# HPCL Engineer

## Previous Year Paper
### (Civil Engineer)
### 16 Aug, 2025

| Participant ID | |
|---|---|
| Participant Name | |
| Test Center Name | |
| Test Date | 16/08/2025 |
| Test Time | 2:00 PM - 4:30 PM |
| Subject | Civil Engineer |

Section : **English Language**

**Q.1** **Select the option that can be used as a one-word substitute for the underlined group of words.**

The villagers treated Heathcliff with <u>obvious dislike and social rejection</u>, though few said anything openly.

**Ans** ✅ A. contempt

❌ B. esteem

❌ C. detachment

❌ D. scepticism

| | |
|---|---|
| Question ID : | **441009383500** |
| Option 1 ID : | **4410091499586** |
| Option 2 ID : | **4410091499585** |
| Option 3 ID : | **4410091499584** |
| Option 4 ID : | **4410091499587** |
| Status : | **Answered** |
| Chosen Option : | **C** |

**Q.2** **Identify the INCORRECTLY spelt word in the given paragraph.**

Pure, bracing ventillation they must have up there at all times, indeed: one may guess the power of the north wind blowing over the edge, by the excessive slant of a few stunted firs at the end of the house; and by a range of gaunt thorns all stretching their limbs one way, as if craving alms of the sun.

**Ans** ❌ A. excessive

❌ B. gaunt

❌ C. stunted

✅ D. ventillation

| | |
|---|---|
| Question ID : | **441009383807** |
| Option 1 ID : | **4410091500863** |
| Option 2 ID : | **4410091500865** |
| Option 3 ID : | **4410091500864** |
| Option 4 ID : | **4410091500862** |
| Status : | **Not Attempted and Marked For Review** |
| Chosen Option : | **--** |

**Q.3** **Identify the INCORRECTLY spelt word in the given sentence.**

She leant her pretty head back against the sill, with half a yauwn and half a sigh, and lapsed into an aspect of abstracted sadness.

**Ans** ✔️ A. yauwn

❌ B. aspect

❌ C. lapsed

❌ D. abstracted

Question ID : **441009383816**
Option 1 ID : **4410091500898**
Option 2 ID : **4410091500900**
Option 3 ID : **4410091500899**
Option 4 ID : **4410091500901**
Status : **Answered**
Chosen Option : **A**

**Q.4** **Select the option that can be used as a one-word substitute for the underlined group of words.**

She stared through the window, unmoving, with a face that showed she had <u>lost all hope and interest in what was happening around her</u>. Hence, she was morose about the whole thing.

**Ans** ❌ A. vacated

✔️ B. desponded

❌ C. disconnected

❌ D. brightened

Question ID : **441009383475**
Option 1 ID : **4410091499469**
Option 2 ID : **4410091499471**
Option 3 ID : **4410091499470**
Option 4 ID : **4410091499468**
Status : **Answered**
Chosen Option : **C**

**Q.5** **Select the most appropriate article to fill in the blank. If no article is needed, select 'No article required'.**

Heathcliff fixed Catherine's arm under his: though she disputed the act at first evidently; and with rapid strides he hurried her into _____ passageway, whose trees concealed them.

**Ans** ❌ A. No article required

✔️ B. the

❌ C. a

❌ D. an

Question ID : **441009383373**
Option 1 ID : **4410091499051**
Option 2 ID : **4410091499050**
Option 3 ID : **4410091499048**
Option 4 ID : **4410091499049**
Status : **Answered**
Chosen Option : **B**

**Q.6** Select the most appropriate option to fill in the blank.

Though Edgar was always courteous, there was something _____ in his interactions with Heathcliff, as though old resentments simmered just below the surface.

**Ans** ✗ A. turbulent

✗ B. evasive

✓ C. restrained

✗ D. genial

Question ID : **441009383383**
Option 1 ID : **4410091499090**
Option 2 ID : **4410091499089**
Option 3 ID : **4410091499091**
Option 4 ID : **4410091499088**
Status : **Answered**
Chosen Option : **B**

**Q.7** Select the most appropriate option to fill in the blank.

Heathcliff's return after years abroad brought a _____ change in his appearance and manner that both surprised and unsettled the household.

**Ans** ✗ A. negligible

✗ B. reluctant

✗ C. mediocre

✓ D. profound

Question ID : **441009383381**
Option 1 ID : **4410091499080**
Option 2 ID : **4410091499082**
Option 3 ID : **4410091499083**
Option 4 ID : **4410091499081**
Status : **Answered**
Chosen Option : **B**

**Q.8** Select the most appropriate ANTONYM of the underlined word in the given sentence.

The leader's remarks were incendiary, stirring tension among the audience.

**Ans** ✗ A. Assertive

✗ B. Insightful

✓ C. Conciliatory

✗ D. Passionate

Question ID : **441009383755**
Option 1 ID : **4410091500657**
Option 2 ID : **4410091500656**
Option 3 ID : **4410091500655**
Option 4 ID : **4410091500654**
Status : **Answered**
Chosen Option : **B**

**Q.9** Select the most appropriate proverb that can substitute the underlined segment in the given sentence.

Nelly described that sudden shift in Catherine's moods—how she began the day shouting and crying but ended it all smiles and sweetness—as if <u>starting wild and ending mild</u>.

Ans ✗ A. a rolling stone gathers no moss

✗ B. a leopard can't change its spots

✗ C. make hay while the sun shines

✓ D. March comes in like a lion and goes out like a lamb

Question ID : **441009383714**
Option 1 ID : **4410091500486**
Option 2 ID : **4410091500488**
Option 3 ID : **4410091500489**
Option 4 ID : **4410091500487**
Status : **Not Answered**
Chosen Option : **--**

**Q.10** Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.
A. Her illness was mysterious—slow to start, but unstoppable once it took hold.
B. She and her brother had delicate health, unlike others in the region.
C. Though no physician named it, we guessed it was a lingering fever.
D. I believe they died of the same condition, just months apart.

Ans ✗ A. BDCA

✗ B. CBDA

✓ C. BACD

✗ D. ABDC

Question ID : **441009383453**
Option 1 ID : **4410091499383**
Option 2 ID : **4410091499381**
Option 3 ID : **4410091499380**
Option 4 ID : **4410091499382**
Status : **Answered**
Chosen Option : **C**

**Q.11** Select the most appropriate idiom that can substitute the underlined segment in the given sentence.

The Captain slammed his hand on the table and told the others to <u>shut up immediately and stop making noise,</u> glaring at them all before bellowing again.

Ans ✓ A. put a sock in it

✗ B. face the music

✗ C. raise the bar

✗ D. talk the talk

Question ID : **441009383698**
Option 1 ID : **4410091500424**
Option 2 ID : **4410091500422**
Option 3 ID : **4410091500423**
Option 4 ID : **4410091500425**
Status : **Answered**
Chosen Option : **A**

**Q.12 Select the most appropriate ANTONYM of the underlined word in the given sentence.**

Her features assumed the <u>facet</u> of abstracted sadness: neither caring nor knowing whether we remarked her.

**Ans** ✔ A. Entirety

✘ B. Sentiment

✘ C. Vitality

✘ D. Defiance

Question ID : **441009383773**
Option 1 ID : **4410091500728**
Option 2 ID : **4410091500726**
Option 3 ID : **4410091500727**
Option 4 ID : **4410091500729**
Status : **Not Answered**
Chosen Option : **--**

**Q.13 Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.**
A. I would go out for a walk and asked her to prepare a simple room and bed.
B. I had startled her with my unexpected arrival, and she was clearly shaken.
C. She thrust a brush into the grate instead of the poker, but seemed eager to help.
D. I assured her I needed only a fire and dry sheets—not a full cleaning.

**Ans** ✘ A. CBDA

✘ B. ADBC

✘ C. BACD

✔ D. BDAC

Question ID : **441009383431**
Option 1 ID : **4410091499285**
Option 2 ID : **4410091499284**
Option 3 ID : **4410091499287**
Option 4 ID : **4410091499286**
Status : **Answered**
Chosen Option : **B**

**Comprehension:**

Read the given passage and answer questions that follow.

Catherine had been left alone for the first time. Waking from a miserable doze after a night of weeping, she reached out to push aside the bed panels—but her hand struck the table. She brushed it along the carpet, and suddenly memory returned like a flood. Her recent sorrow was overtaken vehemently by a wave of extreme grief and anguish.

She couldn't explain her misery—perhaps it was madness, even if only temporary. At twelve years old, she had been torn from everything familiar: from Wuthering Heights, from every early bond, from Heathcliff—who had been everything to her—and turned into Mrs. Linton, a stranger to herself. She felt like an exile, cast out of her own world.

She believed Nelly had a part in it too. Nelly should have spoken to Edgar, should have kept him away. Catherine's body burned with frustration. All she wanted was to be free again—a wild, strong girl who could laugh at pain instead of being crushed by it.

Why had she changed? Why did a single word now stir her blood? She was certain she would feel like herself again if she could just be among the heather on the hills.

"Open the window—wide. Fasten it open!" she demanded.

"I won't give you your death of cold," Nelly replied firmly.

"No," Catherine said bitterly. "You won't give me a chance at life. But I'm not helpless yet."

**SubQuestion No : 14**

**Q.14 According to the passage, how did Catherine feel immediately after waking from her doze?**

**Ans** ✔️ A. Miserable and filled with despair

❌ B. Relieved and hopeful

❌ C. Lost and bitter

❌ D. Angry but calm

Question ID : **441009383669**
Option 1 ID : **4410091500299**
Option 2 ID : **4410091500300**
Option 3 ID : **4410091500301**
Option 4 ID : **4410091500298**
Status : **Answered**
Chosen Option : **A**

**Comprehension:**

Read the given passage and answer questions that follow.

Catherine had been left alone for the first time. Waking from a miserable doze after a night of weeping, she reached out to push aside the bed panels—but her hand struck the table. She brushed it along the carpet, and suddenly memory returned like a flood. Her recent sorrow was overtaken vehemently by a wave of extreme grief and anguish.

She couldn't explain her misery—perhaps it was madness, even if only temporary. At twelve years old, she had been torn from everything familiar: from Wuthering Heights, from every early bond, from Heathcliff—who had been everything to her—and turned into Mrs. Linton, a stranger to herself. She felt like an exile, cast out of her own world.

She believed Nelly had a part in it too. Nelly should have spoken to Edgar, should have kept him away. Catherine's body burned with frustration. All she wanted was to be free again—a wild, strong girl who could laugh at pain instead of being crushed by it.

Why had she changed? Why did a single word now stir her blood? She was certain she would feel like herself again if she could just be among the heather on the hills.

"Open the window—wide. Fasten it open!" she demanded.

"I won't give you your death of cold," Nelly replied firmly.

"No," Catherine said bitterly. "You won't give me a chance at life. But I'm not helpless yet."

**SubQuestion No : 15**

**Q.15 What does Catherine recall being taken away from when she became Mrs. Linton?**

Ans  ✗ A. Her education and career

 ✗ B. Her family and their land

 ✔ C. Wuthering Heights and Heathcliff

 ✗ D. Her health and reputation

Question ID : **441009383670**
Option 1 ID : **4410091500302**
Option 2 ID : **4410091500304**
Option 3 ID : **4410091500305**
Option 4 ID : **4410091500303**
Status : **Answered**
Chosen Option : **C**

**Comprehension:**

Read the given passage and answer questions that follow.

Catherine had been left alone for the first time. Waking from a miserable doze after a night of weeping, she reached out to push aside the bed panels—but her hand struck the table. She brushed it along the carpet, and suddenly memory returned like a flood. Her recent sorrow was overtaken vehemently by a wave of extreme grief and anguish.

She couldn't explain her misery—perhaps it was madness, even if only temporary. At twelve years old, she had been torn from everything familiar: from Wuthering Heights, from every early bond, from Heathcliff—who had been everything to her—and turned into Mrs. Linton, a stranger to herself. She felt like an exile, cast out of her own world.

She believed Nelly had a part in it too. Nelly should have spoken to Edgar, should have kept him away. Catherine's body burned with frustration. All she wanted was to be free again—a wild, strong girl who could laugh at pain instead of being crushed by it.

Why had she changed? Why did a single word now stir her blood? She was certain she would feel like herself again if she could just be among the heather on the hills.

"Open the window—wide. Fasten it open!" she demanded.

"I won't give you your death of cold," Nelly replied firmly.

"No," Catherine said bitterly. "You won't give me a chance at life. But I'm not helpless yet."

**SubQuestion No : 16**

**Q.16 What does Catherine's demand to 'open the window—wide' most likely symbolise in the passage?**

Ans　✔️ A. Her wish to reconnect with the wildness and freedom she once had

❌ B. Her longing for fresh air to calm her nerves

❌ C. Her attempt to attract someone's attention

❌ D. Her desire to escape from physical confinement

Question ID : **441009383671**
Option 1 ID : **4410091500306**
Option 2 ID : **4410091500309**
Option 3 ID : **4410091500307**
Option 4 ID : **4410091500308**
Status : **Answered**
Chosen Option : **A**

**Comprehension:**

Read the given passage and answer questions that follow.

Catherine had been left alone for the first time. Waking from a miserable doze after a night of weeping, she reached out to push aside the bed panels—but her hand struck the table. She brushed it along the carpet, and suddenly memory returned like a flood. Her recent sorrow was overtaken vehemently by a wave of extreme grief and anguish.
She couldn't explain her misery—perhaps it was madness, even if only temporary. At twelve years old, she had been torn from everything familiar: from Wuthering Heights, from every early bond, from Heathcliff—who had been everything to her—and turned into Mrs. Linton, a stranger to herself. She felt like an exile, cast out of her own world.
She believed Nelly had a part in it too. Nelly should have spoken to Edgar, should have kept him away. Catherine's body burned with frustration. All she wanted was to be free again—a wild, strong girl who could laugh at pain instead of being crushed by it.
Why had she changed? Why did a single word now stir her blood? She was certain she would feel like herself again if she could just be among the heather on the hills.
"Open the window—wide. Fasten it open!" she demanded.
"I won't give you your death of cold," Nelly replied firmly.
"No," Catherine said bitterly. "You won't give me a chance at life. But I'm not helpless yet."

**SubQuestion No : 17**

**Q.17 Select the ANTONYM of 'vehemently' as used in the passage.**

Ans ✗ A. Miserably

✗ B. Despondently

✗ C. Melancholily

✓ D. Gently

Question ID : **441009383672**
Option 1 ID : **4410091500313**
Option 2 ID : **4410091500311**
Option 3 ID : **4410091500310**
Option 4 ID : **4410091500312**
Status : **Not Answered**
Chosen Option : **--**

Section : **Quantitative Aptitude**

**Q.1 A student received a score of 92 on a test that accounts for 40% of the final grade, and a score of 76 on another test that counts for 60% of the final grade. What is the student's overall weighted average score?**

Ans ✗ A. 90

✓ B. 82.4

✗ C. 84.8

✗ D. 80.5

Question ID : **441009460343**
Option 1 ID : **4410091800071**
Option 2 ID : **4410091800069**
Option 3 ID : **4410091800070**
Option 4 ID : **4410091800068**
Status : **Answered**
Chosen Option : **B**

**Q.2** Find the difference between a single discount of 25% on ₹6,500 and two successive discounts of 10% and 15% on the same amount.

**Ans** ✗ A. ₹86.50

✓ B. ₹97.50

✗ C. ₹107.50

✗ D. ₹79.50

Question ID : **441009644499**
Option 1 ID : **4410092532190**
Option 2 ID : **4410092532188**
Option 3 ID : **4410092532189**
Option 4 ID : **4410092532187**
Status : **Answered**
Chosen Option : **B**

**Q.3** Three workers, A, B, and C, can complete a task in 12 days, 16 days, and 18 days, respectively. If they all work together, how many days will it take them to finish the $\frac{29}{72}$ part?

**Ans** ✗ A. 5

✗ B. 4

✗ C. 3

✓ D. 2

Question ID : **441009462852**
Option 1 ID : **4410091809974**
Option 2 ID : **4410091809973**
Option 3 ID : **4410091809972**
Option 4 ID : **4410091809971**
Status : **Answered**
Chosen Option : **D**

**Q.4** The ratio of students in Class A to Class B is 5:7. If 10 students are transferred from Class B to Class A, the ratio becomes 6:6. What is the original number of students in Class B?

**Ans** ✗ A. 40

✓ B. 70

✗ C. 60

✗ D. 80

Question ID : **441009462014**
Option 1 ID : **4410091806479**
Option 2 ID : **4410091806478**
Option 3 ID : **4410091806477**
Option 4 ID : **4410091806480**
Status : **Answered**
Chosen Option : **B**

**Q.5** Simplify the expression: $25 - \{5 \times (3 + 2) - [6 \div (2 \times 1)]\}$

**Ans** ✗ A. 0

✗ B. 1

✗ C. 2

✓ D. 3

Question ID : **441009460379**
Option 1 ID : **4410091800228**
Option 2 ID : **4410091800229**
Option 3 ID : **4410091800230**
Option 4 ID : **4410091800231**
Status : **Answered**
Chosen Option : **D**

**Q.6** A bookstore sells pens and notebooks: 1 pen costs ₹10, and 1 notebook costs ₹25. A student buys a total of 12 items (pens + notebooks) for ₹240. How many pens and notebooks did the student buy?

**Ans** ✓ A. 4 pens and 8 notebooks

✗ B. 8 pens and 4 notebooks

✗ C. 5 pens and 7 notebooks

✗ D. 6 pens and 6 notebooks

Question ID : **441009462943**
Option 1 ID : **4410091810360**
Option 2 ID : **4410091810359**
Option 3 ID : **4410091810361**
Option 4 ID : **4410091810362**
Status : **Answered**
Chosen Option : **A**

**Q.7** In a class, the ratio of boys to girls is 5:4. If 40% of the boys and 25% of the girls participate in a competition, what is the ratio of participants to non-participants in the class?

**Ans** ✗ A. 11:17

✓ B. 1:2

✗ C. 3:5

✗ D. 4:7

Question ID : **441009460411**
Option 1 ID : **4410091800355**
Option 2 ID : **4410091800354**
Option 3 ID : **4410091800353**
Option 4 ID : **4410091800352**
Status : **Answered**
Chosen Option : **B**

**Q.8** The average weight of 6 boxes is 12 kg. When a new box is added, the average weight increases to 13 kg. What is the weight of the new box?

**Ans** ✗ A. 17 kg

✗ B. 15 kg

✔ C. 19 kg

✗ D. 22 kg

Question ID : **441009460341**
Option 1 ID : **4410091800061**
Option 2 ID : **4410091800060**
Option 3 ID : **4410091800062**
Option 4 ID : **4410091800063**
Status : **Answered**
Chosen Option : **C**

**Q.9** A quadratic polynomial $p(x) = x^2 + bx + c$ leaves a remainder of 5 when divided by x−2 and a remainder of 3 when divided by x+1. Find the values of b and c.

**Ans**

✔ A. $b = -\dfrac{1}{3}$ and $c = \dfrac{5}{3}$

✗ B. $b = -\dfrac{1}{3}$ and $c = -\dfrac{5}{3}$

✗ C. $b = \dfrac{1}{3}$ and $c = -\dfrac{5}{3}$

✗ D. $b = \dfrac{1}{3}$ and $c = \dfrac{5}{3}$

Question ID : **441009401249**
Option 1 ID : **4410091570412**
Option 2 ID : **4410091570415**
Option 3 ID : **4410091570413**
Option 4 ID : **4410091570414**
Status : **Not Answered**
Chosen Option : **--**

**Q.10** A circle of radius r is inscribed in a circular sector of radius R = 10 cm and central angle θ = 60°. What is the radius r of the inscribed circle?

**Ans**

✗ A. $\dfrac{7}{3}$ cm

✔ B. $\dfrac{10}{3}$ cm

✗ C. $\dfrac{4}{3}$ cm

✗ D. $\dfrac{11}{3}$ cm

Question ID : **441009401085**
Option 1 ID : **4410091569765**
Option 2 ID : **4410091569764**
Option 3 ID : **4410091569766**
Option 4 ID : **4410091569767**
Status : **Not Answered**
Chosen Option : **--**

**Q.11 A quadratic equation has roots 3 and -2. Find the quadratic equation in the form**
$x^2+bx+c=0$**.**

**Ans**  ✗ A. $x^2+5x-25=0$

✗ B. $x^2-x-10=0$

✗ C. $x^2+2x-6=0$

✔ D. $x^2-x-6=0$

Question ID : **441009462969**
Option 1 ID : **4410091810462**
Option 2 ID : **4410091810460**
Option 3 ID : **4410091810459**
Option 4 ID : **4410091810461**
Status : **Answered**
Chosen Option : **D**

**Q.12 A regular polygon has 15 sides, each of length 8 cm. What is its perimeter?**

**Ans**  ✗ A. 158 cm

✔ B. 120 cm

✗ C. 115 cm

✗ D. 140 cm

Question ID : **441009400749**
Option 1 ID : **4410091568443**
Option 2 ID : **4410091568441**
Option 3 ID : **4410091568444**
Option 4 ID : **4410091568442**
Status : **Answered**
Chosen Option : **B**

**Q.13 The marks obtained by 10 students in a mathematics test are: 45, 62, 78, 55, 82, 90, 65, 48, 70, 58**
**Find the arithmetic mean using the direct method.**

**Ans**  ✔ A. 65.3

✗ B. 63

✗ C. 66

✗ D. 60.5

Question ID : **441009462812**
Option 1 ID : **4410091809801**
Option 2 ID : **4410091809800**
Option 3 ID : **4410091809802**
Option 4 ID : **4410091809799**
Status : **Answered**
Chosen Option : **A**

**Q.14** Convert $0.\overline{16}$ into a fraction.

Ans ✗ A. $\dfrac{14}{99}$

✗ B. $\dfrac{10}{99}$

✓ C. $\dfrac{16}{99}$

✗ D. $\dfrac{7}{99}$

Question ID : **441009395832**
Option 1 ID : **4410091548816**
Option 2 ID : **4410091548817**
Option 3 ID : **4410091548819**
Option 4 ID : **4410091548818**
Status : **Answered**
Chosen Option : **C**

**Q.15** A sum of ₹5,000 is invested at a compound interest rate of 8% per annum, compounded half-yearly. What is the amount after 1 year?

Ans ✓ A. ₹5408

✗ B. ₹6548

✗ C. ₹5786

✗ D. ₹5548

Question ID : **441009395734**
Option 1 ID : **4410091548424**
Option 2 ID : **4410091548426**
Option 3 ID : **4410091548425**
Option 4 ID : **4410091548427**
Status : **Answered**
Chosen Option : **C**

**Q.16** A shopkeeper marks a jacket at ₹4,000. He offers three successive discounts of 12.5%, 10%, and 7.5%. Find the final selling price of the jacket.

Ans ✗ A. ₹3,155.89

✗ B. ₹3,000

✓ C. ₹2,913.75

✗ D. ₹3,225.65

Question ID : **441009460400**
Option 1 ID : **4410091800310**
Option 2 ID : **4410091800309**
Option 3 ID : **4410091800308**
Option 4 ID : **4410091800311**
Status : **Answered**
Chosen Option : **C**

**Q.17** What would be the simple interest obtained on an amount of ₹8960 at the rate of 7% per annum after $2\frac{1}{2}$ years?

Ans   ✔ A. ₹1568

    ✘ B. ₹1578

    ✘ C. ₹1558

    ✘ D. ₹1548

Question ID : **441009357241**
Option 1 ID : **4410091394944**
Option 2 ID : **4410091394945**
Option 3 ID : **4410091394943**
Option 4 ID : **4410091394942**
Status : **Answered**
Chosen Option : **A**

**Q.18** A person travels from town A to town B at 60 km/h and returns at 40 km/h. What is the average speed for the entire journey?

Ans   ✘ A. 55 km/h

    ✘ B. 52 km/h

    ✔ C. 48 km/h

    ✘ D. 58 km/h

Question ID : **441009397611**
Option 1 ID : **4410091555883**
Option 2 ID : **4410091555882**
Option 3 ID : **4410091555881**
Option 4 ID : **4410091555880**
Status : **Answered**
Chosen Option : **C**

**Q.19** A student's final grade in a course is determined by the following weighted components:
Midterm Exam (30% weight): Scored 72 out of 100
Final Exam (50% weight): Scored 85 out of 100
Homework (20% weight): Scored 90 out of 100
What is the student's final weighted average after this adjustment?

Ans   ✘ A. 88

    ✘ B. 80

    ✘ C. 85.5

    ✔ D. 82.1

Question ID : **441009460345**
Option 1 ID : **4410091800087**
Option 2 ID : **4410091800084**
Option 3 ID : **4410091800086**
Option 4 ID : **4410091800085**
Status : **Answered**
Chosen Option : **D**

**Q.20** A man buys a second-hand mobile phone for ₹5,000. He spends ₹500 on repairs. He then sells it to a friend at 15% profit. Later, his friend sells it to another person at 20% profit. Find the final selling price of the mobile phone.

Ans ✗ A. ₹7,000

✗ B. ₹8,000

✗ C. ₹8,555

✓ D. ₹7,590

Question ID : **441009460395**
Option 1 ID : **4410091800292**
Option 2 ID : **4410091800294**
Option 3 ID : **4410091800295**
Option 4 ID : **4410091800293**
Status : **Answered**
Chosen Option : **D**

**Q.21**

The value of $\sqrt{6 + \sqrt{6 + \sqrt{6 + \sqrt{\ldots}}}}$ is

Ans ✗ A. 1

✗ B. $\sqrt{6}$

✗ C. $6\sqrt{6}$

✓ D. 3

Question ID : **441009460383**
Option 1 ID : **4410091800244**
Option 2 ID : **4410091800245**
Option 3 ID : **4410091800247**
Option 4 ID : **4410091800246**
Status : **Answered**
Chosen Option : **C**

**Q.22** In a three-candidate election, Candidate X received 30% of the total votes, Candidate Y received 45%, and the remaining votes went to Candidate Z. After counting, 8% of the total votes were declared invalid. If the total number of valid votes was 25,760, how many votes were originally cast in favor of Candidate X?

Ans ✗ A. 8,000

✓ B. 8,400

✗ C. 7,000

✗ D. 7,600

Question ID : **441009460385**
Option 1 ID : **4410091800254**
Option 2 ID : **4410091800255**
Option 3 ID : **4410091800252**
Option 4 ID : **4410091800253**
Status : **Answered**
Chosen Option : **B**

**Q.23** A car covers one-third of the total journey at a speed of 40 km/h, and the rest of the journey at 60 km/h. Find the average speed for the entire trip (rounded off to two decimal places).

**Ans** ✓ A. 51.43 km/h

✗ B. 50.35 km/h

✗ C. 55.67 km/h

✗ D. 53.56 km/h

Question ID : **441009462869**
Option 1 ID : **4410091810044**
Option 2 ID : **4410091810043**
Option 3 ID : **4410091810046**
Option 4 ID : **4410091810045**
Status : **Answered**
Chosen Option : **D**

**Q.24** The weights (in kg) of 7 students in a class are:
48, 52, 45, 60, 55, 50, 58
What is the median weight?

**Ans** ✗ A. 50 kg

✗ B. 55 kg

✓ C. 52 kg

✗ D. 51 kg

Question ID : **441009462821**
Option 1 ID : **4410091809839**
Option 2 ID : **4410091809842**
Option 3 ID : **4410091809841**
Option 4 ID : **4410091809840**
Status : **Answered**
Chosen Option : **C**

**Q.25** A cylindrical pipe has an external diameter of 16 cm, an internal diameter of 12 cm, and a length of 1.5 m. If the metal weighs 8 grams per cm$^3$, determine the total weight of the original pipe.

$$\left( \text{Use } \pi = \frac{22}{7}, \text{ Density} = \frac{\text{Mass}}{\text{Volume}} \right)$$

**Ans** ✗ A. 110.5 kg

✓ B. 105.6 kg

✗ C. 115.25 kg

✗ D. 100 kg

Question ID : **441009463968**
Option 1 ID : **4410091814467**
Option 2 ID : **4410091814466**
Option 3 ID : **4410091814468**
Option 4 ID : **4410091814465**
Status : **Not Answered**
Chosen Option : **--**

**Q.26** Given that $\sin \theta = \dfrac{3}{5}$ and $\theta$ is an acute angle, find the value of $\sin 2$

**Ans**

✗ A. $\dfrac{4}{5}$

✗ B. $\dfrac{12}{25}$

✓ C. $\dfrac{24}{25}$

✗ D. $\dfrac{1}{5}$

Question ID : **441009463998**
Option 1 ID : **4410091814573**
Option 2 ID : **4410091814575**
Option 3 ID : **4410091814576**
Option 4 ID : **4410091814574**
Status : **Answered**
Chosen Option : **C**

**Q.27** The price of a laptop increased by 10% in January and then decreased by 20% in February. Find the overall percentage change in the price of the laptop.

**Ans**

✓ A. 12%, decrease

✗ B. 18%, increase

✗ C. 10%, increase

✗ D. 15%, decrease

Question ID : **441009460389**
Option 1 ID : **4410091800269**
Option 2 ID : **4410091800271**
Option 3 ID : **4410091800268**
Option 4 ID : **4410091800270**
Status : **Answered**
Chosen Option : **A**

**Q.28** A boat travels upstream from point A to point B in 6 hours and returns downstream from B to A in 4 hours. The speed of the stream is 5 km/h. Find the speed of the boat in still water.

**Ans**

✗ A. 28 km/h

✓ B. 25 km/h

✗ C. 22 km/h

✗ D. 20 km/h

Question ID : **441009462894**
Option 1 ID : **4410091810154**
Option 2 ID : **4410091810153**
Option 3 ID : **4410091810152**
Option 4 ID : **4410091810151**
Status : **Answered**
Chosen Option : **B**

**Q.29** The length of a rectangle is twice its breadth. If the length is decreased by 6 cm and the breadth is increased by 4 cm, the area of the rectangle remains the same. Find the original length of the rectangle.

**Ans** ✗ A. 20 cm

✓ B. 24 cm

✗ C. 26 cm

✗ D. 22 cm

Question ID : **441009462982**
Option 1 ID : **4410091810511**
Option 2 ID : **4410091810513**
Option 3 ID : **4410091810514**
Option 4 ID : **4410091810512**
Status : **Answered**
Chosen Option : **B**

**Q.30** Two pipes, A and B, can fill a tank in 12 minutes and 18 minutes respectively. A third pipe, C, can empty the tank in 9 minutes.
Scenario:
Pipes A and B are opened together for 4 minutes, then closed.
After that, pipe C is opened alone for 2 minutes, then closed.
Finally, all three pipes (A, B, and C) are opened together.
How much total time (in minutes) will it take to fill the tank completely from the start?

**Ans** ✓ A. 30 minutes

✗ B. 40 minutes

✗ C. 25 minutes

✗ D. 20 minutes

Question ID : **441009462840**
Option 1 ID : **4410091809929**
Option 2 ID : **4410091809930**
Option 3 ID : **4410091809928**
Option 4 ID : **4410091809927**
Status : **Not Answered**
Chosen Option : **--**

**Q.31** The LCM of two numbers is 1200, and their HCF is 20. If one of the numbers is 80, find the other number.

**Ans** ✗ A. 250

✓ B. 300

✗ C. 600

✗ D. 200

Question ID : **441009460375**
Option 1 ID : **4410091800213**
Option 2 ID : **4410091800214**
Option 3 ID : **4410091800215**
Option 4 ID : **4410091800212**
Status : **Answered**
Chosen Option : **B**

**Q.32 Solve the system of linear equations for x:**

$$x + y + z = 6$$
$$x - y + z = 2$$
$$x + y - z = 4$$

**Ans**  ✗ A. 1

✓ B. 3

✗ C. 2

✗ D. 0

Question ID : **441009395934**
Option 1 ID : **4410091549225**
Option 2 ID : **4410091549227**
Option 3 ID : **4410091549226**
Option 4 ID : **4410091549224**
Status : **Answered**
Chosen Option : **A**

**Q.33 A shopkeeper sells an article at 20% profit if sold for ₹600, but if he sells it for ₹400, he incurs a loss. Find the percentage loss when sold at ₹400.**

**Ans**  ✓ A. 20%

✗ B. 15%

✗ C. 10%

✗ D. 25%

Question ID : **441009460390**
Option 1 ID : **4410091800274**
Option 2 ID : **4410091800273**
Option 3 ID : **4410091800272**
Option 4 ID : **4410091800275**
Status : **Answered**
Chosen Option : **A**

**Q.34 The ratio of two numbers is 4:7. If 8 is subtracted from each, the resulting numbers are in the ratio 2:5. What is the smaller of the original numbers?**

**Ans**  ✓ A. 16

✗ B. 10

✗ C. 14

✗ D. 12

Question ID : **441009462057**
Option 1 ID : **4410091806651**
Option 2 ID : **4410091806652**
Option 3 ID : **4410091806650**
Option 4 ID : **4410091806649**
Status : **Answered**
Chosen Option : **A**

Section : **Intellectual Potential Test**

**Q.1** **What should come in place of ? in the given series based on the English alphabetical order?**
**EEE HGI KIM ? QMU**

**Ans** ✗ A. KJI

✗ B. KNM

✗ C. LKB

✔ D. NKQ

Question ID : **441009368261**
Option 1 ID : **4410091439012**
Option 2 ID : **4410091439009**
Option 3 ID : **4410091439010**
Option 4 ID : **4410091439011**
Status : **Answered**
Chosen Option : **D**

**Q.2** **Refer to the following letter, symbol series and answer the question. Counting to be done from left to right only.**
**(Left) T @ + S R M % V M @ $ \ G K R K $ W A X + (Right)**
**How many such letters are there each of which is immediately preceded by a symbol and also immediately followed by a letter?**

**Ans** ✗ A. One

✔ B. Four

✗ C. Two

✗ D. Three

Question ID : **441009368275**
Option 1 ID : **4410091439068**
Option 2 ID : **4410091439065**
Option 3 ID : **4410091439067**
Option 4 ID : **4410091439066**
Status : **Answered**
Chosen Option : **B**

**Q.3** **What should come in place of ? in the given series based on the English alphabetical order?**
**VUD RPI NKN JFS ?**

**Ans** ✔ A. FAX

✗ B. AXD

✗ C. FCD

✗ D. EDF

Question ID : **441009368256**
Option 1 ID : **4410091438993**
Option 2 ID : **4410091438994**
Option 3 ID : **4410091438995**
Option 4 ID : **4410091438996**
Status : **Answered**
Chosen Option : **A**

**Q.4** In a certain code language,
A ≠ B means 'A is the brother of B'
A # B means 'A is the father of B'
A ≤ B means ' A is the wife of B'
A % B means 'A is the son of B'
Based on the above, how is W related to N if 'W ≤ E ≠ A # R % N'?

Ans ✗ A. Brother's wife

✗ B. Husband's sister

✓ C. Husband's brother's wife

✗ D. Husband's brother

Question ID : **441009367813**
Option 1 ID : **4410091437225**
Option 2 ID : **4410091437224**
Option 3 ID : **4410091437223**
Option 4 ID : **4410091437222**
Status : **Answered**
Chosen Option : **C**

**Q.5** If + means - , - means x , x means ÷ , ÷ means +, then what will come in place of the question mark (?) in the following equation?
324 x 4 - 2 ÷ 16 + 108 = ?

Ans ✗ A. 65

✗ B. 76

✗ C. 73

✓ D. 70

Question ID : **441009381680**
Option 1 ID : **4410091492399**
Option 2 ID : **4410091492402**
Option 3 ID : **4410091492401**
Option 4 ID : **4410091492400**
Status : **Answered**
Chosen Option : **D**

**Q.6** In a certain code language,
A ≠ B means 'A is the brother of B'
A # B means 'A is the father of B'
A ≤ B means ' A is the wife of B'
A % B means 'A is the son of B'
Based on the above, how is W related to N if 'W # E ≤ A ≠ R % N'?

Ans ✗ A. Son's wife

✗ B. Wife's father

✓ C. Son's wife's father

✗ D. Wife's brother

Question ID : **441009367811**
Option 1 ID : **4410091437214**
Option 2 ID : **4410091437215**
Option 3 ID : **4410091437217**
Option 4 ID : **4410091437216**
Status : **Answered**
Chosen Option : **C**

**Q.7** **What should come in place of '?' in the given series?**
**5 7 17 55 ? 1131**

**Ans** ✗ A. 223

✗ B. 221

✓ C. 225

✗ D. 227

Question ID : **441009384846**
Option 1 ID : **4410091505039**
Option 2 ID : **4410091505038**
Option 3 ID : **4410091505040**
Option 4 ID : **4410091505041**
Status : **Answered**
Chosen Option : **C**

**Q.8** **Each of F, G, H, I, M, N and O has an exam on a different day of a week starting from Monday and ending on Sunday of the same week. Only three people have exam between O and I. Only three people have exam between F and M. N has exam on some day before I and on some day after G. Only H has exam before M. How many people have exam after O?**

**Ans** ✓ A. Four

✗ B. Three

✗ C. One

✗ D. Two

Question ID : **441009360567**
Option 1 ID : **4410091408285**
Option 2 ID : **4410091408284**
Option 3 ID : **4410091408282**
Option 4 ID : **4410091408283**
Status : **Answered**
Chosen Option : **A**

**Q.9** **Refer to the following series and answer the question (all numbers are single digit numbers only)**
**(Left) 3 2 9 8 8 9 1 7 7 4 4 4 8 5 7 9 2 4 4 2 3 7 6 (Right)**

**How many such even digits are there each of which is immediately preceded by an even digit and also immediately followed by an even digit?**

**Ans** ✗ A. Three

✗ B. One

✗ C. Two

✓ D. Four

Question ID : **441009368291**
Option 1 ID : **4410091439130**
Option 2 ID : **4410091439132**
Option 3 ID : **4410091439131**
Option 4 ID : **4410091439129**
Status : **Answered**
Chosen Option : **D**

**Q.10** Select the pair which follows the same pattern as that followed by the two set of pairs given below. Both pairs follow the same pattern.
ING : LLE
PLW : SJU

**Ans** ✗ A. EQI : HNG

✓ B. WMP : ZKN

✗ C. SNO : VLL

✗ D. PKJ : SIG

Question ID : **441009367967**
Option 1 ID : **4410091437832**
Option 2 ID : **4410091437830**
Option 3 ID : **4410091437831**
Option 4 ID : **4410091437833**
Status : **Answered**
Chosen Option : **B**

**Q.11** 12 is related to 58 following a certain logic. Following the same logic, 15 is related to 73. To which of the following is 18 related to, following the same logic?
(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)

**Ans** ✗ A. 75

✗ B. 78

✓ C. 88

✗ D. 73

Question ID : **441009387534**
Option 1 ID : **4410091515751**
Option 2 ID : **4410091515752**
Option 3 ID : **4410091515753**
Option 4 ID : **4410091515750**
Status : **Answered**
Chosen Option : **C**

**Q.12** What will come in the place of '?' in the following equation, if '+' and '-' are interchanged and 'x' and '÷' are interchanged?
34 - 20 ÷ 8 x 2 + 16 =?

**Ans** ✗ A. 96

✗ B. 93

✗ C. 95

✓ D. 98

Question ID : **441009384713**
Option 1 ID : **4410091504504**
Option 2 ID : **4410091504502**
Option 3 ID : **4410091504503**
Option 4 ID : **4410091504505**
Status : **Answered**
Chosen Option : **D**

**Q.13 Based on the alphabetical order, three of the following four are alike in a certain way and thus form a group. Which is the one that does not belong to that group?**
**(Note: The odd man out is not based on the number of consonants/vowels or their position in the letter cluster)**

Ans ✗ A. MQN

✗ B. PTQ

✗ C. JNK

✔ D. SDY

Question ID : **441009368175**
Option 1 ID : **4410091438669**
Option 2 ID : **4410091438672**
Option 3 ID : **4410091438670**
Option 4 ID : **4410091438671**
Status : **Answered**
Chosen Option : **D**

**Q.14 Select the set in which the numbers are related in the same way as are the numbers of the following sets.**
**(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)**
**(4,3,144)**
**(5,3,225)**

Ans ✗ A. (8,2,296)

✗ B. (9,2,289)

✔ C. (6,3,324)

✗ D. (5,4,420)

Question ID : **441009387327**
Option 1 ID : **4410091514929**
Option 2 ID : **4410091514928**
Option 3 ID : **4410091514926**
Option 4 ID : **4410091514927**
Status : **Answered**
Chosen Option : **C**

**Q.15 Six people M, N, O, G, H and I live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 6. Only two people live between O and H. O lives on an even numbered floor but not on floor number 4. G lives on an odd numbered floor but not on the lowermost floor. Only two people live between G and N. I lives immediately below G. How many people live between M and N?**

Ans ✔ A. None

✗ B. Three

✗ C. Two

✗ D. One

Question ID : **441009372550**
Option 1 ID : **4410091455819**
Option 2 ID : **4410091455818**
Option 3 ID : **4410091455817**
Option 4 ID : **4410091455816**
Status : **Answered**
Chosen Option : **A**

**Q.16** Sourav starts from Point A and drives 50 km towards South. He then takes a right turn, drives 68 km, turns right and drives 69 km. He then takes a right turn and drives 79 km. He takes a final right turn, drives 19 km and stops at Point P. How far (shortest distance) and towards which direction should he drive in order to reach Point A again? (All turns are 90 degrees turns only unless specified)

**Ans**   ✔ A. 11 km to the west

✘ B. 12 km to the west

✘ C. 14 km to the east

✘ D. 13 km to the east

Question ID : **441009360372**
Option 1 ID : **4410091407502**
Option 2 ID : **4410091407503**
Option 3 ID : **4410091407505**
Option 4 ID : **4410091407504**
Status : **Answered**
Chosen Option : **A**

**Q.17** Based on the alphabetical order, three of the following four are alike in a certain way and thus form a group. Which is the one that does not belong to that group?
(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter cluster)

**Ans**   ✘ A. VDL

✘ B. EMU

✔ C. LTI

✘ D. YGO

Question ID : **441009360073**
Option 1 ID : **4410091406300**
Option 2 ID : **4410091406299**
Option 3 ID : **4410091406298**
Option 4 ID : **4410091406301**
Status : **Answered**
Chosen Option : **C**

**Q.18** MINU is related to YUZG in a certain way based on the English alphabetical order. In the same way, IEJQ is related to UQVC. To which of the following options is SOTA related to, following the same logic?

**Ans**   ✔ A. EAFM

✘ B. MAFE

✘ C. FEAM

✘ D. FAME

Question ID : **441009360266**
Option 1 ID : **4410091407074**
Option 2 ID : **4410091407077**
Option 3 ID : **4410091407076**
Option 4 ID : **4410091407075**
Status : **Answered**
Chosen Option : **A**

**Q.19 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. You have to decide which conclusion/s logically follow/s from the given statements**
**Statements: All rats are cats. All cats are buckets.**
**Conclusions (I) : Some buckets are cats**
**Conclusions (II) : All rats are buckets**

**Ans** ✅ A. Both conclusions (I) and (II) follow

❌ B. Only conclusion (I) follows

❌ C. Neither conclusion (I) nor (II) follows

❌ D. Only conclusion (II) follows

Question ID : **441009360339**
Option 1 ID : **4410091407366**
Option 2 ID : **4410091407369**
Option 3 ID : **4410091407367**
Option 4 ID : **4410091407368**
Status : **Answered**
Chosen Option : **A**

**Q.20 Seven people L, M, N, O, G, H and I are sitting around a circular table facing the center of the table. M sits third to the left of L. N sits third to the left of O. Only four people sit between N and H when counted from the right of N. I is an immediate neighbor of both H and O. How many people sit between G and I when counted from the right of G?**

**Ans** ✅ A. Two

❌ B. One

❌ C. Four

❌ D. Three

Question ID : **441009372555**
Option 1 ID : **4410091455838**
Option 2 ID : **4410091455839**
Option 3 ID : **4410091455836**
Option 4 ID : **4410091455837**
Status : **Answered**
Chosen Option : **A**

**Q.21 If 2 is added to each odd digit and 1 is subtracted from each even digit in the number 7852163,which of the following digits will be first from the right?**

**Ans** ✅ A. 5

❌ B. 3

❌ C. 9

❌ D. 7

Question ID : **441009381867**
Option 1 ID : **4410091493144**
Option 2 ID : **4410091493147**
Option 3 ID : **4410091493145**
Option 4 ID : **4410091493146**
Status : **Answered**
Chosen Option : **A**

**Q.22 Which of the following letter-clusters should replace # and % so that the pattern and relationship followed between the letter-cluster pair on the left side of :: is the same as that on the right side of :: ?**
**# : TXC :: PTY : %**

Ans ✗ A. # = AEJ % = IMO

✓ B. # = AEJ % = IMR

✗ C. # = AEJ % = ICR

✗ D. # = ABJ % = IMR

Question ID : **441009360255**
Option 1 ID : **4410091407031**
Option 2 ID : **4410091407030**
Option 3 ID : **4410091407032**
Option 4 ID : **4410091407033**
Status : **Answered**
Chosen Option : **B**

**Q.23 Based on the English alphabetical order, three of the following four letter cluster pairs are alike in a certain way and thus form a group. Which is the one that does not belong to that group? (Note: The odd man out is not based on the number of consonants/vowels or their position in the letter cluster)**

Ans ✗ A. PT - QU

✓ B. MQ - NS

✗ C. SW - TX

✗ D. JN - KO

Question ID : **441009367978**
Option 1 ID : **4410091437885**
Option 2 ID : **4410091437882**
Option 3 ID : **4410091437884**
Option 4 ID : **4410091437883**
Status : **Answered**
Chosen Option : **B**

**Q.24 Seven people, N, O, P, Q, U, V and W are sitting in a row, facing north. Only two people sit to the left of V. Only three people sit between V and P. U sits second to the right of V. Only two people sit between U and Q. W sits at some place to the right of O but at some place to the left of N. How many people sit to the right of W?**

Ans ✗ A. Two

✗ B. Four

✓ C. Three

✗ D. One

Question ID : **441009360394**
Option 1 ID : **4410091407591**
Option 2 ID : **4410091407593**
Option 3 ID : **4410091407592**
Option 4 ID : **4410091407590**
Status : **Answered**
Chosen Option : **C**

**Q.25** Seven boxes L, M, N, O, G, H and I are kept one over the other but not necessarily in the same order. Only one box is kept between H and O. G is kept immediately above L. I is kept at some place below M. Only two boxes are kept below N. Only one box is kept above H. How many boxes are kept between M and G?

**Ans**  ✗ A. One

  ✗ B. Three

  ✓ C. Four

  ✗ D. Two

Question ID : **441009372566**
Option 1 ID : **4410091455883**
Option 2 ID : **4410091455881**
Option 3 ID : **4410091455880**
Option 4 ID : **4410091455882**
Status : **Answered**
Chosen Option : **C**

**Q.26** In a certain code language, 'TAPE' is coded as '9251' and 'MATE' is coded as '2791'. What is the code for 'M' in the given code language?

**Ans**  ✓ A. 7

  ✗ B. 9

  ✗ C. 1

  ✗ D. 2

Question ID : **441009367790**
Option 1 ID : **4410091437131**
Option 2 ID : **4410091437132**
Option 3 ID : **4410091437133**
Option 4 ID : **4410091437130**
Status : **Answered**
Chosen Option : **A**

**Q.27** Seven people L, M, N, O, G, H and I are sitting around a circular table facing the center of the table. Only three people sit between O and L when counted from right of L. M sits to the immediate right of H. I sits to the immediate right of O. Only three people sit between I and N when counted from the left of I. How many people sit between G and H when counted from the left of H?

**Ans**  ✓ A. Two

  ✗ B. Four

  ✗ C. One

  ✗ D. Three

Question ID : **441009372559**
Option 1 ID : **4410091455854**
Option 2 ID : **4410091455852**
Option 3 ID : **4410091455855**
Option 4 ID : **4410091455853**
Status : **Answered**
Chosen Option : **A**

**Q.28** Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. You have to decide which conclusion/s logically follow/s from the given statements
Statements: All rabbits are tables. All rabbits are prints.
Conclusions (I) : Some tables are prints
Conclusions (II) : All prints are rabbits

**Ans**  ✗ A. Both conclusions (I) and (II) follow

✗ B. Only conclusion (II) follows

✓ C. Only conclusion (I) follows

✗ D. Neither conclusion (I) nor (II) follows

Question ID : **441009360341**
Option 1 ID : **4410091407377**
Option 2 ID : **4410091407375**
Option 3 ID : **4410091407374**
Option 4 ID : **4410091407376**
Status : **Answered**
Chosen Option : **C**

**Q.29** Below are given two sets of numbers. In each set of numbers, a certain mathematical operation on first number results in the second number. Similarly, certain mathematical operation on second number results in the third number and so on. Which of the given options follows the same set of operations as in question?
(NOTE – A two/three digit number cannot be broken into individual digits for operations e.g. if 37 is followed by 10, the operation cannot be 3+7 as a two digit number cannot be broken into individual digits)
22 - 88 - 176 - 186 ; 25 - 100 - 200 -210

**Ans**  ✗ A. 19-76-152-172

✗ B. 24-96-192-200

✓ C. 21-84-168-178

✗ D. 26-104-208-228

Question ID : **441009388134**
Option 1 ID : **4410091518143**
Option 2 ID : **4410091518142**
Option 3 ID : **4410091518144**
Option 4 ID : **4410091518145**
Status : **Answered**
Chosen Option : **C**

**Q.30** What should come in place of '?' in the given series?
4 ? 4 9 32 155

**Ans**  ✗ A. 6

✗ B. 2

✗ C. 1

✓ D. 3

Question ID : **441009384847**
Option 1 ID : **4410091505045**
Option 2 ID : **4410091505043**
Option 3 ID : **4410091505044**
Option 4 ID : **4410091505042**
Status : **Answered**
Chosen Option : **D**

**Q.31** Refer to the following letter, number, symbol series and answer the question
(Left) # T 5 N ? / E # $ A @ Y 4 M V @ $ @ R ^ % @ (Right)
How many such letters are there each of which is immediately preceded by a symbol
and also immediately followed by a number?

Ans ✗ A. One

✗ B. Four

✗ C. Three

✓ D. Two

Question ID : **441009360056**
Option 1 ID : **4410091406230**
Option 2 ID : **4410091406233**
Option 3 ID : **4410091406232**
Option 4 ID : **4410091406231**
Status : **Answered**
Chosen Option : **D**

**Q.32** In a certain code language, 'LEAD' is coded as '1578' and 'DEAR' is coded as '7958'.
What is the code for 'R' in the given code language?

Ans ✓ A. 9

✗ B. 8

✗ C. 5

✗ D. 7

Question ID : **441009367793**
Option 1 ID : **4410091437143**
Option 2 ID : **4410091437145**
Option 3 ID : **4410091437144**
Option 4 ID : **4410091437142**
Status : **Answered**
Chosen Option : **A**

**Q.33** If 2 is added to each odd digit and 1 is subtracted from each even digit in the number
7852163, what will be difference between the highest and lowest digits in the number
thus formed?

Ans ✗ A. 6

✓ B. 8

✗ C. 7

✗ D. 5

Question ID : **441009381874**
Option 1 ID : **4410091493173**
Option 2 ID : **4410091493175**
Option 3 ID : **4410091493174**
Option 4 ID : **4410091493172**
Status : **Answered**
Chosen Option : **B**

**Q.34** Refer to the following letter, number, symbol series and answer the question. Counting to be done from left to right only
(Left) T L ^ 3 9 T M * N 3 U N # 2 W R 6 C L 6 A S (Right)
How many such symbols are there each of which is immediately preceded by a letter and also immediately followed by a number? (Note: All numbers are single digit numbers only)

Ans    ✗ A. Four

✗ B. Three

✔ C. Two

✗ D. One

Question ID : **441009360059**
Option 1 ID : **4410091406245**
Option 2 ID : **4410091406244**
Option 3 ID : **4410091406243**
Option 4 ID : **4410091406242**
Status : **Answered**
Chosen Option : **C**

Section : **Domain Knowledge**

**Q.1** An offset taken at exactly 90° to the chain line is called:

Ans    ✔ A. perpendicular offset

✗ B. oblique offset

✗ C. parallel offset

✗ D. diagonal offset

Question ID : **441009917910**
Option 1 ID : **4410093625699**
Option 2 ID : **4410093625697**
Option 3 ID : **4410093625700**
Option 4 ID : **4410093625698**
Status : **Answered**
Chosen Option : **A**

**Q.2** If the retaining wall is restrained against yielding, the earth pressure developed on the wall is _____.

Ans    ✗ A. passive earth pressure

✔ B. earth pressure at rest

✗ C. zero earth pressure

✗ D. active earth pressure

Question ID : **441009750515**
Option 1 ID : **4410092955929**
Option 2 ID : **4410092955930**
Option 3 ID : **4410092955931**
Option 4 ID : **4410092955928**
Status : **Answered**
Chosen Option : **B**

**Q.3 For calculating the effective length of a column, IS 800 uses ___.**

Ans ✗ A. a fixed value for all types of columns

✗ B. empirical formulas based on material properties used in column

✗ C. assumed buckling length equal to unsupported length

✓ D. effective length factors based on boundary conditions of column

Question ID : **441009674435**
Option 1 ID : **4410092651878**
Option 2 ID : **4410092651876**
Option 3 ID : **4410092651875**
Option 4 ID : **4410092651877**
Status : **Answered**
Chosen Option : **D**

**Q.4 As per IS 800:2007, the design strength of a bolt under combined shear and tension is determined using:**

Ans ✗ A. Mohr's circle

✓ B. Linear interaction formula

✗ C. Euler's formula

✗ D. Parabolic curve

Question ID : **441009672866**
Option 1 ID : **4410092645584**
Option 2 ID : **4410092645582**
Option 3 ID : **4410092645585**
Option 4 ID : **4410092645583**
Status : **Answered**
Chosen Option : **B**

**Q.5 The nominal shear stress in a reinforced concrete section is resisted by:**

Ans ✓ A. Combination of concrete and shear reinforcement

✗ B. Concrete only

✗ C. Flexural reinforcement only

✗ D. Shear reinforcement only

Question ID : **441009642358**
Option 1 ID : **4410092523577**
Option 2 ID : **4410092523575**
Option 3 ID : **4410092523578**
Option 4 ID : **4410092523576**
Status : **Answered**
Chosen Option : **A**

**Q.6 What is the primary purpose of false flooring systems in buildings?**

Ans ✗ A. Increasing structural capacity

✗ B. Providing additional insulation only

✓ C. Concealing and accessing mechanical services

✗ D. Serving as the primary floor finish

Question ID : **441009874625**
Option 1 ID : **4410093451969**
Option 2 ID : **4410093451971**
Option 3 ID : **4410093451970**
Option 4 ID : **4410093451972**
Status : **Answered**
Chosen Option : **C**

**Q.7** Which of the following geometric elements is most commonly used to connect straight sections in a horizontal alignment?

Ans ✔ A. Circular curve

✘ B. Vertical summit curve

✘ C. Gradient

✘ D. Superelevation

Question ID : **441009771847**
Option 1 ID : **4410093041375**
Option 2 ID : **4410093041376**
Option 3 ID : **4410093041373**
Option 4 ID : **4410093041374**
Status : **Answered**
Chosen Option : **A**

**Q.8** The critical design consideration for the outstanding leg of the seat angle in an unstiffened seated connection is:

Ans ✘ A. Block shear

✘ B. Bearing capacity of bolts

✔ C. Bending capacity (flexural yielding)

✘ D. Shear yielding

Question ID : **441009672585**
Option 1 ID : **4410092644463**
Option 2 ID : **4410092644465**
Option 3 ID : **4410092644464**
Option 4 ID : **4410092644462**
Status : **Answered**
Chosen Option : **D**

**Q.9** A compacted fill is to be constructed. The soil can be taken from two areas.

Area A: e = 0.80, w = 16% and $G_s$ = 2.65
Area B: e = 0.60, w = 12% and $G_s$ = 2.65

The compacted volume of soil in fill is 50000 $m^3$ with water content and unit weight of 20% and 20 $kN/m^3$, respectively.
Find the ratio of soil to be excavated from Area A to that of Area B.

Ans ✘ A. 10 : 9

✘ B. 1 : 1

✘ C. 7 : 8

✔ D. 9 : 8

Question ID : **441009673143**
Option 1 ID : **4410092646683**
Option 2 ID : **4410092646684**
Option 3 ID : **4410092646682**
Option 4 ID : **4410092646681**
Status : **Answered**
Chosen Option : **D**

**Q.10 What is the primary function of external cladding in a building?**

Ans ✗ A. Sole insulation

✗ B. Load-bearing support

✔ C. Weatherproofing and enhancing appearance

✗ D. Internal partitioning

Question ID : **441009874615**
Option 1 ID : **4410093451930**
Option 2 ID : **4410093451929**
Option 3 ID : **4410093451932**
Option 4 ID : **4410093451931**
Status : **Answered**
Chosen Option : **C**

**Q.11 What does the E. coli index primarily indicate in drinking water?**

Ans ✗ A. Chlorine level

✔ B. Pathogen presence

✗ C. pH value

✗ D. Hardness

Question ID : **441009944840**
Option 1 ID : **4410093732932**
Option 2 ID : **4410093732933**
Option 3 ID : **4410093732935**
Option 4 ID : **4410093732934**
Status : **Answered**
Chosen Option : **B**

**Q.12 A column is effectively held in position and restrained against rotation in both ends. As per IS 456:2000, the recommended theoretical value of effective length is:**
**(If L = unsupported length of the column)**

Ans ✗ A. 1 × L

✗ B. 2 × L

✗ C. 0.65 × L

✔ D. 0.5 × L

Question ID : **441009642596**
Option 1 ID : **4410092524529**
Option 2 ID : **4410092524530**
Option 3 ID : **4410092524528**
Option 4 ID : **4410092524527**
Status : **Answered**
Chosen Option : **C**

**Q.13 As per IS 2911: 2013, part IV, the allowable load on a pile group is _____.**

Ans ✅ A. lesser of final load at which the total settlement is 25 mm or 2/3 of the final load, at which the settlement is 40 mm

❌ B. greater of 2/3 of the final load at which the total settlement is 12 mm or 1/2 of the final load, at which the settlement is 10% of the pile diameter

❌ C. lesser of 2/3 of the final load at which the total settlement is 12 mm or 1/2 of the final load, at which the settlement is 10% of the pile diameter

❌ D. greater of final load at which the total settlement is 25 mm or 2/3 of the final load, at which the settlement is 40 mm

Question ID : **441009678410**
Option 1 ID : **4410092667790**
Option 2 ID : **4410092667793**
Option 3 ID : **4410092667792**
Option 4 ID : **4410092667791**
Status : **Answered**
Chosen Option : **C**

**Q.14 When a shaft is subjected to a pure bending moment in such a manner that the beam material is stressed within its elastic limit, the induced stress is:**

Ans ❌ A. pure shear stress across the full cross-section

✅ B. bending stress that varies linearly across the section

❌ C. torsional shear stress along the shaft surface

❌ D. uniform normal stress throughout the entire section

Question ID : **441009750806**
Option 1 ID : **4410092957101**
Option 2 ID : **4410092957102**
Option 3 ID : **4410092957104**
Option 4 ID : **4410092957103**
Status : **Answered**
Chosen Option : **D**

**Q.15 What is the primary goal of an effective building lighting design?**

Ans ❌ A. Maximum brightness regardless of energy use

❌ B. Minimal fixture installation

❌ C. Solely decorative lighting

✅ D. Energy-efficient illumination for comfort and tasks

Question ID : **441009883221**
Option 1 ID : **4410093486861**
Option 2 ID : **4410093486858**
Option 3 ID : **4410093486859**
Option 4 ID : **4410093486860**
Status : **Answered**
Chosen Option : **D**

**Q.16 The results of Standard Proctor test provide:**

Ans ✗ A. Cohesion and angle of internal friction

✗ B. Water content and specific gravity

✗ C. Coefficient of consolidation and degree of consolidation

✓ D. Optimum moisture content and maximum dry density

Question ID : **441009674378**
Option 1 ID : **4410092651641**
Option 2 ID : **4410092651642**
Option 3 ID : **4410092651640**
Option 4 ID : **4410092651639**
Status : **Answered**
Chosen Option : **D**

**Q.17 Which of the following is NOT typically part of a non-adversarial team in construction management?**

Ans ✗ A. Owner

✗ B. Contractor

✗ C. Architect-engineer

✓ D. Professional arbitrator

Question ID : **441009705131**
Option 1 ID : **4410092774554**
Option 2 ID : **4410092774557**
Option 3 ID : **4410092774556**
Option 4 ID : **4410092774555**
Status : **Answered**
Chosen Option : **A**

**Q.18 For a cable structure with ends at different levels, identify the correct statement about the horizontal tension component in the cable.**

Ans ✓ A. It remains constant along the entire length

✗ B. It varies depending on the elevation difference and load nature

✗ C. It depends only on the vertical loads

✗ D. It is zero when the cable is in equilibrium

Question ID : **441009663238**
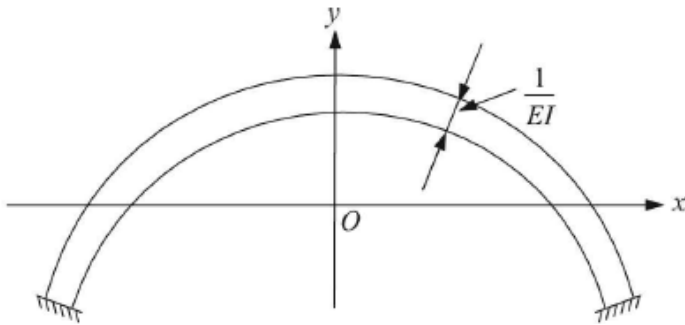Option 1 ID : **4410092606999**
Option 2 ID : **4410092607000**
Option 3 ID : **4410092607002**
Option 4 ID : **4410092607001**
Status : **Answered**
Chosen Option : **A**

**Q.19** What is the integral equation for the area for the fixed arch shown in the figure, as per the Elastic Center Method?
Where, ds is the differential length, O is the center, E is the Young's modulus, and I is the moment of inertia.



**Ans**   ✗ A. A = ∫1/ds

✗ B. A = ∫1/EI

✔ C. A = ∫ds/EI

✗ D. A = ∫EI/ds

Question ID : **441009655277**
Option 1 ID : **4410092575378**
Option 2 ID : **4410092575377**
Option 3 ID : **4410092575375**
Option 4 ID : **4410092575376**
Status : **Answered**
Chosen Option : **C**

**Q.20** Which process reduces the volume of wastewater sludge?

**Ans**   ✗ A. Chlorination

✔ B. Digestion

✗ C. Aeration

✗ D. Flocculation

Question ID : **441009948754**
Option 1 ID : **4410093748500**
Option 2 ID : **4410093748502**
Option 3 ID : **4410093748499**
Option 4 ID : **4410093748501**
Status : **Answered**
Chosen Option : **B**

**Q.21** Construction management primarily aims to mitigate which of the following challenges throughout the project life cycle?

**Ans**   ✗ A. Compromises in material sourcing standards

✗ B. Influence of organised labour on site operations

✗ C. Advancements in sustainable construction practices

✔ D. Project delays and budgetary overruns

Question ID : **441009705444**
Option 1 ID : **4410092775808**
Option 2 ID : **4410092775806**
Option 3 ID : **4410092775807**
Option 4 ID : **4410092775805**
Status : **Answered**
Chosen Option : **D**

**Q.22 For a flow through soil having permeability k, under a head of H, the shape factor of the flow net is 0.5. Find the seepage through the soil.**

Ans ✔ A. q = 0.5 k H

✘ B. q = 2 k H

✘ C. q = 1.5 k H

✘ D. q = k H

Question ID : **441009674802**
Option 1 ID : **4410092653366**
Option 2 ID : **4410092653367**
Option 3 ID : **4410092653368**
Option 4 ID : **4410092653369**
Status : **Answered**
Chosen Option : **A**

**Q.23 The Nagpur Road Plan (First 20-Year Road Plan) was formulated in which year?**

Ans ✘ A. 1951

✘ B. 1934

✔ C. 1943

✘ D. 1947

Question ID : **441009754278**
Option 1 ID : **4410092971104**
Option 2 ID : **4410092971101**
Option 3 ID : **4410092971103**
Option 4 ID : **4410092971102**
Status : **Answered**
Chosen Option : **C**

**Q.24 In transportation engineering, what is meant by 'highway alignment'?**

Ans ✘ A. The sequence of road maintenance operations

✘ B. The location of toll plazas along the highway

✘ C. The positioning of traffic signals on the route

✔ D. The layout of the centreline of a highway on the ground

Question ID : **441009771764**
Option 1 ID : **4410093041052**
Option 2 ID : **4410093041049**
Option 3 ID : **4410093041050**
Option 4 ID : **4410093041051**
Status : **Answered**
Chosen Option : **D**

**Q.25 Which of the following most accurately differentiates light construction from heavy construction?**

Ans   ✅ A. Light construction projects typically employ smaller, more portable equipment compared to that used in heavy construction.

  ❌ B. Heavy construction includes residential buildings, whereas light construction includes industrial complexes.

  ❌ C. Light construction projects require more environmental clearances than heavy construction projects.

  ❌ D. Light construction projects typically require larger teams with specialised skills, compared to heavy construction projects.

Question ID : **441009673570**
Option 1 ID : **4410092648391**
Option 2 ID : **4410092648392**
Option 3 ID : **4410092648393**
Option 4 ID : **4410092648394**
Status : **Answered**
Chosen Option : **A**

**Q.26 The most suitable compacting equipment for core of earthen dams is _____.**

Ans   ❌ A. vibratory rollers

  ❌ B. rammers

  ✅ C. sheep foot rollers

  ❌ D. smooth wheeled rollers

Question ID : **441009673856**
Option 1 ID : **4410092649542**
Option 2 ID : **4410092649541**
Option 3 ID : **4410092649539**
Option 4 ID : **4410092649540**
Status : **Answered**
Chosen Option : **D**

**Q.27 Which instrument is commonly used to measure magnetic bearing?**

Ans   ❌ A. Theodolite

  ✅ B. Compass

  ❌ C. Dumpy level

  ❌ D. Sextant

Question ID : **441009917874**
Option 1 ID : **4410093625557**
Option 2 ID : **4410093625558**
Option 3 ID : **4410093625559**
Option 4 ID : **4410093625560**
Status : **Answered**
Chosen Option : **B**

**Q.28 Which of the following is a common example of a welded connection subjected to combined axial (normal) and shear stress?**

Ans ✗ A. A simple beam-to-column web shear connection (fin plate)

✓ B. A column-to-base plate connection where the column experiences an axial load and a moment

✗ C. A splice plate connecting two tension members

✗ D. A pure butt weld in tension

Question ID : **441009674405**
Option 1 ID : **4410092651747**
Option 2 ID : **4410092651748**
Option 3 ID : **4410092651749**
Option 4 ID : **4410092651750**
Status : **Answered**
Chosen Option : **B**

**Q.29 Large growths of aquatic plants in reservoirs can lead to what issue?**

Ans ✗ A. Evaporation

✗ B. Aeration

✓ C. Oxygen depletion

✗ D. Sedimentation

Question ID : **441009944838**
Option 1 ID : **4410093732925**
Option 2 ID : **4410093732924**
Option 3 ID : **4410093732926**
Option 4 ID : **4410093732927**
Status : **Answered**
Chosen Option : **C**

**Q.30 What does 'reuse' of solid waste primarily involve for products?**

Ans ✗ A. Disposal

✗ B. Material recovery

✗ C. Processing

✓ D. Direct use

Question ID : **441009948775**
Option 1 ID : **4410093748580**
Option 2 ID : **4410093748582**
Option 3 ID : **4410093748579**
Option 4 ID : **4410093748581**
Status : **Answered**
Chosen Option : **C**

**Q.31 As per IS 456:2000, what is the minimum diameter of a longitudinal reinforcement bar in a RCC column?**

Ans ✗ A. 10 mm

✗ B. 8 mm

✗ C. 6 mm

✓ D. 12 mm

Question ID : **441009642619**
Option 1 ID : **4410092524622**
Option 2 ID : **4410092524619**
Option 3 ID : **4410092524620**
Option 4 ID : **4410092524621**
Status : **Answered**
Chosen Option : **D**

**Q.32 In a three-hinged circular arch subjected to a vertical uniformly distributed load (UDL) over its entire span, which of the following statements is true regarding the horizontal thrust at the supports?**

Ans  ✗ A. The horizontal thrust is independent of the rise of the arch

✗ B. The horizontal thrust is independent of the magnitude of applied load of the arch

✗ C. The horizontal thrust is maximum at the crown of the arch

✓ D. The horizontal thrust depends on the span, rise, and magnitude of the UDL

Question ID : **441009663212**
Option 1 ID : **4410092606897**
Option 2 ID : **4410092606898**
Option 3 ID : **4410092606896**
Option 4 ID : **4410092606895**
Status : **Answered**
Chosen Option : **D**

**Q.33 Which of the following statements is NOT true about light construction?**

Ans  ✗ A. Residential construction is an example of light construction.

✗ B. It includes less complex construction activities.

✓ C. It requires heavy machinery or extensive engineering.

✗ D. It focuses on a smaller project.

Question ID : **441009673084**
Option 1 ID : **4410092646456**
Option 2 ID : **4410092646454**
Option 3 ID : **4410092646455**
Option 4 ID : **4410092646453**
Status : **Answered**
Chosen Option : **C**

**Q.34 A group of nine pile, 10 m long and 350 mm in diameter, is to be arranged in a square pattern in a clay soil of cohesion c = 60 kN/m$^2$. Find the centre to centre spacing of pile, for a group efficiency of 1. Neglect end bearing resistance of piles. The value of α can be taken as 1 for both individual pile and group.**

Ans  ✗ A. 0.248 m

✓ B. 1.06 m

✗ C. 2.12 m

✗ D. 0.50 m

Question ID : **441009678383**
Option 1 ID : **4410092667683**
Option 2 ID : **4410092667682**
Option 3 ID : **4410092667684**
Option 4 ID : **4410092667685**
Status : **Not Answered**
Chosen Option : **--**

**Q.35 Turbulent boundary layer generally starts forming on a flat plate when the Reynolds number exceeds:**

Ans ✗ A. 2000

✓ B. 5,00,000

✗ C. 1000

✗ D. 4,00,000

| | |
|---|---|
| Question ID : | **441009672890** |
| Option 1 ID : | **4410092645675** |
| Option 2 ID : | **4410092645676** |
| Option 3 ID : | **4410092645674** |
| Option 4 ID : | **4410092645677** |
| Status : | **Answered** |
| Chosen Option : | **C** |

**Q.36 Identify the correct statements from the following.**

**A: The solution of Terzaghi's consolidation equation results in three non-dimensional factors: drainage path ratio (Z), time factor ($T_v$), and degree of consolidation (U).**
**B: The solution of Terzaghi's consolidation equation results in three non-dimensional factors: coefficient of permeability (k), time factor ($T_v$), and coefficient of consolidation ($C_v$).**
**C: Terzaghi consolidation equation considers the change in volume of soil only due to change in volume of soil voids.**
**D: Terzaghi consolidation equation considers the change in volume of soil only due to change in volume of soil solids.**

Ans ✓ A. A and C

✗ B. B and C

✗ C. B and D

✗ D. A and D

| | |
|---|---|
| Question ID : | **441009673055** |
| Option 1 ID : | **4410092646333** |
| Option 2 ID : | **4410092646335** |
| Option 3 ID : | **4410092646336** |
| Option 4 ID : | **4410092646334** |
| Status : | **Answered** |
| Chosen Option : | **B** |

**Q.37 Under the Modified Classification of Road System (1981–2001), which roads fall under the tertiary system?**

Ans ✗ A. Urban arterial streets and Collector roads

✗ B. State Highways and Major District Roads

✓ C. Village Roads and Other District Roads

✗ D. Expressways and National Highways

| | |
|---|---|
| Question ID : | **441009754298** |
| Option 1 ID : | **4410092971180** |
| Option 2 ID : | **4410092971178** |
| Option 3 ID : | **4410092971179** |
| Option 4 ID : | **4410092971177** |
| Status : | **Answered** |
| Chosen Option : | **C** |

**Q.38 Which of the following is a key application of BIM in construction projects?**

Ans ✗ A. Conventional 2D drafting

✗ B. Paper-based documentation

✔ C. Clash detection

✗ D. Traditional manual estimation only

Question ID : **441009883485**
Option 1 ID : **4410093487917**
Option 2 ID : **4410093487915**
Option 3 ID : **4410093487914**
Option 4 ID : **4410093487916**
Status : **Answered**
Chosen Option : **B**

**Q.39 At a cross-section of a beam subjected to both bending moment and shear force due to the load directed vertically downwards, which types of stresses are typically developed?**

Ans ✔ A. Both bending and shear stresses

✗ B. Only bending stress

✗ C. Torsional stress only

✗ D. Only shear stress

Question ID : **441009750587**
Option 1 ID : **4410092956217**
Option 2 ID : **4410092956215**
Option 3 ID : **4410092956218**
Option 4 ID : **4410092956216**
Status : **Answered**
Chosen Option : **A**

**Q.40 If the neutral axis of a T-beam lies within the flange, the section is treated as which of the following for moment of resistance computation?**

Ans ✔ A. Rectangular section with effective flange depth and width of T Section

✗ B. T-section with centroid at bottom extreme fibre of web

✗ C. Rectangular section with effective flange width and effective depth of T section

✗ D. T-section with centroid at web

Question ID : **441009642446**
Option 1 ID : **4410092523929**
Option 2 ID : **4410092523928**
Option 3 ID : **4410092523930**
Option 4 ID : **4410092523927**
Status : **Answered**
Chosen Option : **C**

**Q.41 Which method is used for hydraulic analysis of complex pipe networks?**

Ans ✗ A. Arithmetic method

✓ B. Hardy-Cross method

✗ C. Graphical method

✗ D. Direct method

Question ID : **441009951225**
Option 1 ID : **4410093758281**
Option 2 ID : **4410093758283**
Option 3 ID : **4410093758282**
Option 4 ID : **4410093758284**
Status : **Answered**
Chosen Option : **B**

**Q.42 The _____ is based on Coulomb's theory, for determination of active earth pressure on soils with no cohesion.**

Ans ✗ A. Jumikis and Janbu method

✗ B. Casagrande's curve fitting method

✗ C. Skempton's graphical method

✓ D. Culmann's graphical method

Question ID : **441009750488**
Option 1 ID : **4410092955823**
Option 2 ID : **4410092955822**
Option 3 ID : **4410092955821**
Option 4 ID : **4410092955820**
Status : **Answered**
Chosen Option : **D**

**Q.43 The plane that is tangential to the level surface and perpendicular to the plumb line is _____.**

Ans ✗ A. vertical plane

✗ B. the plane passing through the centre of the telescope

✓ C. horizontal plane

✗ D. plane parallel to the MSL

Question ID : **441009280730**
Option 1 ID : **4410091090839**
Option 2 ID : **4410091090842**
Option 3 ID : **4410091090840**
Option 4 ID : **4410091090841**
Status : **Answered**
Chosen Option : **C**

**Q.44 The overtaking sight distance (OSD) includes all the following, EXCEPT:**

Ans ✓ A. skid resistance of pavement

✗ B. distance traveled by overtaking vehicle during reaction time

✗ C. distance traveled by opposing vehicle

✗ D. distance traveled by overtaken vehicle

Question ID : **441009772405**
Option 1 ID : **4410093043616**
Option 2 ID : **4410093043613**
Option 3 ID : **4410093043615**
Option 4 ID : **4410093043614**
Status : **Answered**
Chosen Option : **A**

**Q.45 The circular arc method for computing surface profile length is applied to:**

Ans ✗ A. Uniform flows

✗ B. Rapidly varied flows

✗ C. Critical flows only

✓ D. Gradually varied flows

Question ID : **441009673078**
Option 1 ID : **4410092646426**
Option 2 ID : **4410092646427**
Option 3 ID : **4410092646428**
Option 4 ID : **4410092646425**
Status : **Answered**
Chosen Option : **A**

**Q.46 Hydraulically, most efficient rectangular channels are designed to:**

Ans ✗ A. Increase turbulence

✗ B. Increase roughness coefficient

✓ C. Reduce wetted perimeter for a given area

✗ D. Reduce slope

Question ID : **441009673063**
Option 1 ID : **4410092646365**
Option 2 ID : **4410092646368**
Option 3 ID : **4410092646367**
Option 4 ID : **4410092646366**
Status : **Answered**
Chosen Option : **C**

**Q.47 Which of the following statements is true about displacement thickness (δ*)?**

Ans ✗ A. It is the thickness of the laminar sublayer

✗ B. It is always greater than actual boundary layer thickness

✓ C. It is the thickness that accounts for the reduction in mass flow due to boundary layer

✗ D. It represents the distance where pressure gradient is zero

Question ID : **441009672875**
Option 1 ID : **4410092645621**
Option 2 ID : **4410092645618**
Option 3 ID : **4410092645620**
Option 4 ID : **4410092645619**
Status : **Answered**
Chosen Option : **C**

**Q.48 Which factor is most critical in selecting the type of retaining wall for RCC and masonry structures?**

Ans ✗ A. Aesthetic appearance

✗ B. Ease of installation

✓ C. Type of soil and load conditions

✗ D. Cost of construction

Question ID : **441009874551**
Option 1 ID : **4410093451675**
Option 2 ID : **4410093451676**
Option 3 ID : **4410093451674**
Option 4 ID : **4410093451673**
Status : **Answered**
Chosen Option : **C**

**Q.49 In streamlined bodies, most of the drag force is due to:**

Ans ✗ A. Shock waves

✓ B. Friction between fluid and surface

✗ C. Vortex shedding

✗ D. Flow reversal

Question ID : **441009673045**
Option 1 ID : **4410092646297**
Option 2 ID : **4410092646299**
Option 3 ID : **4410092646298**
Option 4 ID : **4410092646300**
Status : **Answered**
Chosen Option : **C**

**Q.50 What is magnetic declination at a place?**

Ans ✗ A. The angle between celestial north and magnetic south

✗ B. The angle made by the magnetic needle with the horizontal

✓ C. The horizontal angle between magnetic meridian and true meridian

✗ D. The vertical angle between magnetic meridian and true meridian

Question ID : **441009917885**
Option 1 ID : **4410093625604**
Option 2 ID : **4410093625603**
Option 3 ID : **4410093625602**
Option 4 ID : **4410093625601**
Status : **Answered**
Chosen Option : **C**

**Q.51 As per IS 456:2000, which of the following parameters DOES NOT directly influence the calculation of the development length of a reinforcement bar in RCC structures?**

Ans ✗ A. Diameter of the bar

✓ B. Modulus of elasticity of steel

✗ C. Characteristic compressive strength of concrete

✗ D. Grade of steel

Question ID : **441009642300**
Option 1 ID : **4410092523343**
Option 2 ID : **4410092523345**
Option 3 ID : **4410092523346**
Option 4 ID : **4410092523344**
Status : **Answered**
Chosen Option : **B**

**Q.52 Which of the following factors DOES NOT affect kinematic indeterminacy in a rigid-jointed frame?**

Ans ✓ A. Material properties

✗ B. Number of members

✗ C. Number of degrees of freedom at joints

✗ D. Number of external reactions

Question ID : **441009663281**
Option 1 ID : **4410092607174**
Option 2 ID : **4410092607171**
Option 3 ID : **4410092607173**
Option 4 ID : **4410092607172**
Status : **Answered**
Chosen Option : **A**

**Q.53 What type of obstacle affects both chaining and ranging in chain surveying?**

Ans    ✗ A. A pond located far away from the chain line

       ✗ B. A rock that allows line of sight but blocks walking path

       ✓ C. A building blocking the chain line entirely

       ✗ D. A small bush beside the survey line

Question ID : **441009917931**
Option 1 ID : **4410093625781**
Option 2 ID : **4410093625784**
Option 3 ID : **4410093625782**
Option 4 ID : **4410093625783**
Status : **Answered**
Chosen Option : **C**

**Q.54 After a certain time lapse, clay A achieved 50% average consolidation and clay B achieved 20% average consolidation. Find the ratio of coefficient of consolidation of clay A to that of clay B. The time factor ($T_v$) for U = 50% is 0.2 and for U = 20% is 0.03. Both clays have same drainage path lengths.**

Ans    ✗ A. 400 : 9

       ✗ B. 10 : 1.5

       ✗ C. 4 : 1

       ✓ D. 20 : 3

Question ID : **441009673006**
Option 1 ID : **4410092646142**
Option 2 ID : **4410092646143**
Option 3 ID : **4410092646144**
Option 4 ID : **4410092646141**
Status : **Answered**
Chosen Option : **D**

**Q.55 In shaft design, maximum principal stress theory is reasonably applicable when the material is:**

Ans    ✓ A. brittle and subjected to combined loading

       ✗ B. perfectly elastic and under torsion

       ✗ C. only subjected to shear

       ✗ D. ductile and loaded in bending

Question ID : **441009750785**
Option 1 ID : **4410092957018**
Option 2 ID : **4410092957019**
Option 3 ID : **4410092957020**
Option 4 ID : **4410092957017**
Status : **Answered**
Chosen Option : **D**

**Q.56** The relationship between shear stress and velocity gradient in a fluid with moderate viscosity is given by:

Ans ✗ A. Darcy's Law

✗ B. Hooke's Law

✗ C. Pascal's Law

✓ D. Newton's Law of Viscosity

Question ID : **441009672904**
Option 1 ID : **4410092645728**
Option 2 ID : **4410092645726**
Option 3 ID : **4410092645729**
Option 4 ID : **4410092645727**
Status : **Answered**
Chosen Option : **C**

**Q.57** When the moment is in a plane perpendicular to the plane of connection in the bracket connection, which stress combination is usually considered in a weld group when a moment acts in the plane of the weld?

Ans ✗ A. Tension and torsion

✗ B. Pure shear

✓ C. Shear and bending

✗ D. Compression and torsion

Question ID : **441009674393**
Option 1 ID : **4410092651699**
Option 2 ID : **4410092651702**
Option 3 ID : **4410092651701**
Option 4 ID : **4410092651700**
Status : **Not Answered**
Chosen Option : **--**

**Q.58** In the context of transportation engineering, what is the primary objective of conducting a 'Final location and detailed survey' for a highway project?

Ans ✗ A. Studying vehicle registration statistics

✗ B. Estimating future population distribution

✓ C. Translating the finalised alignment onto the ground

✗ D. Preparing index maps

Question ID : **441009771755**
Option 1 ID : **4410093041014**
Option 2 ID : **4410093041016**
Option 3 ID : **4410093041015**
Option 4 ID : **4410093041013**
Status : **Answered**
Chosen Option : **C**

**Q.59 What aspect does the minimum gradient at a manhole ensure for sewage flow?**

Ans ✗ A. Odour control

✓ B. Self-cleansing

✗ C. Pressure build-up

✗ D. High velocity

Question ID : **441009948779**
Option 1 ID : **4410093748597**
Option 2 ID : **4410093748596**
Option 3 ID : **4410093748598**
Option 4 ID : **4410093748595**
Status : **Answered**
Chosen Option : **B**

**Q.60 Which sensor monitors exhaust oxygen levels for optimal combustion and emissions?**

Ans ✗ A. TPS sensor

✓ B. Oxygen sensor

✗ C. MAP sensor

✗ D. Crank sensor

Question ID : **441009944817**
Option 1 ID : **4410093732841**
Option 2 ID : **4410093732842**
Option 3 ID : **4410093732840**
Option 4 ID : **4410093732843**
Status : **Answered**
Chosen Option : **B**

**Q.61 Which type of survey evaluates drainage and hydrological aspects for highway alignment?**

Ans ✗ A. Reconnaissance survey

✗ B. Soil survey

✗ C. Topographic survey

✓ D. Preliminary survey

Question ID : **441009754369**
Option 1 ID : **4410092971471**
Option 2 ID : **4410092971469**
Option 3 ID : **4410092971470**
Option 4 ID : **4410092971472**
Status : **Answered**
Chosen Option : **C**

**Q.62 Which population forecasting method assumes a constant percentage growth rate?**

Ans ✓ A. Geometric

✗ B. Logistic

✗ C. Decreasing

✗ D. Arithmetic

Question ID : **441009944868**
Option 1 ID : **4410093733044**
Option 2 ID : **4410093733047**
Option 3 ID : **4410093733046**
Option 4 ID : **4410093733045**
Status : **Answered**
Chosen Option : **A**

**Q.63 What is the correct method to determine the Reduced Level (RL) of a point using a change point?**

Ans ✔ A. RL = HI – foresight

✘ B. RL = Benchmark RL + backsight – foresight

✘ C. RL = RL of previous point + foresight

✘ D. RL = foresight – backsight

Question ID : **441009917948**
Option 1 ID : **4410093625850**
Option 2 ID : **4410093625849**
Option 3 ID : **4410093625852**
Option 4 ID : **4410093625851**
Status : **Answered**
Chosen Option : **B**

**Q.64 Which software is widely recognised as a basic BIM tool?**

Ans ✘ A. AutoCAD LT

✘ B. Adobe Photoshop

✔ C. Autodesk Revit

✘ D. Microsoft Word

Question ID : **441009883490**
Option 1 ID : **4410093487937**
Option 2 ID : **4410093487936**
Option 3 ID : **4410093487934**
Option 4 ID : **4410093487935**
Status : **Answered**
Chosen Option : **A**

**Q.65 In a two-hinged arch, how does an increase in temperature affect horizontal thrust, if supports prevent movement?**

Ans ✔ A. Increases due to thermal expansion

✘ B. Decreases with temperature rise

✘ C. Creates no additional stress

✘ D. Remains unchanged

Question ID : **441009663228**
Option 1 ID : **4410092606962**
Option 2 ID : **4410092606960**
Option 3 ID : **4410092606961**
Option 4 ID : **4410092606959**
Status : **Answered**
Chosen Option : **B**

**Q.66 One of the design criteria for protective filter is:**
$[D_{15(filter)}/ D_{85(protected\ material)}] < 5$.
**This criteria ensures :**

Ans ✅ A. no significant invasion of particles from the protected material to the filter

❌ B. development of piping condition

❌ C. loss of sufficient head during flow through filters

❌ D. the filter removes all soil particles

Question ID : **441009675170**
Option 1 ID : **4410092654861**
Option 2 ID : **4410092654863**
Option 3 ID : **4410092654862**
Option 4 ID : **4410092654864**
Status : **Answered**
Chosen Option : **D**

**Q.67 A load acting eccentrically (along the direction of longitudinal axis of the columns) on a rectangular column section produces:**

Ans ❌ A. pure shear stress only

✅ B. bending stress and axial stress

❌ C. uniform axial stress only

❌ D. torsional stress and shear stress

Question ID : **441009750632**
Option 1 ID : **4410092956401**
Option 2 ID : **4410092956402**
Option 3 ID : **4410092956403**
Option 4 ID : **4410092956404**
Status : **Answered**
Chosen Option : **D**

**Q.68 What is the purpose of welding in a welded stiffened seated joint?**

Ans ✅ A. Provide rigid connection and effective load transfer between beam and column

❌ B. Allow rotation of the beam end freely

❌ C. Eliminate the need for a seat angle

❌ D. Reduce the weight of the connection

Question ID : **441009672581**
Option 1 ID : **4410092644448**
Option 2 ID : **4410092644449**
Option 3 ID : **4410092644447**
Option 4 ID : **4410092644446**
Status : **Answered**
Chosen Option : **A**

**Q.69 What is the primary purpose of painting both the interiors and exteriors of a building?**

Ans ✅ A. Aesthetic appeal and protection

❌ B. Solely aesthetic

❌ C. Fire insulation

❌ D. Structural reinforcement

Question ID : **441009874606**
Option 1 ID : **4410093451893**
Option 2 ID : **4410093451894**
Option 3 ID : **4410093451896**
Option 4 ID : **4410093451895**
Status : **Answered**
Chosen Option : **A**

**Q.70 The boundary layer thickness (δ) is the distance from the surface where the fluid velocity becomes approximately:**

Ans  ✓ A. 99% of free-stream velocity

✗ B. 0% of free-stream velocity

✗ C. 50% of free-stream velocity

✗ D. 90% of free-stream velocity

Question ID : **441009672623**
Option 1 ID : **4410092644613**
Option 2 ID : **4410092644610**
Option 3 ID : **4410092644611**
Option 4 ID : **4410092644612**
Status : **Answered**
Chosen Option : **A**

**Q.71 Which of the following parameters is least likely to be considered a core focus of construction management for effective project delivery?**

Ans  ✗ A. Scope and function

✓ B. Architectural style

✗ C. Quality and safety

✗ D. Project schedule

Question ID : **441009688056**
Option 1 ID : **4410092706253**
Option 2 ID : **4410092706255**
Option 3 ID : **4410092706254**
Option 4 ID : **4410092706252**
Status : **Answered**
Chosen Option : **B**

**Q.72 Find the active earth pressure at the base of the wall of 10 m height, only due to an UDL of 30 kN/m$^2$. The backfill soil has unit weight of 20 kN/m$^3$ and angle of internal friction 30°.**

Ans  ✗ A. 0 kN/m$^2$

✗ B. 30 kN/m$^2$

✗ C. 90 kN/m$^2$

✓ D. 10 kN/m$^2$

Question ID : **441009750570**
Option 1 ID : **4410092956151**
Option 2 ID : **4410092956150**
Option 3 ID : **4410092956149**
Option 4 ID : **4410092956148**
Status : **Answered**
Chosen Option : **D**

**Q.73 In a rectangular channel, a local rise on the floor causes:**

Ans ✗ A. Reduction in channel slope

✔ B. Decrease in specific energy

✗ C. Increase in flow area

✗ D. Flow to become uniform

Question ID : **441009673053**
Option 1 ID : **4410092646325**
Option 2 ID : **4410092646327**
Option 3 ID : **4410092646326**
Option 4 ID : **4410092646328**
Status : **Answered**
Chosen Option : **B**

**Q.74 For which type of arch is the consistent deformation method primarily used?**

Ans ✗ A. Three-hinged circular arch

✔ B. Fixed arch

✗ C. Single-hinged arch

✗ D. Three-hinged parabolic arch

Question ID : **441009655257**
Option 1 ID : **4410092575302**
Option 2 ID : **4410092575301**
Option 3 ID : **4410092575300**
Option 4 ID : **4410092575299**
Status : **Not Answered**
Chosen Option : **--**

**Q.75 In a column subjected to an eccentric axial load, the maximum resultant compressive stress occurs:**

Ans ✗ A. uniformly across the entire cross-section

✗ B. at the centre point of the cross-section

✔ C. at the extreme fibre on the load's eccentric side

✗ D. at the axis that passes through the neutral plane

Question ID : **441009750732**
Option 1 ID : **4410092956810**
Option 2 ID : **4410092956809**
Option 3 ID : **4410092956811**
Option 4 ID : **4410092956812**
Status : **Answered**
Chosen Option : **D**

**Q.76 Lateral rigidity of a shaft primarily refers to its ability to resist:**

Ans ✗ A. resistance to torsional twist

✔ B. resistance to bending

✗ C. resistance to shear failure

✗ D. resistance to axial deformation

Question ID : **441009750737**
Option 1 ID : **4410092956830**
Option 2 ID : **4410092956831**
Option 3 ID : **4410092956832**
Option 4 ID : **4410092956829**
Status : **Answered**
Chosen Option : **D**

**Q.77 Which of the following statements is correct?**
    **A: Negative skin friction in precast piles, can be reduced by painting the pile surface with bitumen.**
    **B: Lowering of water table may increase negative skin friction in piles.**
    **C: Negative skin friction in precast piles, can be increased by painting the pile surface with bitumen.**
    **D: Lowering of water table will always decrease negative skin friction in piles.**

Ans    ✗ A. Only C and D

       ✗ B. Only A and D

       ✓ C. Only A and B

       ✗ D. Only B and C

Question ID : **441009750455**
Option 1 ID : **4410092955689**
Option 2 ID : **4410092955691**
Option 3 ID : **4410092955688**
Option 4 ID : **4410092955690**
Status : **Answered**
Chosen Option : **C**

**Q.78 Which of the following is NOT an example of Industrial Construction?**

Ans    ✗ A. Warehouses

       ✓ B. Hotels and Restaurants

       ✗ C. Power plants

       ✗ D. Factories

Question ID : **441009670974**
Option 1 ID : **4410092637930**
Option 2 ID : **4410092637932**
Option 3 ID : **4410092637931**
Option 4 ID : **4410092637929**
Status : **Answered**
Chosen Option : **B**

**Q.79 Which of the following statements is true for an externally indeterminate structure?**

Ans    ✗ A. It can be analysed using equilibrium equations

       ✗ B. It has equal number of unknown support reactions and equilibrium equations

       ✓ C. It has more unknown support reactions than the number of equilibrium equations

       ✗ D. It has fewer reactions than the number of equilibrium equations

Question ID : **441009663258**
Option 1 ID : **4410092607079**
Option 2 ID : **4410092607081**
Option 3 ID : **4410092607082**
Option 4 ID : **4410092607080**
Status : **Answered**
Chosen Option : **C**

**Q.80** Select the option that is correct regarding the following two statements labelled Assertion (A) and Reason (R).

**Assertion (A):** The displacement piles are less suitable for use in clay soil as compared to loose sands.

**Reason (R):** During driving of displacement piles in clays, very high pore pressures are developed.

**Ans** ✓ A. Both A and R are true and R is the correct explanation of A.

✗ B. A is false and R is true.

✗ C. A is true and R is false.

✗ D. Both A and R are true and R is not the correct explanation of A.

Question ID : **441009678434**
Option 1 ID : **4410092667886**
Option 2 ID : **4410092667889**
Option 3 ID : **4410092667888**
Option 4 ID : **4410092667887**
Status : **Answered**
Chosen Option : **A**

**Q.81** The primary purpose of compass surveying is to:

**Ans** ✗ A. determine the relative heights of objects

✗ B. locate inaccessible points using triangulation

✓ C. measure directions of survey lines using magnetic bearings

✗ D. establish control points using GPS signals

Question ID : **441009917897**
Option 1 ID : **4410093625649**
Option 2 ID : **4410093625650**
Option 3 ID : **4410093625651**
Option 4 ID : **4410093625652**
Status : **Answered**
Chosen Option : **C**

**Q.82** In the load balancing method for designing a prestressed concrete beam, the prestressing force is assumed to:

**Ans** ✓ A. Create an upward camber that balances the downward gravity loads

✗ B. Increase the moments acting on the beam

✗ C. Eliminate all external loading

✗ D. Only balance the live load on the beam

Question ID : **441009644157**
Option 1 ID : **4410092530816**
Option 2 ID : **4410092530814**
Option 3 ID : **4410092530815**
Option 4 ID : **4410092530817**
Status : **Answered**
Chosen Option : **C**

**Q.83 In a shaft system with equal lengths and common angle of twist, torque is divided between two parallel shafts based on the:**

Ans  ✗ A. ratio of their bulk modulus

✓ B. ratio of their torsional rigidities (GJ)

✗ C. ratio of their lengths

✗ D. ratio of their angles of twist

Question ID : **441009750766**
Option 1 ID : **4410092956946**
Option 2 ID : **4410092956948**
Option 3 ID : **4410092956947**
Option 4 ID : **4410092956945**
Status : **Answered**
Chosen Option : **B**

**Q.84 In the Rise and Fall method, if the next staff reading is greater than the previous, it indicates:**

Ans  ✓ A. a fall

✗ B. no change in elevation

✗ C. an incorrect reading

✗ D. a rise

Question ID : **441009917973**
Option 1 ID : **4410093625950**
Option 2 ID : **4410093625951**
Option 3 ID : **4410093625952**
Option 4 ID : **4410093625949**
Status : **Answered**
Chosen Option : **A**

**Q.85 Which section of the DPR provides the project's schedule and phasing using a Work Breakdown Structure (WBS)?**

Ans  ✓ A. Project Implementation Schedule

✗ B. Executive Summary

✗ C. Risk Assessment

✗ D. Quality Management Plan

Question ID : **441009771820**
Option 1 ID : **4410093041270**
Option 2 ID : **4410093041269**
Option 3 ID : **4410093041272**
Option 4 ID : **4410093041271**
Status : **Answered**
Chosen Option : **A**