981165**
Option 2 ID : **6306801981167**
Option 3 ID : **6306801981166**
Option 4 ID : **6306801981168**
Status : **Answered**
Chosen Option : **2**

Q.67 w/c ratio mentioned in table 5 of which of the following IS code?

Ans ✗ 1. IS 800

✔ 2. IS 456

✗ 3. IS 303

✗ 4. IS 1893

Question ID : **630680506873**
Option 1 ID : **6306801980999**
Option 2 ID : **6306801980997**
Option 3 ID : **6306801980998**
Option 4 ID : **6306801981000**
Status : **Answered**
Chosen Option : **2**

Q.68 Which of the following equation means 'the free surface of water is parallel to the bed of the channel'? (where $\frac{dh}{dx}$ = variation of the water depth along the bottom of the channel)

Ans ✗ 1. $\dfrac{dh}{dx} = negative$

✗ 2. $\dfrac{dh}{dx} = positive$

✗ 3. $\dfrac{dh}{dx} = \infty$

✔ 4. $\dfrac{dh}{dx} = 0$

Question ID : **630680506905**
Option 1 ID : **6306801981127**
Option 2 ID : **6306801981126**
Option 3 ID : **6306801981128**
Option 4 ID : **6306801981125**
Status : **Answered**
Chosen Option : **4**

Q.69 In the context of sedimentation tank, the ratio of the 'flowing through period' to the detention period is called _____.

Ans ✗ 1. Sludge efficiency

✔ 2. Displacement efficiency

✗ 3. Detention efficiency

✗ 4. Skimming through efficiency

Question ID : **630680506914**
Option 1 ID : **6306801981163**
Option 2 ID : **6306801981161**
Option 3 ID : **6306801981162**
Option 4 ID : **6306801981164**
Status : **Answered**
Chosen Option : **2**

Q.70 Arrange the component of flexible pavement structure from bottom to the top.

I. Granular base course

II. Bituminous binder

III. Granular sub-base cum drainage layer

IV. Prepared soil subgrade

Ans ✗ 1. III, II, I, IV

✗ 2. III, II, IV, I

✗ 3. IV, III, II, I

✔ 4. IV, III, I, II

Question ID : **630680506924**
Option 1 ID : **6306801981203**
Option 2 ID : **6306801981201**
Option 3 ID : **6306801981202**
Option 4 ID : **6306801981204**
Status : **Answered**
Chosen Option : **4**

Q.71 Which of the following statement is correct regarding 'HYSD' bars?

I. HYSD bars have lugs, ribs or deformation on the surface

II. HYSD bar have a definite yield point

Ans ✗ 1. Both I and II

✗ 2. Neither I nor II

✔ 3. Only I

✗ 4. Only II

Question ID : **630680506870**
Option 1 ID : **6306801980987**
Option 2 ID : **6306801980988**
Option 3 ID : **6306801980985**
Option 4 ID : **6306801980986**
Status : **Answered**
Chosen Option : **3**

Q.72 A steel plate of width 80 mm and of thickness 15 mm is bent into a circular arc of radius 8 m, what will be the maximum stress induced in plate?

Ans

✗ 1. 150 N/mm^2

✔ 2. 187.5 N/mm^2

✗ 3. 200 N/mm^2

✗ 4. 189.5 N/mm^2

Question ID : **630680506864**
Option 1 ID : **6306801980964**
Option 2 ID : **6306801980961**
Option 3 ID : **6306801980963**
Option 4 ID : **6306801980962**
Status : **Not Answered**
Chosen Option : **--**

Q.73 For a given cantilever beam, what will be the influence line diagram for bending moment?

Ans

✗ 1.

✗ 2.

✗ 3.

✔ 4.
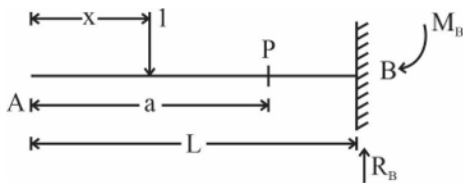
Question ID : **630680506868**
Option 1 ID : **6306801980977**
Option 2 ID : **6306801980978**
Option 3 ID : **6306801980980**
Option 4 ID : **6306801980979**
Status : **Answered**
Chosen Option : **2**

Q.74 According to dilution method, which of the following is correct formula for BOD_5? (where BOD_5 = BOD of 5 days)

Ans

✔ 1. BOD_5 = loss of oxygen in mg/l × Dilution ratio

✗ 2. $BOD_5 = \dfrac{Dilution\,ratio}{loss\,of\,oxygen\,in\,mg/l}$

✗ 3. $BOD_5 = \dfrac{loss\,of\,oxygen\,in\,mg/l}{Dilution\,ratio}$

✗ 4. BOD_5 = Dilution ratio + loss of oxygen in mg/l

Question ID : **630680506908**
Option 1 ID : **6306801981138**
Option 2 ID : **6306801981139**
Option 3 ID : **6306801981137**
Option 4 ID : **6306801981140**
Status : **Answered**
Chosen Option : **3**

Q.75 Which of the following is assumption of Bernoulli's equation?

I. The fluid is ideal

II. The flow is unsteady

III. The flow is incompressible

Ans

✗ 1. Only I and II

✔ 2. Only I and III

✗ 3. Only II and III

✗ 4. I, II and III

Question ID : **630680506901**
Option 1 ID : **6306801981109**
Option 2 ID : **6306801981111**
Option 3 ID : **6306801981110**
Option 4 ID : **6306801981112**
Status : **Answered**
Chosen Option : **2**

Q.76 In case of a perfectly saturated soil, the voids are completely filled with _____ .

I. air

II. water

Ans ✗ 1. Neither I nor II

✗ 2. Both I and II

✗ 3. Only I

✔ 4. Only II

Question ID : **630680506889**
Option 1 ID : **6306801981064**
Option 2 ID : **6306801981063**
Option 3 ID : **6306801981061**
Option 4 ID : **6306801981062**
Status : **Answered**
Chosen Option : **4**

Q.77 Which of the following is correct formula for closing error in traversing? (where, $\sum L$ = algebraic sum of latitudes, $\sum D$ = algebraic sum of departure, e = closing error)

Ans ✗ 1. $e = \sqrt{(\sum L) - (\sum D)}$

✗ 2. $e = \sqrt{(\sum L)^2 - (\sum D)^2}$

✗ 3. $e = \sqrt{(\sum L) + (\sum D)}$

✔ 4. $e = \sqrt{(\sum L)^2 + (\sum D)^2}$

Question ID : **630680506933**
Option 1 ID : **6306801981240**
Option 2 ID : **6306801981237**
Option 3 ID : **6306801981239**
Option 4 ID : **6306801981238**
Status : **Answered**
Chosen Option : **4**

Q.78 The minimum distance open to the vision of the driver of a vehicle intending to overtake slow vehicle ahead with safety against the traffic of opposite direction is known as _____ .

Ans ✗ 1. head light sight distance

✔ 2. minimum overtaking sight distance

✗ 3. minimum intermediate sight distance

✗ 4. minimum stopping sight distance

Question ID : **630680506922**
Option 1 ID : **6306801981195**
Option 2 ID : **6306801981194**
Option 3 ID : **6306801981193**
Option 4 ID : **6306801981196**
Status : **Answered**
Chosen Option : **2**

Q.79 The consolidation test data are used to determine which of the following property of soil?

I. Coefficient of consolidation

II. Coefficient of permeability

III. Bearing capacity of soil

Ans ✔ 1. Only I and II

✘ 2. Only II and III

✘ 3. I, II and III

✘ 4. Only I

Question ID : **630680506892**
Option 1 ID : **6306801981073**
Option 2 ID : **6306801981074**
Option 3 ID : **6306801981076**
Option 4 ID : **6306801981075**
Status : **Answered**
Chosen Option : **1**

Q.80 Water proofing treatments are divided into which of the following categories?

I. Integral water proofing

II. Surface treatment

Ans ✔ 1. Both I and II

✘ 2. Only II

✘ 3. Only I

✘ 4. Neither I nor II

Question ID : **630680506938**
Option 1 ID : **6306801981259**
Option 2 ID : **6306801981258**
Option 3 ID : **6306801981257**
Option 4 ID : **6306801981260**
Status : **Answered**
Chosen Option : **1**

Q.81 The ratio of tensile stress to the corresponding strain is a constant and this ratio is known as _____.

Ans ✔ 1. Modulus of elasticity

✘ 2. Section modulus

✘ 3. Modulus of rigidity

✘ 4. Poisson's ratio

Question ID : **630680506869**
Option 1 ID : **6306801980981**
Option 2 ID : **6306801980984**
Option 3 ID : **6306801980982**
Option 4 ID : **6306801980983**
Status : **Answered**
Chosen Option : **1**

Q.82 What will be center of gravity of the given L – section shown in figure?
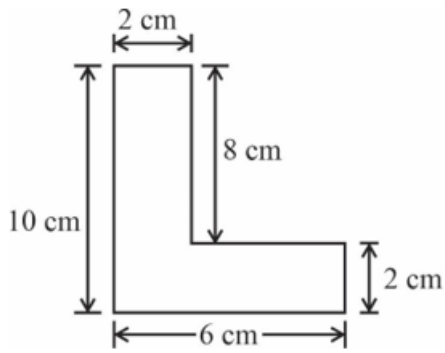
Ans
✗ 1. (1.85 cm, 2.83 cm)

✔ 2. (1.86 cm, 3.86 cm)

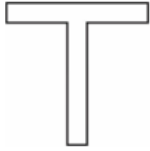✗ 3. (2.96 cm, 5.32 cm)

✗ 4. (2.44 cm, 4.33 cm)

Question ID : **630680506860**
Option 1 ID : **6306801980946**
Option 2 ID : **6306801980947**
Option 3 ID : **6306801980948**
Option 4 ID : **6306801980945**
Status : **Answered**
Chosen Option : **2**

Q.83 The maximum strain in concrete at the outermost compression fibre is taken as _____ in bending, as per IS456: 2000.
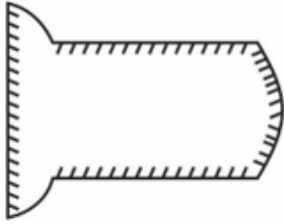
Ans
✗ 1. 0.0047

✗ 2. 0.0096

✔ 3. 0.0035

✗ 4. 0.0038

Question ID : **630680506879**
Option 1 ID : **6306801981022**
Option 2 ID : **6306801981023**
Option 3 ID : **6306801981021**
Option 4 ID : **6306801981024**
Status : **Answered**
Chosen Option : **3**

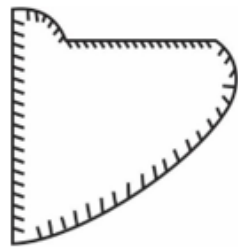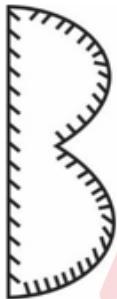**Q.84** What will be the correct shear stress distribution diagram for given T section?

Ans

✗ 1.

✗ 2.

✓ 3.

✗ 4.

Question ID : **630680506865**
Option 1 ID : **6306801980967**
Option 2 ID : **6306801980966**
Option 3 ID : **6306801980968**
Option 4 ID : **6306801980965**
Status : **Answered**
Chosen Option : **3**

Q.85 Which of the following is correct representation of Poisson's ratio (μ)?

Ans

✔ 1. $\mu = \dfrac{\text{Lateral strain}}{\text{Longitudinal strain}}$

✘ 2. $\mu = \dfrac{\text{Lateral stress}}{\text{Longitudinal strain}}$

✘ 3. $\mu = \dfrac{\text{Lateral strain}}{\text{Longitudinal stress}}$

✘ 4. $\mu = \dfrac{\text{Lateral stress}}{\text{Longitudinal stress}}$

Question ID : **630680506863**
Option 1 ID : **6306801980960**
Option 2 ID : **6306801980957**
Option 3 ID : **6306801980958**
Option 4 ID : **6306801980959**
Status : **Answered**
Chosen Option : **1**