

हिन्दुस्तान पेट्रोलियम कॉर्पोरेशन लिमिटेड
Hindustan Petroleum Corporation Limited
(A Maharatna Company)

Participant ID	
Participant Name	
Test Center Name	iON Digital Zone iDZ Kanti
Test Date	16/08/2025
Test Time	2:00 PM - 4:30 PM
Subject	Mechanical Engineer

Section : English Language

Q.1 Select the most appropriate idiom to substitute the highlighted segment in the given sentence.

When the board questioned his loyalty, he **immediately became angry and defensive**, refusing to explain himself.

- Ans A. took the bull by the horns
 B. pulled up his socks
 C. jumped down their throats
 D. drew the line

Question ID : 441009387298
Option 1 ID : 4410091514812
Option 2 ID : 4410091514811
Option 3 ID : 4410091514810
Option 4 ID : 4410091514813
Status : Not Answered
Chosen Option : --

Q.2 Select the option that can be used as a one-word substitute for the underlined group of words.

Heathcliff's eyes burned with the intensity of someone who would stop at nothing, as though he had **made a firm decision to pursue something despite obstacles**.

- Ans A. decided
 B. schemed
 C. resolved
 D. persevered

Question ID : 441009383468
Option 1 ID : 4410091499442
Option 2 ID : 4410091499440
Option 3 ID : 4410091499441
Option 4 ID : 4410091499443
Status : Answered
Chosen Option : C

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Q.3 Select the most appropriate article to fill in the blank. If no article is needed, select 'No article required'.

The candle-wick reclined on one of the antique volumes and perfumed the place with _____ odour of roasted calf-skin.

- Ans A. No article required
 B. an
 C. a
 D. the

Question ID : 441009383378
Option 1 ID : 4410091499071
Option 2 ID : 4410091499069
Option 3 ID : 4410091499068
Option 4 ID : 4410091499070
Status : Answered
Chosen Option : B

Q.4 Identify the word in the given sentence that contains a spelling error and select the option that rectifies this error.

His honest, warm, and intelligent nature shook off rapidly the clouds of ignorance and degredation in which it had been bred; and Catherine's sincere commendations acted as a spur to his industry.

- Ans A. ignorance- ingorance
 B. degredation- degradation
 C. intelligent- inteligent
 D. commendations- commendatiuns

Question ID : 441009383826
Option 1 ID : 4410091500939
Option 2 ID : 4410091500940
Option 3 ID : 4410091500938
Option 4 ID : 4410091500941
Status : Answered
Chosen Option : B

Q.5 Select the option that can be used as a one-word substitute for the underlined group of words.

She entered the room with a calm and graceful way of moving, unlike the stormy mood outside.

- Ans A. poise
 B. lightness
 C. speed
 D. hesitation

Question ID : 441009383487
Option 1 ID : 4410091499524
Option 2 ID : 4410091499527
Option 3 ID : 4410091499525
Option 4 ID : 4410091499526
Status : Answered
Chosen Option : A

Q.6 Identify the word in the given sentence that contains a spelling error and select the option that rectifies this error.

She threw down her pipe and bustled in, the girl followed, and I entered too; soon perceiving that her report was true, and, moreover, that I had almost upset her wits by my unwelcome apparition, I bade her be composed.

- Ans A. apparition - apparitione
 B. bade - bede
 C. perceiving - perceiving
 D. moreover - morover

Question ID : 441009383830
Option 1 ID : 4410091500956
Option 2 ID : 4410091500957
Option 3 ID : 4410091500954
Option 4 ID : 4410091500955
Status : Answered
Chosen Option : C

Q.7 Select the most appropriate proverb to substitute the highlighted segment in the given sentence.

He continued working on the invention, even though nobody believed in it, because he believed that **eventually, every persistent effort bears some fruit.**

- Ans A. a rising tide lifts all boats
 B. even a broken clock is right twice a day
 C. birds of a feather flock together
 D. constant dripping wears away the stone

Question ID : 441009387304
Option 1 ID : 4410091514834
Option 2 ID : 4410091514835
Option 3 ID : 4410091514837
Option 4 ID : 4410091514836
Status : Answered
Chosen Option : D

Q.8 The following sentence may contain an incorrect or awkward use of a conjunction. Select the option that best corrects the sentence. Select 'No correction needed' if the sentence is already correct.

Catherine wanted to stay with Edgar, yet she longed for the wildness and freedom she had shared with Heathcliff, or she never said it aloud.

- Ans A. freedom she had shared with Heathcliff, because she never said it aloud
 B. freedom she had shared with Heathcliff, but she never said it aloud
 C. freedom she had shared with Heathcliff, unless she never said it aloud
 D. No correction needed

Question ID : 441009383400
Option 1 ID : 4410091499157
Option 2 ID : 4410091499156
Option 3 ID : 4410091499158
Option 4 ID : 4410091499159
Status : Answered
Chosen Option : B

Q.9 Select the most appropriate synonym of the highlighted word in the given sentence.

His **puerile** comments during the meeting undermined the seriousness of the discussion.

- Ans A. Sincere
 B. Astute
 C. Juvenile
 D. Profound

Question ID : 441009387521
Option 1 ID : 4410091515700
Option 2 ID : 4410091515701
Option 3 ID : 4410091515698
Option 4 ID : 4410091515699
Status : Answered
Chosen Option : C

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. Though the day had faded, the scene remained bathed in amber and silver light.
B. The moon now lit my path so clearly that every stone and blade of grass stood out in sharp detail.
C. As I neared the gate, it yielded to my hand—an unexpected improvement from earlier visits.
D. Meanwhile, a faint scent of stocks and wallflowers drifted through the air, lending a gentle charm to the night.

- Ans A. CBAD
 B. BADC
 C. DCBA
 D. ADBC

Question ID : 441009383438
Option 1 ID : 4410091499312
Option 2 ID : 4410091499314
Option 3 ID : 4410091499315
Option 4 ID : 4410091499313
Status : Answered
Chosen Option : A

Q.11 Select the most appropriate ANTONYM of the highlighted word in the given sentence.

His **temerity** in questioning the board's decision shocked even the most seasoned employees.

- Ans A. Audacity
 B. Cowardice
 C. Boldness
 D. Rashness

Question ID : 441009387331
Option 1 ID : 4410091514942
Option 2 ID : 4410091514943
Option 3 ID : 4410091514944
Option 4 ID : 4410091514945
Status : Answered
Chosen Option : B

Q.12 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. The male speaker began to read, but kept glancing up from the book.
- B. Her golden ringlets bent forward as she helped him with his lesson.
- C. I envied him for the chance I had foolishly thrown away.
- D. His companion stood behind him, correcting him with a playful slap when distracted.

- Ans
- A. BACD
 - B. ADCB
 - C. BCDA
 - D. ADBC

Question ID : 441009383428

Option 1 ID : 4410091499272

Option 2 ID : 4410091499273

Option 3 ID : 4410091499274

Option 4 ID : 4410091499275

Status : Answered

Chosen Option : D

Q.13 The given sentence contains an incorrect or awkward use of a conjunction. Choose the option that best corrects the sentence. Select 'No correction needed' if the sentence is already correct.

Heathcliff returned to Wuthering Heights not only wealthier but also with a quiet, hardened demeanour.

- Ans
- A. not only wealthier but also appeared different
 - B. No correction needed
 - C. not only wealthier but also more bitter
 - D. not only wealthier and also

Question ID : 441009383406

Option 1 ID : 4410091499182

Option 2 ID : 4410091499183

Option 3 ID : 4410091499181

Option 4 ID : 4410091499180

Status : Answered

Chosen Option : B

Comprehension:

Read the given passage carefully and answer the questions that follow.

In today's fast-evolving professional landscape, a Career Lab serves as a vital resource for students and professionals seeking clarity and direction in their career paths. Unlike traditional career counselling, which often focuses on general advice, Career Labs provide hands-on experiences, skill assessments and personalised guidance tailored to individual aspirations and market trends. A Career Lab typically integrates various tools, such as psychometric tests, workshops on resume buildings, interview simulations and networking opportunities with industry experts. This multifaceted approach equips individuals not only with knowledge about different professions but also with practical skills necessary for job acquisition and career growth. One significant advantage of Career Labs is their emphasis on adaptability. Given the rapid changes in technology and job requirements, Career Labs encourage continuous learning and skill upgrading. They help participants recognise transferable skills that can open doors to new fields, fostering resilience in uncertain job markets. However, the effectiveness of Career Labs depends on their ability to stay updated with current industry demands and to customise guidance accordingly. Labs that merely offer static information without real-time relevance risk becoming obsolete. Therefore, a successful Career Lab combines dynamic content delivery with mentorship and feedback mechanisms, empowering individuals to make informed decisions. In sum, Career Labs act as dynamic platforms that bridge the gap between academic learning and professional realities. By fostering self-awareness and practical skills, they enhance employability and prepare individuals for sustained career success.

SubQuestion No : 14

Q.14 Which aspect primarily differentiates Career Labs from traditional career counselling?

- Ans A. They offer personalised, practical experiences aligned with market trends.
- B. They rely on static information without real-time updates.
- C. They provide generic career advice applicable to all fields.
- D. They focus solely on academic performance assessments.

Question ID : 441009391593
Option 1 ID : 4410091531916
Option 2 ID : 4410091531918
Option 3 ID : 4410091531915
Option 4 ID : 4410091531917

Status : Answered

Chosen Option : A

Comprehension:

Read the given passage carefully and answer the questions that follow.

In today's fast-evolving professional landscape, a Career Lab serves as a vital resource for students and professionals seeking clarity and direction in their career paths. Unlike traditional career counselling, which often focuses on general advice, Career Labs provide hands-on experiences, skill assessments and personalised guidance tailored to individual aspirations and market trends. A Career Lab typically integrates various tools, such as psychometric tests, workshops on resume buildings, interview simulations and networking opportunities with industry experts. This multifaceted approach equips individuals not only with knowledge about different professions but also with practical skills necessary for job acquisition and career growth. One significant advantage of Career Labs is their emphasis on adaptability. Given the rapid changes in technology and job requirements, Career Labs encourage continuous learning and skill upgrading. They help participants recognise transferable skills that can open doors to new fields, fostering resilience in uncertain job markets. However, the effectiveness of Career Labs depends on their ability to stay updated with current industry demands and to customise guidance accordingly. Labs that merely offer static information without real-time relevance risk becoming obsolete. Therefore, a successful Career Lab combines dynamic content delivery with mentorship and feedback mechanisms, empowering individuals to make informed decisions. In sum, Career Labs act as dynamic platforms that bridge the gap between academic learning and professional realities. By fostering self-awareness and practical skills, they enhance employability and prepare individuals for sustained career success.

SubQuestion No : 15

Q.15 What is the implied importance of adaptability in the context of Career Labs?

- Ans A. It ensures that Career Labs remain irrelevant in changing job markets.
- B. It fosters resilience by helping individuals apply skills across different industries.
- C. It enables participants to reject all new skills in favour of expertise in one field.
- D. It discourages continuous learning to maintain a focus on core competencies.

Question ID : 441009391594

Option 1 ID : 4410091531920

Option 2 ID : 4410091531921

Option 3 ID : 4410091531919

Option 4 ID : 4410091531922

Status : Answered

Chosen Option : B

Comprehension:

Read the given passage carefully and answer the questions that follow.

In today's fast-evolving professional landscape, a Career Lab serves as a vital resource for students and professionals seeking clarity and direction in their career paths. Unlike traditional career counselling, which often focuses on general advice, Career Labs provide hands-on experiences, skill assessments and personalised guidance tailored to individual aspirations and market trends. A Career Lab typically integrates various tools, such as psychometric tests, workshops on resume buildings, interview simulations and networking opportunities with industry experts. This multifaceted approach equips individuals not only with knowledge about different professions but also with practical skills necessary for job acquisition and career growth. One significant advantage of Career Labs is their emphasis on adaptability. Given the rapid changes in technology and job requirements, Career Labs encourage continuous learning and skill upgrading. They help participants recognise transferable skills that can open doors to new fields, fostering resilience in uncertain job markets. However, the effectiveness of Career Labs depends on their ability to stay updated with current industry demands and to customise guidance accordingly. Labs that merely offer static information without real-time relevance risk becoming obsolete. Therefore, a successful Career Lab combines dynamic content delivery with mentorship and feedback mechanisms, empowering individuals to make informed decisions. In sum, Career Labs act as dynamic platforms that bridge the gap between academic learning and professional realities. By fostering self-awareness and practical skills, they enhance employability and prepare individuals for sustained career success.

SubQuestion No : 16

Q.16 Select the most appropriate title for the passage.

- Ans A. The Role of Adaptability in Job Searching
- B. Bridging the Gap Between Education and Employment
- C. Skill Development through Career Lab Programmes
- D. Traditional Career Counselling Methods: An Overview

Question ID : 441009391595
Option 1 ID : 4410091531925
Option 2 ID : 4410091531923
Option 3 ID : 4410091531926
Option 4 ID : 4410091531924

Status : Answered

Chosen Option : C

Comprehension:

Read the given passage carefully and answer the questions that follow.

In today's fast-evolving professional landscape, a Career Lab serves as a vital resource for students and professionals seeking clarity and direction in their career paths. Unlike traditional career counselling, which often focuses on general advice, Career Labs provide hands-on experiences, skill assessments and personalised guidance tailored to individual aspirations and market trends. A Career Lab typically integrates various tools, such as psychometric tests, workshops on resume buildings, interview simulations and networking opportunities with industry experts. This multifaceted approach equips individuals not only with knowledge about different professions but also with practical skills necessary for job acquisition and career growth. One significant advantage of Career Labs is their emphasis on adaptability. Given the rapid changes in technology and job requirements, Career Labs encourage continuous learning and skill upgrading. They help participants recognise transferable skills that can open doors to new fields, fostering resilience in uncertain job markets. However, the effectiveness of Career Labs depends on their ability to stay updated with current industry demands and to customise guidance accordingly. Labs that merely offer static information without real-time relevance risk becoming obsolete. Therefore, a successful Career Lab combines dynamic content delivery with mentorship and feedback mechanisms, empowering individuals to make informed decisions. In sum, Career Labs act as dynamic platforms that bridge the gap between academic learning and professional realities. By fostering self-awareness and practical skills, they enhance employability and prepare individuals for sustained career success.

SubQuestion No : 17

Q.17 Identify the tone of the passage.

Ans A. Cautionary

B. Critical

C. Inquisitive

D. Enlightening

Question ID : 441009391596

Option 1 ID : 4410091531929

Option 2 ID : 4410091531928

Option 3 ID : 4410091531927

Option 4 ID : 4410091531930

Status : Answered

Chosen Option : D

Section : Quantitative Aptitude

Q.1 In a class of 50 students, the average score in a test is 70. The difference between the highest and lowest marks is 100. If both students are excluded, the average drops by 2 marks. What were the highest marks?

Ans A. 167

B. 170

C. 169

D. 168

Question ID : 441009398112

Option 1 ID : 4410091557898

Option 2 ID : 4410091557901

Option 3 ID : 4410091557900

Option 4 ID : 4410091557899

Status : Answered

Chosen Option : D

Q.2 If $5^{2n+1} \div 25 = 125$, find the value of n.

Ans A. 2

B. 5

C. 3

D. 7

Question ID : 441009461157

Option 1 ID : 4410091803309

Option 2 ID : 4410091803311

Option 3 ID : 4410091803310

Option 4 ID : 4410091803312

Status : Answered

Chosen Option : A

Q.3 The following numbers represent the runs scored by a batsman in 10 matches:

56, 48, 56, 72, 48, 56, 40, 48, 60, 56

What is the mode of the data?

Ans A. 60

B. 56

C. 48

D. 72

Question ID : 441009459996

Option 1 ID : 4410091798622

Option 2 ID : 4410091798620

Option 3 ID : 4410091798621

Option 4 ID : 4410091798623

Status : Answered

Chosen Option : B

Q.4 Manish travels one – third of a journey at a speed of 30 km/h, the next one – third at 60 km/h and the final one – third at 90 km/h. What is his average speed for the whole journey?

Ans A. 45

B. 42

C. 40

D. 48

Question ID : 441009386207

Option 1 ID : 4410091510452

Option 2 ID : 4410091510451

Option 3 ID : 4410091510450

Option 4 ID : 4410091510453

Status : Answered

Chosen Option : A

Q.5 A tank can be filled by Pipe A in 12 hours and emptied by Pipe B in 18 hours. If both the pipes are opened together, in how many hours will the tank be full?

- Ans
- A. 32
 - B. 30
 - C. 42
 - D. 36

Question ID : 441009460009
Option 1 ID : 4410091798669
Option 2 ID : 4410091798670
Option 3 ID : 4410091798671
Option 4 ID : 4410091798668
Status : Answered
Chosen Option : D

Q.6 What is the arithmetic mean of first 50 even natural numbers?

- Ans
- A. 50
 - B. 52
 - C. 51
 - D. 56

Question ID : 441009459972
Option 1 ID : 4410091798530
Option 2 ID : 4410091798531
Option 3 ID : 4410091798528
Option 4 ID : 4410091798529
Status : Answered
Chosen Option : C

Q.7 From the top of a tower 35 m high, the angles of depression of the top and bottom of a building are 60° and 45° respectively. Find the height (in m) of the building.

- Ans
- A. $35\left(1 + \frac{1}{\sqrt{3}}\right)$
 - B. $35\sqrt{3}$
 - C. $35\left(1 - \frac{1}{\sqrt{3}}\right)$
 - D. 35

Question ID : 441009461019
Option 1 ID : 4410091802772
Option 2 ID : 4410091802771
Option 3 ID : 4410091802770
Option 4 ID : 4410091802773
Status : Answered
Chosen Option : C

Q.8 A bottle contains 60 ml of a juice solution that is 40% pure juice and 60% water. First, x ml of pure juice is added to the solution to reverse the original juice-to-water ratio. Then, y ml of pure water is added to reverse the ratio back to its original proportion. Determine the total amount of liquid added ($x + y$).

- Ans
- A. 96 ml
 - B. 90 ml
 - C. 72 ml
 - D. 75 ml

Question ID : 441009398248
 Option 1 ID : 4410091558441
 Option 2 ID : 4410091558440
 Option 3 ID : 4410091558439
 Option 4 ID : 4410091558438
 Status : Answered
 Chosen Option : D

Q.9 Ramesh wrote a number as 2.356565656.....
 What is the vulgar fraction equivalent of this decimal?

- Ans
- A. $\frac{2353}{990}$
 - B. $\frac{2233}{990}$
 - C. $\frac{2523}{990}$
 - D. $\frac{2333}{990}$

Question ID : 441009398516
 Option 1 ID : 4410091559528
 Option 2 ID : 4410091559527
 Option 3 ID : 4410091559529
 Option 4 ID : 4410091559526
 Status : Answered
 Chosen Option : D

Q.10 Pipe P can fill a tank in 24 minutes, and Pipe Q can fill the same tank in 36 minutes. If both pipes are opened together, after how much time should Pipe Q be closed so that the tank is filled in exactly 18 minutes?

- Ans
- A. 10 minutes
 - B. 9 minutes
 - C. 8 minutes
 - D. 6 minutes

Question ID : 441009460016
 Option 1 ID : 4410091798698
 Option 2 ID : 4410091798697
 Option 3 ID : 4410091798699
 Option 4 ID : 4410091798696
 Status : Answered
 Chosen Option : B

Q.11 Ravi spends 80% of his income. His income increases by 25% and his expenditure increases by 40%. As a result, his savings decrease by ₹714. What was his original income?

- Ans A. ₹10,200
 B. ₹11,200
 C. ₹10,420
 D. ₹11,880

Question ID : 441009398692
Option 1 ID : 4410091560222
Option 2 ID : 4410091560223
Option 3 ID : 4410091560225
Option 4 ID : 4410091560224
Status : Answered
Chosen Option : A

Q.12 The HCF and LCM of two positive integers are 6 and 180 respectively. How many such distinct unordered pairs of numbers are possible?

- Ans A. 4
 B. 5
 C. 3
 D. 6

Question ID : 441009398523
Option 1 ID : 4410091559551
Option 2 ID : 4410091559552
Option 3 ID : 4410091559550
Option 4 ID : 4410091559553
Status : Not Answered
Chosen Option : --

Q.13 The average age of a group of teachers is 42 years. Later, 5 new teachers with an average age of 38 years joined the group. As a result, the average age of the entire group becomes 41 years. How many teachers were there in the original group?

- Ans A. 16
 B. 15
 C. 14
 D. 18

Question ID : 441009398203
Option 1 ID : 4410091558260
Option 2 ID : 4410091558258
Option 3 ID : 4410091558259
Option 4 ID : 4410091558261
Status : Answered
Chosen Option : B

Q.14 If a is the mean proportional between x and y , and $x=90$, $y=160$, then what is the value of a ?

- Ans A. 120
 B. 126
 C. 125
 D. 124

Question ID : 441009462042
Option 1 ID : 4410091806591
Option 2 ID : 4410091806592
Option 3 ID : 4410091806589
Option 4 ID : 4410091806590
Status : Answered
Chosen Option : A

Q.15 If the cost of 7 pencils is equal to the cost of 4 pens, and the cost of 9 then find the cost of 21 pencils.

- Ans A. ₹134
 B. ₹144
 C. ₹124
 D. ₹154

Question ID : 441009384906
Option 1 ID : 4410091505263
Option 2 ID : 4410091505264
Option 3 ID : 4410091505262
Option 4 ID : 4410091505265
Status : Answered
Chosen Option : B

Q.16 Priya trimmed a rectangular carpet twice. With the first trim, she reduced its area by 25%, and with the second trim, she reduced the remaining area by 20%. If the final area of the carpet is 96 cm^2 , what was the original area?

- Ans A. 160 cm^2
 B. 180 cm^2
 C. 164 cm^2
 D. 184 cm^2

Question ID : 441009398746
Option 1 ID : 4410091560438
Option 2 ID : 4410091560440
Option 3 ID : 4410091560439
Option 4 ID : 4410091560441
Status : Answered
Chosen Option : A

Q.17 The curved surface area of a cylinder is 880 cm^2 and its height is 10 cm the cylinder (Use $\pi = \frac{22}{7}$).

- Ans A. 6610 cm^3
 B. 6160 cm^3
 C. 6060 cm^3
 D. 6260 cm^3

Question ID : 441009389708
Option 1 ID : 4410091524424
Option 2 ID : 4410091524421
Option 3 ID : 4410091524422
Option 4 ID : 4410091524423
Status : Answered
Chosen Option : B

Q.18 A shopkeeper marked the price of a bag at ₹4800. He gave three successive discounts of 15%, 10%, and 5%. Then he offered a further discount of ₹300. What is the final price paid by the customer?

- Ans A. ₹3148.40
 B. ₹3188.40
 C. ₹3344
 D. ₹3248

Question ID : 441009399314
Option 1 ID : 4410091562707
Option 2 ID : 4410091562706
Option 3 ID : 4410091562708
Option 4 ID : 4410091562709
Status : Answered
Chosen Option : B

Q.19 If the sum of the roots of the quadratic equation $x^2 + bx + c = 0$ is 11 and the product of the roots is 24, find the value of $b + c$.

- Ans A. 16
 B. 17
 C. 13
 D. 15

Question ID : 441009460204
Option 1 ID : 4410091799454
Option 2 ID : 4410091799455
Option 3 ID : 4410091799452
Option 4 ID : 4410091799453
Status : Answered
Chosen Option : C

Q.20 A principal of ₹5,000 amounts to ₹6,000 in 4 years at simple interest. What is the rate of interest per annum?

- Ans A. 8%
 B. 5%
 C. 10%
 D. 12%

Question ID : 441009358934
Option 1 ID : 4410091401740
Option 2 ID : 4410091401739
Option 3 ID : 4410091401738
Option 4 ID : 4410091401741
Status : Answered
Chosen Option : B

Q.21 Construct a quadratic equation whose both roots are 3 more than the roots of the equation:

$$x^2 + 7x + 16 = 0$$

- Ans A. $x^2 + 3x + 4 = 0$
 B. $x^2 + 3x + 6 = 0$
 C. $x^2 + 5x + 4 = 0$
 D. $x^2 + x + 4 = 0$

Question ID : 441009460211
Option 1 ID : 4410091799489
Option 2 ID : 4410091799490
Option 3 ID : 4410091799491
Option 4 ID : 4410091799488
Status : Answered
Chosen Option : D

Q.22 A toy is sold at ₹455 with a loss of 9%. At what price should it be sold to gain 9%?

- Ans A. ₹545
 B. ₹560
 C. ₹568
 D. ₹580

Question ID : 441009399076
Option 1 ID : 4410091561758
Option 2 ID : 4410091561759
Option 3 ID : 4410091561760
Option 4 ID : 4410091561761
Status : Answered
Chosen Option : A

Q.23 Ramesh travelled from City A to City B at an average speed of 72 kmph. He covered the first two-thirds of the distance in three-fourths of the total time. What was his average speed during the remaining part of the journey?

- Ans
- A. 92 kmph
 - B. 90 kmph
 - C. 85 kmph
 - D. 96 kmph

Question ID : 441009460058
Option 1 ID : 4410091798861
Option 2 ID : 4410091798862
Option 3 ID : 4410091798863
Option 4 ID : 4410091798860
Status : Answered
Chosen Option : D

Q.24 Priya travelled from Town M to Town N at 60 kmph and returned at 40 kmph. What was her average speed for the entire trip?

- Ans
- A. 42 kmph
 - B. 48 kmph
 - C. 50 kmph
 - D. 45 kmph

Question ID : 441009460051
Option 1 ID : 4410091798835
Option 2 ID : 4410091798832
Option 3 ID : 4410091798833
Option 4 ID : 4410091798834
Status : Answered
Chosen Option : B

Q.25 A car is marked at ₹6,50,800. The dealership offers a 23% discount for cash payments. What is the amount payable if you choose to pay in cash?

- Ans
- A. ₹ 511816
 - B. ₹ 501216
 - C. ₹ 500116
 - D. ₹ 501116

Question ID : 441009370751
Option 1 ID : 4410091448907
Option 2 ID : 4410091448905
Option 3 ID : 4410091448906
Option 4 ID : 4410091448908
Status : Answered
Chosen Option : D

Q.26 Simplify the following expression:

$$\frac{1}{1 + ky^{-x} + kz^{-x}} + \frac{1}{1 + k^{x-y} + k^{z-y}} + \frac{1}{1 + k^{x-z} + ky^{-z}}$$

- Ans
- A. 2
 - B. k^{x+y+z}
 - C. $x+y+z$
 - D. 1

Question ID : 441009461172
 Option 1 ID : 4410091803370
 Option 2 ID : 4410091803371
 Option 3 ID : 4410091803372
 Option 4 ID : 4410091803369
 Status : Answered
 Chosen Option : D

Q.27 If triangles ΔXYZ and ΔLMN are similar such that $YZ = 5$ cm, MN and the area of $\Delta XYZ = 100$ cm², then find the area of ΔLMN .

- Ans
- A. 160cm²
 - B. 200cm²
 - C. 256cm²
 - D. 320cm²

Question ID : 441009387013
 Option 1 ID : 4410091513674
 Option 2 ID : 4410091513676
 Option 3 ID : 4410091513675
 Option 4 ID : 4410091513677
 Status : Answered
 Chosen Option : C

Q.28 A circular garden has a radius of 28 meters. A sector-shaped pathway making an angle of 90° at the center is to be fenced along its boundary (the arc and two radii). If the cost of fencing is ₹48 per meter, find the total cost of fencing the pathway.

(Use $\pi = \frac{22}{7}$)

- Ans
- A. ₹4,670
 - B. ₹4,800
 - C. ₹4,600
 - D. ₹4,250

Question ID : 441009460948
 Option 1 ID : 4410091802496
 Option 2 ID : 4410091802493
 Option 3 ID : 4410091802494
 Option 4 ID : 4410091802495
 Status : Answered
 Chosen Option : B

Q.29 If $x + \frac{1}{x} = 7$, then find the value of $x^2 + \frac{1}{x^2}$.

- Ans A. 49
 B. 47
 C. 52
 D. 51

Question ID : 441009460147
Option 1 ID : 4410091799221
Option 2 ID : 4410091799220
Option 3 ID : 4410091799223
Option 4 ID : 4410091799222
Status : Answered
Chosen Option : B

Q.30 Farmer A invests a certain sum of money at simple interest and Farmer B invests the same sum at compound interest for 2 years at the same rate of 10% per annum. If Farmer B receives ₹462 more as interest than Farmer A, find the sum invested by each farmer.

- Ans A. ₹42600
 B. ₹46400
 C. ₹46210
 D. ₹46200

Question ID : 441009384115
Option 1 ID : 4410091502112
Option 2 ID : 4410091502113
Option 3 ID : 4410091502110
Option 4 ID : 4410091502111
Status : Not Answered
Chosen Option : --

Q.31 In quadrilateral ABCD, $AB = 8$ cm, $BC = 6$ cm, $CD = 12$ cm. Both $\angle ABC$ and $\angle BCD$ are 90° . Find the area of the quadrilateral ABCD.

- Ans A. 62 cm^2
 B. 60 cm^2
 C. 64 cm^2
 D. 68 cm^2

Question ID : 441009460844
Option 1 ID : 4410091802074
Option 2 ID : 4410091802072
Option 3 ID : 4410091802073
Option 4 ID : 4410091802075
Status : Answered
Chosen Option : B

Q.32 Meena and Rajiv started a business together. Meena invested ₹15,000 for 8 months, and Rajiv invested ₹12,000 for the whole year. If the total profit at the end of the year was ₹9,900, what was Rajiv's share in the profit?

- Ans A. ₹5,400
 B. ₹5,200
 C. ₹4,800
 D. ₹5,000

Question ID : 441009459967
Option 1 ID : 4410091798508
Option 2 ID : 4410091798509
Option 3 ID : 4410091798511
Option 4 ID : 4410091798510
Status : Not Answered
Chosen Option : --

Q.33 Ramesh bought 150 kg of wheat for ₹6800. Due to a sudden price drop in the market, he had to sell the entire quantity at a loss equal to the selling price of 20 kg of wheat. What was his selling price per kg?

- Ans A. ₹42
 B. ₹40
 C. ₹45
 D. ₹44

Question ID : 441009399087
Option 1 ID : 4410091561803
Option 2 ID : 4410091561802
Option 3 ID : 4410091561805
Option 4 ID : 4410091561804
Status : Answered
Chosen Option : B

Q.34 A woman's present age is three times that of her only daughter. When the woman was 29 years old, her only son, who is 4 years younger than the daughter, was born. What is the present age of her son?

- Ans A. 8.5 years
 B. 10.5 years
 C. 9 years
 D. 8 years

Question ID : 441009460182
Option 1 ID : 4410091799356
Option 2 ID : 4410091799357
Option 3 ID : 4410091799359
Option 4 ID : 4410091799358
Status : Answered
Chosen Option : A

Q.1 W,V,X,Y,Z and T 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.
V lives on an odd-numbered floor above E. There are only two people between V and W.Y lives immediately below W.
X does not live on floor number 2 or 4, T lives on one of the floors below Y.

Who lives on floor number 3?

- Ans A. V
 B. T
 C. W
 D. Y

Question ID : 441009402350
 Option 1 ID : 4410091574805
 Option 2 ID : 4410091574803
 Option 3 ID : 4410091574802
 Option 4 ID : 4410091574804
 Status : Answered
 Chosen Option : A

Q.2 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. RDP
 B. AMY
 C. MYK
 D. TFO

Question ID : 441009359998
 Option 1 ID : 4410091405991
 Option 2 ID : 4410091405992
 Option 3 ID : 4410091405993
 Option 4 ID : 4410091405990
 Status : Not Answered
 Chosen Option : --

Q.3 Seven friends Aman, Rita, Shruti ,Kirti, Neha, Rahul and Gita are scheduled for vaccination on different days of a week from Monday to Sunday.
 Kirti is scheduled on Monday, Neha is scheduled two days after Kirti. Shruti is scheduled before Rahul but after Rita.
 Gita is not scheduled on Sunday. Only one person is scheduled between Rahul and Neha.
 On which day is Shruti scheduled?

- Ans A. Thursday
 B. Wednesday
 C. Friday
 D. Saturday

Question ID : 441009402367
 Option 1 ID : 4410091574859
 Option 2 ID : 4410091574858
 Option 3 ID : 4410091574860
 Option 4 ID : 4410091574861
 Status : Answered
 Chosen Option : C

Q.4 What should come in place of ? in the given series based on the English alphabetical order?

CLU UDM MVE ENW ?

- Ans A. FWO
 B. WOF
 C. FWE
 D. WFO

Question ID : 441009359094

Option 1 ID : 4410091402361

Option 2 ID : 4410091402359

Option 3 ID : 4410091402360

Option 4 ID : 4410091402358

Status : Answered

Chosen Option : D

Q.5 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)

(10,20,90)

(14,15,87)

- Ans A. (7,19,78)
 B. (24,19,99)
 C. (12,36,84)
 D. 27,17,72

Question ID : 441009359452

Option 1 ID : 4410091403799

Option 2 ID : 4410091403801

Option 3 ID : 4410091403802

Option 4 ID : 4410091403800

Status : Not Answered

Chosen Option : --

Q.6 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: All parrot are pigeon. Some pigeon are sparrow.

Conclusions (I) : Some parrot are sparrow

Conclusions (II) : Some sparrow are pigeon

- Ans A. Only conclusion I follows
 B. Only conclusion II follows
 C. Neither conclusion I nor II follow
 D. Both conclusion I and II follow

Question ID : 441009386203

Option 1 ID : 4410091510434

Option 2 ID : 4410091510435

Option 3 ID : 4410091510437

Option 4 ID : 4410091510436

Status : Answered

Chosen Option : B

Q.7 If 2 is subtracted from each odd digit and 2 is added to each even digit in the number 472462934257 what will be the sum of the digits which are second from the left and second from the right?

- Ans A. 9
 B. 10
 C. 8
 D. 7

Question ID : 441009359392
Option 1 ID : 4410091403546
Option 2 ID : 4410091403547
Option 3 ID : 4410091403545
Option 4 ID : 4410091403544
Status : Answered
Chosen Option : C

Q.8 LITE is related to WTEP in a certain way based on the English alphabetical order. In the same way, DALW is related to OLWH. To which of the following options is KHSD related to, following the same logic?

- Ans A. VODS
 B. VSDO
 C. VSDE
 D. VDSW

Question ID : 441009359068
Option 1 ID : 4410091402260
Option 2 ID : 4410091402258
Option 3 ID : 4410091402259
Option 4 ID : 4410091402261
Status : Answered
Chosen Option : B

Q.9 In a certain code language,
A + B means 'A is the son of B'
A - B means 'A is the brother of B'
A x B means 'A is the wife of B'
A ÷ B means 'A is the father of B'
Based on the above, how is H related to R if 'HxU-N÷T+R'?

- Ans A. Husband's brother's daughter
 B. Brother's wife
 C. Brother's daughter
 D. Husband's brother's wife

Question ID : 441009358991
Option 1 ID : 4410091401967
Option 2 ID : 4410091401968
Option 3 ID : 4410091401969
Option 4 ID : 4410091401966
Status : Answered
Chosen Option : D

Q.10 What should come in place of '?' in the given series?

23 46 69 92 115 ?

- Ans A. 130
 B. 135
 C. 138
 D. 137

Question ID : 441009359424

Option 1 ID : 4410091403679

Option 2 ID : 4410091403680

Option 3 ID : 4410091403682

Option 4 ID : 4410091403681

Status : Answered

Chosen Option : C

Q.11 VDSK is related to TAQH in a certain way based on the English alphabetical order. In the same way, PTEH is related to NQCE. To which of the following is YNBJ related to, following the same logic?

- Ans A. WKZG
 B. XKXG
 C. VJYH
 D. VLYF

Question ID : 441009386855

Option 1 ID : 4410091513038

Option 2 ID : 4410091513041

Option 3 ID : 4410091513039

Option 4 ID : 4410091513040

Status : Answered

Chosen Option : A

Q.12 Refer to the following letter, number, symbol series and answer the question

(Left) P P S E 2 L C S R \ E P ? 2 B D + 4 H \$ D P (Right)

How many such letters are there each of which is immediately preceded by a number and also immediately followed by a symbol?

- Ans A. Three
 B. Four
 C. One
 D. Two

Question ID : 441009360012

Option 1 ID : 4410091406044

Option 2 ID : 4410091406045

Option 3 ID : 4410091406042

Option 4 ID : 4410091406043

Status : Answered

Chosen Option : C

Q.13 Refer to the following number, symbol series and answer the question that follow.

Counting to be done from left to right only.

(Left) ** 4 2 1 + \ + * 4 5 ^ > 8 / 5 # @ % ^ 6 (Right)

How many such symbols are there each of which is immediately preceded by another symbol and also immediately followed by a number?

- Ans A. Two
 B. Four
 C. Three
 D. One

Question ID : 441009359135
 Option 1 ID : 4410091402525
 Option 2 ID : 4410091402527
 Option 3 ID : 4410091402526
 Option 4 ID : 4410091402524
 Status : Answered
 Chosen Option : B

Q.14 In a certain code language, 'EWMB' is coded as '65' and 'XCSI' is coded as '77'. What is the code for 'JTAV' in the given code language?

- Ans A. 63
 B. 60
 C. 78
 D. 75

Question ID : 441009385546
 Option 1 ID : 4410091507807
 Option 2 ID : 4410091507809
 Option 3 ID : 4410091507808
 Option 4 ID : 4410091507806
 Status : Not Answered
 Chosen Option : --

Q.15 In a certain code language, 'YCQH' is coded as '48' and 'SALK' is coded as '58'. What is the code for 'JUGX' in the given code language?

- Ans A. 52
 B. 44
 C. 32
 D. 39

Question ID : 441009385537
 Option 1 ID : 4410091507771
 Option 2 ID : 4410091507770
 Option 3 ID : 4410091507772
 Option 4 ID : 4410091507773
 Status : Not Answered
 Chosen Option : --

Q.16 H, I, J, M, N, O and P are sitting in a straight line facing north.
Only M sits to the left of O. Only four people sit between M and P. Only N sits between H and J and H is not an immediate neighbor of P. Who sits at the extreme right end of the line?

- Ans
- A. H
 - B. P
 - C. M
 - D. I

Question ID : 441009358954
 Option 1 ID : 4410091401818
 Option 2 ID : 4410091401821
 Option 3 ID : 4410091401820
 Option 4 ID : 4410091401819
 Status : Not Answered
 Chosen Option : --

Q.17 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)
 (8,13,15)
 (24,15,33)

- Ans
- A. (9,3,6)
 - B. (24,33,41)
 - C. (13,24,23)
 - D. (10,13,21)

Question ID : 441009359437
 Option 1 ID : 4410091403731
 Option 2 ID : 4410091403733
 Option 3 ID : 4410091403734
 Option 4 ID : 4410091403732
 Status : Not Answered
 Chosen Option : --

Q.18 What should come in place of ? in the given series based on the English alphabetical order?
 VAN NSF FKX XCP ?

- Ans
- A. HUP
 - B. PHU
 - C. HPU
 - D. PUH

Question ID : 441009359095
 Option 1 ID : 4410091402364
 Option 2 ID : 4410091402363
 Option 3 ID : 4410091402365
 Option 4 ID : 4410091402362
 Status : Not Answered
 Chosen Option : --

Q.19 Refer to the following letter, number, symbol series and answer the question

(Left) Y 4 L * 6 F 3 & U P 5 H A 7 K 9 + C T 9 H S (Right)

How many such symbols are there each of which is immediately preceded by a letter and also immediately followed by a number?

Ans A. Three

B. One

C. Two

D. Four

Question ID : 441009360011

Option 1 ID : 4410091406040

Option 2 ID : 4410091406038

Option 3 ID : 4410091406039

Option 4 ID : 4410091406041

Status : Not Answered

Chosen Option : --

Q.20 If 1 is subtracted from each odd digit and 2 is added to each even digit in the number 433525434976 what will be the sum of the digits which are second from the left and second from the right?

Ans A. 7

B. 6

C. 8

D. 5

Question ID : 441009359199

Option 1 ID : 4410091402770

Option 2 ID : 4410091402769

Option 3 ID : 4410091402771

Option 4 ID : 4410091402768

Status : Not Answered

Chosen Option : --

Q.21 Town Q is to the west of Town R. Town K is to the south of Town Q. Town I is to the east of Town K. Town J is to the north of Town I. Town R is to the east of Town J. What is the position of Town K with respect to Town J?

Ans A. South East

B. North

C. North West

D. South West

Question ID : 441009386927

Option 1 ID : 4410091513330

Option 2 ID : 4410091513332

Option 3 ID : 4410091513331

Option 4 ID : 4410091513333

Status : Not Answered

Chosen Option : --

Q.22 If 'A' stands for '+', 'B' stands for 'x', 'C' stands for '+' and 'D' stands for '-', what will be come in place of question mark '?' in the following equation?
9 B 8 C 7 D 50 A 10 = ?

- Ans A. 75
 B. 72
 C. 73
 D. 74

Question ID : 441009359400
 Option 1 ID : 4410091403587
 Option 2 ID : 4410091403584
 Option 3 ID : 4410091403585
 Option 4 ID : 4410091403586
 Status : Not Answered
 Chosen Option : --

Q.23 In a certain code language,
 A+ B means 'A is the son of B'
 A - B means 'A is the brother of B'
 A x B means 'A is the wife of B'
 A ÷ B means 'A is the father of B'
 Based on the above, how is H related to R if 'H-UxN+T÷R'?

- Ans A. Brother's brother
 B. Brother's wife's father
 C. Brother's wife's brother
 D. Brother

Question ID : 441009358989
 Option 1 ID : 4410091401961
 Option 2 ID : 4410091401959
 Option 3 ID : 4410091401958
 Option 4 ID : 4410091401960
 Status : Not Answered
 Chosen Option : --

Q.24 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 one out is not based on the number of consonants/vowels or their position in the letter cluster)

- Ans A. FG-VF
 B. ST-SI
 C. XY-NX
 D. DE-TD

Question ID : 441009359118
 Option 1 ID : 4410091402451
 Option 2 ID : 4410091402449
 Option 3 ID : 4410091402448
 Option 4 ID : 4410091402450
 Status : Not Answered
 Chosen Option : --

Q.25 In the following triad, each group of letters is related to the subsequent one following a certain logic. Select from the given options, the one which follows the same logic.
PINK - IPNK - KIPN
DOME - ODME - EODM

- Ans A. HUNT - UHNT - UNTH
 B. FIRM - IFRM - MIFR
 C. NAME - ANME - EAMN
 D. LEAN - LAEN - NAEL

Question ID : 441009359059
Option 1 ID : 4410091402225
Option 2 ID : 4410091402222
Option 3 ID : 4410091402224
Option 4 ID : 4410091402223
Status : Not Answered
Chosen Option : --

Q.26 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 Queens are beautiful. All beautiful are tall.
Conclusions (I) : Some tall are beautiful.
Conclusions (II) : Some beautiful are not Queens.

- Ans A. Only conclusion 2 follows
 B. Neither conclusion 1 nor 2 follows
 C. Only conclusion 1 follows
 D. Both conclusion 1 and 2 follow

Question ID : 441009386214
Option 1 ID : 4410091510479
Option 2 ID : 4410091510481
Option 3 ID : 4410091510478
Option 4 ID : 4410091510480
Status : Not Answered
Chosen Option : --

Q.27 Seven boxes A,B,C, D,E,F and G are kept one over the other but not necessarily in the same order.
Only two boxes are kept between B and A. Only D is kept above F. No box is kept below A,E is kept at some place below G but at some place above C.
Which box is kept third above C?

- Ans A. A
 B. G
 C. D
 D. F

Question ID : 441009358959
Option 1 ID : 4410091401838
Option 2 ID : 4410091401841
Option 3 ID : 4410091401839
Option 4 ID : 4410091401840
Status : Not Answered
Chosen Option : --

Q.28 What will come in the place of '?' in the following equation, if '+' and '-' are interchanged and 'x' and '÷' are interchanged?
 $16 \div 14 - 15 + 10 \times 5 = ?$

- Ans A. 237
 B. 236
 C. 235
 D. 238

Question ID : 441009359409
Option 1 ID : 4410091403621
Option 2 ID : 4410091403620
Option 3 ID : 4410091403619
Option 4 ID : 4410091403622
Status : Not Answered
Chosen Option : --

Q.29 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)
(10,20,120)
(14,15,116)

- Ans A. (7,19,104)
 B. (27,17,96)
 C. 42,16,112)
 D. 34,19,132)

Question ID : 441009359552
Option 1 ID : 4410091404207
Option 2 ID : 4410091404208
Option 3 ID : 4410091404210
Option 4 ID : 4410091404209
Status : Not Answered
Chosen Option : --

Q.30 H, I, J, M, N, O and P are sitting in a straight line facing north.
Only two people sit to the left of H. Only three people sit between H and N. Only one person sits between N and J. P sits to the immediate left of O. M is not an immediate neighbor of N.
How many people sit to the right of I?

- Ans A. Two
 B. Four
 C. Three
 D. One

Question ID : 441009358948
Option 1 ID : 4410091401795
Option 2 ID : 4410091401797
Option 3 ID : 4410091401796
Option 4 ID : 4410091401794
Status : Not Answered
Chosen Option : --

Q.31 Refer to the following letter, symbol series and answer the question.

Counting to be done from left to right only.

(Left) B H @ \$ N E % # * \$ X Z # M A T % X C M \$ % Y (Right)

If all the symbols are dropped from the series, which of the following will be fourth from the right?

- Ans
- A. Z
 - B. A
 - C. X
 - D. M

Question ID : 441009386823
 Option 1 ID : 4410091512910
 Option 2 ID : 4410091512913
 Option 3 ID : 4410091512912
 Option 4 ID : 4410091512911
 Status : Not Answered
 Chosen Option : --

Q.32 What should come in place of '?' in the given series?

150 125 100 75 50 ?

- Ans
- A. 25
 - B. 22
 - C. 24
 - D. 20

Question ID : 441009359421
 Option 1 ID : 4410091403670
 Option 2 ID : 4410091403668
 Option 3 ID : 4410091403669
 Option 4 ID : 4410091403667
 Status : Not Answered
 Chosen Option : --

Q.33 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. MXI
 - B. YNC
 - C. LAP
 - D. ODS

Question ID : 441009359127
 Option 1 ID : 4410091402492
 Option 2 ID : 4410091402495
 Option 3 ID : 4410091402494
 Option 4 ID : 4410091402493
 Status : Not Answered
 Chosen Option : --

Q.34 K,L,M,N,P,Q and R are sitting around a circular table facing the centre of the table.
Only K sits between L and M. M sits third to the left of R. N sits to the immediate left of R. Q is not an immediate neighbor of M.
Who sits second to the right of P?

- Ans A. M
 B. K
 C. R
 D. N

Question ID : 441009358942
Option 1 ID : 4410091401771
Option 2 ID : 4410091401770
Option 3 ID : 4410091401773
Option 4 ID : 4410091401772
Status : Not Answered
Chosen Option : --

Section : Domain Knowledge

Q.1 Labour law is also known as:

- Ans A. Labour market code
 B. Human capital conduct
 C. Industrial workforce code
 D. Employment law

Question ID : 441009871806
Option 1 ID : 4410093440395
Option 2 ID : 4410093440396
Option 3 ID : 4410093440397
Option 4 ID : 4410093440394
Status : Not Answered
Chosen Option : --

Q.2 In a free longitudinal vibration of a spring-mass system with no damping, the total mechanical energy _____.

- Ans A. increases quadratically with time
 B. becomes zero at maximum displacement
 C. decreases exponentially with time
 D. remains constant

Question ID : 441009664938
Option 1 ID : 4410092613780
Option 2 ID : 4410092613782
Option 3 ID : 4410092613779
Option 4 ID : 4410092613781
Status : Answered
Chosen Option : D

Q.3 Which of the following is the fastest memory?

- Ans A. RAM
 B. Hard Disk
 C. Cache
 D. ROM

Question ID : 4410091152388
Option 1 ID : 4410094544463
Option 2 ID : 4410094544462
Option 3 ID : 4410094544465
Option 4 ID : 4410094544464
Status : Answered
Chosen Option : C

Q.4 Which of the following statements is NOT correct about the moving average?

- Ans A. As each new observation becomes available, a new mean is computed by adding the newest value and dropping the oldest value.
 B. Moving average of order k is the mean value of k consecutive observations.
 C. The number of data points in each average changes as time passes.
 D. The most recent moving average value provides a forecast for the next period.

Question ID : 441009605504
Option 1 ID : 4410092377135
Option 2 ID : 4410092377133
Option 3 ID : 4410092377136
Option 4 ID : 4410092377134
Status : Not Answered
Chosen Option : --

Q.5 In the equation $VT^n = C$, the exponent n depends on:

- Ans A. cutting fluid
 B. machine type
 C. power supply
 D. tool material

Question ID : 441009672554
Option 1 ID : 4410092644338
Option 2 ID : 4410092644340
Option 3 ID : 4410092644341
Option 4 ID : 4410092644339
Status : Answered
Chosen Option : D

Q.6 In one-dimensional steady-state heat conduction through a plane wall with constant thermal conductivity, the temperature distribution is:

- Ans A. logarithmic
 B. exponential
 C. parabolic
 D. linear

Question ID : 441009393922

Option 1 ID : 4410091541184

Option 2 ID : 4410091541181

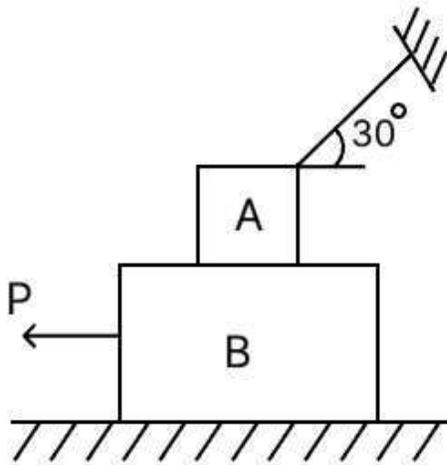
Option 3 ID : 4410091541182

Option 4 ID : 4410091541183

Status : Answered

Chosen Option : D

Q.7 Calculate the force P required to move the block B shown in the given figure. Weight of block A and B are 1 kN and 2 kN, respectively, while coefficient of friction on each surface is 0.3.



- Ans A. 0.25 kN
 B. 0.85 kN
 C. 1.10 kN
 D. 0.6 kN

Question ID : 441009641317

Option 1 ID : 4410092519407

Option 2 ID : 4410092519408

Option 3 ID : 4410092519410

Option 4 ID : 4410092519409

Status : Not Answered

Chosen Option : --

Q.8 If the clearance factor is unity, then the clearance volume of a reciprocating compressor

- Ans A. becomes equal to the total volume
 B. becomes more than stroke volume
 C. becomes less than stroke volume
 D. becomes equal to the stroke volume

Question ID : 441009460815
Option 1 ID : 4410091801963
Option 2 ID : 4410091801961
Option 3 ID : 4410091801960
Option 4 ID : 4410091801962
Status : Answered
Chosen Option : D

Q.9 In which year was the famous Maternity Benefit Act enacted in India?

- Ans A. 1956
 B. 1955
 C. 1972
 D. 1961

Question ID : 441009871846
Option 1 ID : 4410093440551
Option 2 ID : 4410093440553
Option 3 ID : 4410093440552
Option 4 ID : 4410093440550
Status : Not Answered
Chosen Option : --

Q.10 It is assumed that in Economic Order Quantity (EOQ), the ordering cost per order:

- Ans A. depends on the holding cost
 B. depends on the frequency and cost of the order
 C. depends on the size of the order
 D. remains constant

Question ID : 441009605572
Option 1 ID : 4410092377407
Option 2 ID : 4410092377408
Option 3 ID : 4410092377405
Option 4 ID : 4410092377406
Status : Not Answered
Chosen Option : --

Q.11 In a counter flow heat exchanger, effectiveness increases when:

- Ans A. NTU increases
 B. flow is turbulent only
 C. heat capacity ratio is very low
 D. NTU is very low

Question ID : 441009605574
Option 1 ID : 4410092377415
Option 2 ID : 4410092377416
Option 3 ID : 4410092377413
Option 4 ID : 4410092377414
Status : Answered
Chosen Option : D

Q.12 Which of the following describes a hardware component in computer systems?

- Ans A. Operating System
 B. Antivirus
 C. Word Processor
 D. Motherboard

Question ID : 4410091152419
Option 1 ID : 4410094544586
Option 2 ID : 4410094544587
Option 3 ID : 4410094544589
Option 4 ID : 4410094544588
Status : Answered
Chosen Option : D

Q.13 A machine component is subjected to fluctuating stress that varies from 40 to 100 N/mm^2 . The corrected endurance limit stress for the machine component is 150 N/mm^2 . The ultimate tensile strength and yield strength of the material are 600 and 350 N/mm^2 , respectively. What will be the factor of safety using the Soderberg line?

- Ans A. 4.5
 B. 1.5
 C. 3.5
 D. 2.5

Question ID : 441009397573
Option 1 ID : 4410091555731
Option 2 ID : 4410091555728
Option 3 ID : 4410091555730
Option 4 ID : 4410091555729
Status : Answered
Chosen Option : D

Q.14 What does engineering professional ethics mean?

- Ans A. Avoiding teamwork
 B. Following moral principles in professional practice
 C. Obeying orders from seniors
 D. Following personal interests

Question ID : 4410091151763
 Option 1 ID : 4410094541991
 Option 2 ID : 4410094541990
 Option 3 ID : 4410094541989
 Option 4 ID : 4410094541988
 Status : Answered
 Chosen Option : B

Q.15 Which of the following formula is correct about radius of curvature (R)

Where: R = Radius of curvature of the bent sheet/beam

E = Young's modulus of the material

I = Moment of inertia of the cross – section

M = Bending moment

- Ans A. $R = \frac{M.I}{E}$
 B. $R = \frac{M}{E.I}$
 C. $R = \frac{M}{I}$
 D. $R = \frac{E.I}{M}$

Question ID : 441009802207
 Option 1 ID : 4410093162938
 Option 2 ID : 4410093162937
 Option 3 ID : 4410093162939
 Option 4 ID : 4410093162936
 Status : Answered
 Chosen Option : D

Q.16 If the evaporator and condenser pressure in the reciprocating compressor are 4 bar and 16 bar, respectively, then what will the inter-cooler pressure be?

- Ans A. 20 bar
 B. 12 bar
 C. 8 bar
 D. 4 bar

Question ID : 441009460956
 Option 1 ID : 4410091802521
 Option 2 ID : 4410091802524
 Option 3 ID : 4410091802523
 Option 4 ID : 4410091802522
 Status : Answered
 Chosen Option : C

Q.17 A wall of thickness L and thermal conductivity k has a steady heat flow Q through it. The temperature drop across the wall is ΔT . What is the expression for the rate of heat conduction per unit area?

Ans A. $q = kL \Delta T$

B. $q = \frac{\Delta T}{kL}$

C. $q = \frac{k \Delta T}{L}$

D. $q = \frac{kL}{\Delta T}$

Question ID : 441009394368

Option 1 ID : 4410091542973

Option 2 ID : 4410091542971

Option 3 ID : 4410091542972

Option 4 ID : 4410091542970

Status : Answered

Chosen Option : C

Q.18 In programming, what is a variable?

Ans A. A fixed value

B. A storage location identified by a name

C. A type of loop

D. An operator

Question ID : 4410091153463

Option 1 ID : 4410094548689

Option 2 ID : 4410094548691

Option 3 ID : 4410094548690

Option 4 ID : 4410094548692

Status : Answered

Chosen Option : B

Q.19 Which of the following is NOT true about deforestation?

Ans A. Deforestation is taking place only in developing countries.

B. Clearing of forest for agriculture causes deforestation.

C. Population explosion is one of the reasons for deforestation.

D. Industrialisation and urban expansion are also responsible for deforestation.

Question ID : 441009643360

Option 1 ID : 4410092527628

Option 2 ID : 4410092527627

Option 3 ID : 4410092527626

Option 4 ID : 4410092527629

Status : Answered

Chosen Option : A

Q.20 Which of the following purposes of clearance volume is INCORRECT?

- Ans A. Prevents damage to moving components
 B. Reduces noise and vibration during operation
 C. The volumetric efficiency is between 90% to 95% because of the presence of clearance volume
 D. Gives mechanical freedom to the moving parts

Question ID : 441009460823

Option 1 ID : 4410091801986

Option 2 ID : 4410091801985

Option 3 ID : 4410091801987

Option 4 ID : 4410091801984

Status : Answered

Chosen Option : C

Q.21 A simply supported beam of length $L = 2$ m, mass per unit length $m = 10$ kg/m and flexural rigidity $EI = 2000\text{Nm}^2$ undergoes free transverse vibration. What is the first natural frequency ω_1 in rad/s? (Use $\pi^2 \approx 10$, and $\sqrt{200} \approx 14$)

- Ans A. 25 rad/s
 B. 35 rad/s
 C. 7 rad/s
 D. 14 rad/s

Question ID : 441009665252

Option 1 ID : 4410092615045

Option 2 ID : 4410092615046

Option 3 ID : 4410092615043

Option 4 ID : 4410092615044

Status : Answered

Chosen Option : D

Q.22 Which principle allows the conversion of a dynamic force problem into an equivalent static equilibrium problem by introducing inertia forces and couples in mechanism analysis?

- Ans A. Grashof's law for linkages
 B. Instantaneous centre method
 C. D'Alembert's principle of dynamics
 D. Kennedy's theorem on centres

Question ID : 441009550253

Option 1 ID : 4410092156389

Option 2 ID : 4410092156392

Option 3 ID : 4410092156391

Option 4 ID : 4410092156390

Status : Answered

Chosen Option : C

Q.23 In material structure, a dislocation is a type of:

- Ans A. volume defect
 B. point defect
 C. surface defect
 D. line defect

Question ID : 4410091144792
Option 1 ID : 4410094514127
Option 2 ID : 4410094514124
Option 3 ID : 4410094514126
Option 4 ID : 4410094514125
Status : Answered
Chosen Option : B

Q.24 Which of the following best defines tolerance in the context of engineering drawing and manufacturing?

- Ans A. The permissible variation in the dimension of a part, ensuring proper function and interchangeability.
 B. The statistical mean of the actual measurements taken from a batch of components.
 C. The range of temperature a material can withstand without deforming.
 D. The maximum load a component can carry before failure.

Question ID : 441009672565
Option 1 ID : 4410092644383
Option 2 ID : 4410092644385
Option 3 ID : 4410092644382
Option 4 ID : 4410092644384
Status : Answered
Chosen Option : A

Q.25 Which of the following components of a reciprocating compressor transfers the linear motion of the piston to the rotational motion of the crankshaft?

- Ans A. Frame (Crankcase)
 B. Valves
 C. Connecting rod
 D. Crankshaft

Question ID : 441009460813
Option 1 ID : 4410091801939
Option 2 ID : 4410091801937
Option 3 ID : 4410091801938
Option 4 ID : 4410091801936
Status : Answered
Chosen Option : C

Q.26 What is a crystalline material's atomic configuration referred to as?

- Ans A. Molecule
 B. Crystal lattice
 C. Phase
 D. Microstructure

Question ID : 4410091144466
Option 1 ID : 4410094512823
Option 2 ID : 4410094512821
Option 3 ID : 4410094512822
Option 4 ID : 4410094512820
Status : Answered
Chosen Option : D

Q.27 In viscous damping, a damper offers resistance 0.05 N at constant velocity 0.04 m/s.
Determine viscous damping coefficient in N.s/m.

- Ans A. 0.09
 B. 1.25
 C. 0.8
 D. 0.002

Question ID : 441009664865
Option 1 ID : 4410092613486
Option 2 ID : 4410092613484
Option 3 ID : 4410092613483
Option 4 ID : 4410092613485
Status : Answered
Chosen Option : B

Q.28 What is the loss of energy in the primary of the transformer due to the reversal of magnetism in the iron core called?

- Ans A. Hysteresis loss
 B. Eddy current loss
 C. Copper loss
 D. Dielectric loss

Question ID : 441009641335
Option 1 ID : 4410092519477
Option 2 ID : 4410092519475
Option 3 ID : 4410092519476
Option 4 ID : 4410092519478
Status : Answered
Chosen Option : A

Q.29 A CNC milling program uses the following line:

G17 G02 X50 Y50 I10 J0

Assuming the current position is at X40 Y50, which of the following best describes the tool motion?

- Ans A. Counter-clockwise circular interpolation in the XY plane with centre at X50, Y60
- B. Clockwise circular interpolation in the XZ plane with 10 mm radius
- C. Clockwise circular interpolation in the XY plane with center at X50, Y50, and radius of 10 mm
- D. Clockwise circular interpolation in the XY plane with center at X50, Y50

Question ID : 441009673862

Option 1 ID : 4410092649564

Option 2 ID : 4410092649563

Option 3 ID : 4410092649566

Option 4 ID : 4410092649565

Status : Answered

Chosen Option : C

Q.30 For a laminar boundary layer over a flat plate, the thickness δ at a distance x from the leading edge is:

- Ans A. $\delta \propto x^{2/3}$
- B. $\delta \propto x^{3/4}$
- C. $\delta \propto x^{1/2}$
- D. $\delta \propto x$

Question ID : 441009656930

Option 1 ID : 4410092582068

Option 2 ID : 4410092582069

Option 3 ID : 4410092582066

Option 4 ID : 4410092582067

Status : Answered

Chosen Option : C

Q.31 Which of the following forecasting methods is used to form a weighted average of past observations to smooth short-term fluctuations?

- Ans A. Logarithmic average method
- B. Exponentially weighted moving average method
- C. Simple moving average method
- D. Fourier averaging method

Question ID : 441009605522

Option 1 ID : 4410092377207

Option 2 ID : 4410092377205

Option 3 ID : 4410092377206

Option 4 ID : 4410092377208

Status : Not Answered

Chosen Option : --

Q.32 What does Plagiarism in engineering refer to?

- Ans A. Building machines quickly
 B. Copying another's work or ideas without credit
 C. Testing machines without permission
 D. Selling old designs

Question ID : 4410091151770
Option 1 ID : 4410094542018
Option 2 ID : 4410094542017
Option 3 ID : 4410094542016
Option 4 ID : 4410094542019
Status : Answered
Chosen Option : B

Q.33 The dynamic load-carrying capacity of a bearing is defined as the radial load in radial bearings that can be carried for a minimum life of what revolutions?

- Ans A. 10 million
 B. 1 million
 C. 100 million
 D. 0.1 million

Question ID : 441009398209
Option 1 ID : 4410091558284
Option 2 ID : 4410091558283
Option 3 ID : 4410091558285
Option 4 ID : 4410091558282
Status : Answered
Chosen Option : B

Q.34 A fluid with density ρ and dynamic viscosity μ flows through a pipe of diameter D . If a new physical quantity is defined as: $\Pi = \mu / \rho D$, then the dimensional formula of Π is:

- Ans A. LT^{-1}
 B. T^{-1}
 C. L^2T^{-1}
 D. LT^{-2}

Question ID : 441009663355
Option 1 ID : 4410092607469
Option 2 ID : 4410092607470
Option 3 ID : 4410092607468
Option 4 ID : 4410092607467
Status : Answered
Chosen Option : A

Q.35 In which of the following control methods for reciprocating compressors a check valve is provided in the system in order to isolate the inactive cylinders from the active cylinders?

- Ans A. By cylinder by-pass system
 B. By using multi-speed motor
 C. By using multiple compressors
 D. By suction valve lift control

Question ID : 441009460860

Option 1 ID : 4410091802138

Option 2 ID : 4410091802135

Option 3 ID : 4410091802137

Option 4 ID : 4410091802136

Status : Answered

Chosen Option : A

Q.36 Determine the mass moment of inertia of three identical rods (each of mass m and length l) arranged to form an equilateral triangle, about an axis perpendicular to the plane of the triangle and passing through the centroid of the triangle.

- Ans A. $\frac{ml^2}{2}$
 B. $\frac{ml^2}{12}$
 C. $\frac{ml^2}{6}$
 D. $\frac{ml^2}{3}$

Question ID : 441009640773

Option 1 ID : 4410092517240

Option 2 ID : 4410092517241

Option 3 ID : 4410092517239

Option 4 ID : 4410092517242

Status : Answered

Chosen Option : A

Q.37 The Coriolis component of acceleration arises when a slider moves radially on a rotating link. Which of the following correctly gives the magnitude of this acceleration?

- Ans A. $\omega \cdot v$
 B. $\alpha \cdot r$
 C. $\omega^2 \cdot r$
 D. $2 \cdot \omega \cdot v$

Question ID : 441009550219

Option 1 ID : 4410092156258

Option 2 ID : 4410092156256

Option 3 ID : 4410092156255

Option 4 ID : 4410092156257

Status : Answered

Chosen Option : D

Q.38 Given the Blasius solution, what is the approximate boundary layer thickness at $x = 1$ m from leading edge ($Re_x = 10^5$)?

- Ans A. 5 mm
 B. 50 mm
 C. 16 mm
 D. 25 mm

Question ID : 441009657309
Option 1 ID : 4410092583610
Option 2 ID : 4410092583613
Option 3 ID : 4410092583611
Option 4 ID : 4410092583612
Status : Answered
Chosen Option : C

Q.39 Which of the following best defines 'heat' in thermodynamics?

- Ans A. Energy stored in a body
 B. Energy transferred due to temperature difference
 C. Energy associated with pressure
 D. Mechanical energy

Question ID : 441009394485
Option 1 ID : 4410091543442
Option 2 ID : 4410091543443
Option 3 ID : 4410091543444
Option 4 ID : 4410091543445
Status : Answered
Chosen Option : B

Q.40 Kirchhoff's Voltage Law (KVL) is applicable when:

- Ans A. the circuit contains no resistors
 B. only one voltage source is present in the circuit
 C. the circuit is open only
 D. there is one or more voltage source in a closed loop

Question ID : 441009620049
Option 1 ID : 4410092434319
Option 2 ID : 4410092434317
Option 3 ID : 4410092434318
Option 4 ID : 4410092434320
Status : Not Answered
Chosen Option : --

Q.41 In which of the following ways can the environment NOT be conserved?

- Ans A. Encouraging dependence on fossil fuels.
 B. Stopping deforestation and protecting forest cover.
 C. Using natural non-renewable resources efficiently and responsibly.
 D. Adopting effective waste management techniques.

Question ID : 441009643434
 Option 1 ID : 4410092527929
 Option 2 ID : 4410092527926
 Option 3 ID : 4410092527927
 Option 4 ID : 4410092527928
 Status : Answered
 Chosen Option : A

Q.42 A black body at 500 K emits radiation. If the temperature increases to 1000 K, the emitted energy increases by a factor of:

- Ans A. 2
 B. 8
 C. 16
 D. 4

Question ID : 441009563055
 Option 1 ID : 4410092207354
 Option 2 ID : 4410092207356
 Option 3 ID : 4410092207357
 Option 4 ID : 4410092207355
 Status : Answered
 Chosen Option : C

Q.43 Section modulus of circular section is _____.

- Ans A. $\frac{\pi d^4}{32}$
 B. $\frac{\pi d^3}{32}$
 C. $\frac{\pi d^3}{64}$
 D. $\frac{\pi d^4}{64}$

Question ID : 441009640704
 Option 1 ID : 4410092516967
 Option 2 ID : 4410092516968
 Option 3 ID : 4410092516970
 Option 4 ID : 4410092516969
 Status : Answered
 Chosen Option : B

Q.44 Air at 30°C flows over a flat plate maintained at 90°C. If the convective heat transfer coefficient is 25 W/m²·K, what is the heat flux to the surface?

- Ans
- A. 1250 W/m²
 - B. 1800 W/m²
 - C. 1500 W/m²
 - D. 600 W/m²

Question ID : 441009394416
Option 1 ID : 4410091543167
Option 2 ID : 4410091543169
Option 3 ID : 4410091543168
Option 4 ID : 4410091543166
Status : Answered
Chosen Option : C

Q.45 A straight line joining endurance limit (S_e) on the ordinate to yield strength or yield point (S_{yt}) on the abscissa is defined by which of the following terms?

- Ans
- A. Soderberg Line
 - B. S-N Curve Line
 - C. Goodman Line
 - D. Gerber Line

Question ID : 441009397557
Option 1 ID : 4410091555664
Option 2 ID : 4410091555667
Option 3 ID : 4410091555665
Option 4 ID : 4410091555666
Status : Answered
Chosen Option : A

Q.46 In the dynamic analysis of a four-link mechanism, why is the inertia force F_i replaced with an equivalent offset inertia force in the procedure?

- Ans
- A. To eliminate the inertia couple and focus only on linear inertia effects
 - B. To convert dynamic analysis into an equivalent static force system for easier computation
 - C. To include the effect of angular acceleration and eliminate the need for velocity diagrams
 - D. To remove the need for acceleration diagrams and simplify link mass estimation

Question ID : 441009550263
Option 1 ID : 4410092156431
Option 2 ID : 4410092156429
Option 3 ID : 4410092156428
Option 4 ID : 4410092156430
Status : Not Answered
Chosen Option : --

Q.47 The non-negative variables which are added in the left hand side (LHS) of the constraints to convert equality into the standard form of simplex table is known as:

- Ans A. slack variables
 B. artificial variables
 C. basic feasible solution
 D. surplus variables

Question ID : 441009605484
 Option 1 ID : 4410092377054
 Option 2 ID : 4410092377056
 Option 3 ID : 4410092377055
 Option 4 ID : 4410092377053
 Status : Not Answered
 Chosen Option : --

Q.48 Expression for time of flight (T) of a projectile in a horizontal plane is _____.

- Ans A. $T = \frac{u \sin 2\theta}{2g}$
 B. $T = \frac{u \sin \theta}{2g}$
 C. $T = \frac{u \sin 2\theta}{g}$
 D. $T = \frac{2u \sin \theta}{g}$

Question ID : 441009641095
 Option 1 ID : 4410092518522
 Option 2 ID : 4410092518519
 Option 3 ID : 4410092518521
 Option 4 ID : 4410092518520
 Status : Not Attempted and Marked For Review
 Chosen Option : --

Q.49 A square beam 20 mm × 20 mm in section and 2 m long is supported at the ends. The beam fails when a point load of 400 N is applied at the centre of the beam. What is the value of flexural stress in the beam?

- Ans A. $250 \frac{N}{mm^2}$
 B. $150 \frac{N}{mm^2}$
 C. $200 \frac{N}{mm^2}$
 D. $100 \frac{N}{mm^2}$

Question ID : 441009801574
 Option 1 ID : 4410093160408
 Option 2 ID : 4410093160405
 Option 3 ID : 4410093160407
 Option 4 ID : 4410093160406
 Status : Answered
 Chosen Option : B

Q.50 A reverted gear train consists of four gears with teeth $T_1 = 20$, $T_2 = 40$, $T_3 = 30$, and T_4 to be determined. If gear 1 rotates at $N_1 = 1200$ rpm and gear 4 rotates at $N_4 = 400$ rpm, what should be the number of teeth on gear 4 for the train to maintain proper function?

- Ans A. 75
 B. 45
 C. 90
 D. 60

Question ID : 441009562532
 Option 1 ID : 4410092205152
 Option 2 ID : 4410092205150
 Option 3 ID : 4410092205153
 Option 4 ID : 4410092205151
 Status : Answered
 Chosen Option : D

Q.51 Which of the following conditions leads to the appearance of the Coriolis component of acceleration in a mechanism?

- Ans A. When a link rotates about a fixed point
 B. When a crank rotates at uniform angular velocity
 C. When a link translates with constant speed
 D. When a slider moves along a rotating link

Question ID : 441009550197
 Option 1 ID : 4410092156169
 Option 2 ID : 4410092156172
 Option 3 ID : 4410092156171
 Option 4 ID : 4410092156170
 Status : Answered
 Chosen Option : D

Q.52 According to Kirchhoff's current law, the algebraic sum of currents entering and leaving any point in a circuit must be equal to:

- Ans A. 0
 B. -1
 C. ∞
 D. +1

Question ID : 441009620005
 Option 1 ID : 4410092434141
 Option 2 ID : 4410092434142
 Option 3 ID : 4410092434143
 Option 4 ID : 4410092434144
 Status : Answered
 Chosen Option : A

Q.53 The order of momentum thickness (θ), displacement thickness (δ^*) and energy thickness (δ_e) is:

- Ans
- A. $\theta < \delta^* < \delta_e$
 - B. $\delta^* < \delta_e < \theta$
 - C. $\delta_e < \delta^* < \theta$
 - D. $\theta < \delta_e < \delta^*$

Question ID : 441009657100

Option 1 ID : 4410092582763

Option 2 ID : 4410092582764

Option 3 ID : 4410092582762

Option 4 ID : 4410092582765

Status : Answered

Chosen Option : D

Q.54 How can eddy current loss in a transformer core be reduced?

- Ans
- A. By using a core made of an insulator
 - B. By increasing the frequency of the current
 - C. By making the core into thick flat sections
 - D. By making the core into thin, laminated sections

Question ID : 441009629004

Option 1 ID : 4410092470167

Option 2 ID : 4410092470168

Option 3 ID : 4410092470170

Option 4 ID : 4410092470169

Status : Not Answered

Chosen Option : --

Q.55 Which of the following equations is used to determine the stress and strain relation in the plastic region of the stress-strain curve of a metal?

- Ans
- A. Power law
 - B. Hooke's law
 - C. Pascal law
 - D. Boyle's law

Question ID : 441009753533

Option 1 ID : 4410092968115

Option 2 ID : 4410092968113

Option 3 ID : 4410092968114

Option 4 ID : 4410092968116

Status : Not Answered

Chosen Option : --

Q.56 Which of the following domains is NOT typically covered under labour laws?

- Ans A. Industrial relations
 B. Intellectual property
 C. Employment standards
 D. Workplace health and safety

Question ID : 441009871822
Option 1 ID : 4410093440458
Option 2 ID : 4410093440461
Option 3 ID : 4410093440459
Option 4 ID : 4410093440460
Status : Answered
Chosen Option : B

Q.57 Which of the following is NOT the correct reason for the termination of a contract?

- Ans A. Compliance with the contract
 B. Dispensing the promise
 C. Impossibility of performance
 D. Breach of contract

Question ID : 441009871879
Option 1 ID : 4410093440677
Option 2 ID : 4410093440676
Option 3 ID : 4410093440674
Option 4 ID : 4410093440675
Status : Answered
Chosen Option : A

Q.58 A box of mass 10 kg travelling at 2 m/s impact with a spring which compresses 1 mm per Newton. Determine the maximum compression in the spring.

- Ans A. 100 mm
 B. 200 mm
 C. 400 mm
 D. 50 mm

Question ID : 441009641176
Option 1 ID : 4410092518839
Option 2 ID : 4410092518840
Option 3 ID : 4410092518842
Option 4 ID : 4410092518841
Status : Not Attempted and
Marked For Review
Chosen Option : --

Q.59 Which of the following advantages of multi-stage compression over single stage compression is INCORRECT?

- Ans A. It reduces the leakage loss considerably.
- B. It provides effective lubrication because of lower temperature range.
- C. It gives non-uniform torque and hence a smaller size flywheel is required.
- D. It improves the volumetric efficiency for the given pressure ratio.

Question ID : 441009460827
Option 1 ID : 4410091802002
Option 2 ID : 4410091802000
Option 3 ID : 4410091802001
Option 4 ID : 4410091802003
Status : Not Answered
Chosen Option : --

Q.60 Which of the following construction cost estimates is known as Rough Order of Magnitude (ROM)?

- Ans A. Parametric cost estimate
- B. Preliminary cost estimate
- C. Detailed cost estimate
- D. Definitive bid cost estimate

Question ID : 441009718916
Option 1 ID : 4410092829380
Option 2 ID : 4410092829377
Option 3 ID : 4410092829379
Option 4 ID : 4410092829378
Status : Answered
Chosen Option : B

Q.61 Which of the following statements best explains the meaning of the designation H8/f7 according to the Indian Standard (IS 919) system of limits and fits?

- Ans A. It indicates a shaft basis system with H8 shaft and f7 hole, resulting in a clearance fit.
- B. It is a hole basis system where the shaft is larger than the hole, ensuring an interference fit.
- C. It denotes a hole basis system with a medium tolerance hole and a shaft tolerance zone below the hole, typically resulting in a clearance fit.
- D. It represents a transition fit with equal probability of clearance and interference, used in precision assemblies.

Question ID : 441009672578
Option 1 ID : 4410092644434
Option 2 ID : 4410092644436
Option 3 ID : 4410092644435
Option 4 ID : 4410092644437
Status : Not Answered
Chosen Option : --

Q.62 Which of the following is NOT an objective of environmental conservation?

- Ans A. Ensuring access to clean water and air
 B. Combating climate change
 C. Protecting biodiversity
 D. Promoting industrialisation without environmental regulation

Question ID : 441009643403
Option 1 ID : 4410092527800
Option 2 ID : 4410092527799
Option 3 ID : 4410092527798
Option 4 ID : 4410092527801
Status : Answered
Chosen Option : D

Q.63 In a turbulent boundary layer, the shape factor $H = \delta^*/\theta$ typically:

- Ans A. is independent of Reynolds number
 B. is only affected by the surface roughness
 C. decreases with increasing Reynolds number
 D. increases with increasing Reynolds number

Question ID : 441009656979
Option 1 ID : 4410092582272
Option 2 ID : 4410092582273
Option 3 ID : 4410092582270
Option 4 ID : 4410092582271
Status : Answered
Chosen Option : A

Q.64 Cloud databases are typically:

- Ans A. stored only on paper
 B. not accessible via the internet
 C. hosted on cloud platforms and accessible online
 D. used only for government purposes

Question ID : 4410091153412
Option 1 ID : 4410094548493
Option 2 ID : 4410094548494
Option 3 ID : 4410094548495
Option 4 ID : 4410094548496
Status : Answered
Chosen Option : C

Q.65 A point on a disc of radius 500 mm undergoes uniform linear acceleration of 4 m/s^2 . Calculate angular acceleration of the disc.

- Ans A. 16 rad/s^2
 B. 8 rad/s^2
 C. 2 rad/s^2
 D. 4 rad/s^2

Question ID : 441009641203
Option 1 ID : 4410092518950
Option 2 ID : 4410092518948
Option 3 ID : 4410092518949
Option 4 ID : 4410092518947
Status : Answered
Chosen Option : B

Q.66 Which of the following gases is harmful to the ozone layer?

- Ans A. Nitrogen
 B. Hydrogen
 C. Chlorofluorocarbons
 D. Carbon dioxide

Question ID : 441009643461
Option 1 ID : 4410092528031
Option 2 ID : 4410092528033
Option 3 ID : 4410092528030
Option 4 ID : 4410092528032
Status : Answered
Chosen Option : C

Q.67 If the boundary layer velocity profile is linear (i.e., $u/U = y/\delta$), the displacement thickness is:

- Ans A. $2\delta/3$
 B. $\delta/4$
 C. $\delta/2$
 D. $\delta/3$

Question ID : 441009657056
Option 1 ID : 4410092582589
Option 2 ID : 4410092582588
Option 3 ID : 4410092582587
Option 4 ID : 4410092582586
Status : Answered
Chosen Option : C

Q.68 Which of the following statements correctly distinguishes nitriding from carburising in the context of case hardening?

- Ans A. Nitriding requires quenching after heating, while carburising does not.
- B. Both nitriding and carburizing involve soaking the part in molten salt baths to introduce carbon and nitrogen simultaneously.
- C. Nitriding introduces nitrogen into the surface at sub-critical temperatures and does not require quenching, unlike carburising.
- D. Carburising is performed at lower temperatures than nitriding and introduces nitrogen into the surface.

Question ID : 441009674434

Option 1 ID : 4410092651871

Option 2 ID : 4410092651874

Option 3 ID : 4410092651873

Option 4 ID : 4410092651872

Status : Answered

Chosen Option : C

Q.69 Which of following mechanical properties of materials can be obtained using universal tensile testing?

- Ans A. Yield stress
- B. Hardness
- C. Creep properties
- D. Wear resistance

Question ID : 441009753688

Option 1 ID : 4410092968739

Option 2 ID : 4410092968737

Option 3 ID : 4410092968738

Option 4 ID : 4410092968740

Status : Not Answered

Chosen Option : --

Q.70 If P = equivalent dynamic load (N), F_r = radial load (N), F_a = axial or thrust load (N), V = race-rotation factor and X and Y are radial and thrust factors, respectively. Then, the expression for the equivalent dynamic load is given by which of the following expressions?

- Ans A. $P = XVF_r + YF_a$
- B. $P = XVF_r - YF_a$
- C. $P = XF_a + YVF_r$
- D. $P = XF_a - YVF_r$

Question ID : 441009397623

Option 1 ID : 4410091555934

Option 2 ID : 4410091555935

Option 3 ID : 4410091555936

Option 4 ID : 4410091555937

Status : Answered

Chosen Option : A

Q.71 Which of the following statements is NOT correct?

- Ans A. The Gerber curve takes the mean path through failure points.
 B. Theories are based on the Goodman line, as failure criteria are conservative theories.
 C. Soderberg line is more accurate in predicting fatigue failure than the Gerber curve.
 D. Theories are based on the Soderberg line, as failure criteria are conservative theories.

Question ID : 441009397561
Option 1 ID : 4410091555683
Option 2 ID : 4410091555682
Option 3 ID : 4410091555680
Option 4 ID : 4410091555681
Status : Answered
Chosen Option : B

Q.72 Which of the following relations is correct for core loss in a transformer?

- Ans A. Core loss = Hysteresis loss \times Eddy current loss
 B. Core loss = Hysteresis loss / Eddy current loss
 C. Core loss = Hysteresis loss + Eddy current loss
 D. Core loss = Hysteresis loss - Eddy current loss

Question ID : 441009626341
Option 1 ID : 4410092459519
Option 2 ID : 4410092459518
Option 3 ID : 4410092459516
Option 4 ID : 4410092459517
Status : Not Answered
Chosen Option : --

Q.73 For an opaque body, the relation between absorptivity α , reflectivity ρ and transmissivity τ is:

- Ans A. $\alpha + \rho = 1$
 B. $\alpha + \rho + \tau = 0$
 C. $\alpha + \tau = 1$
 D. $\rho + \tau = 1$

Question ID : 441009461607
Option 1 ID : 4410091804849
Option 2 ID : 4410091804852
Option 3 ID : 4410091804850
Option 4 ID : 4410091804851
Status : Answered
Chosen Option : A

Q.74 For which of the following applications are deterministic models usually NOT implemented?

- Ans A. Inventory management where demand and supply are known
 B. PERT
 C. CPM
 D. Maintaining the air conditioners temperature

Question ID : 441009605550
Option 1 ID : 4410092377320
Option 2 ID : 4410092377317
Option 3 ID : 4410092377318
Option 4 ID : 4410092377319
Status : Not Answered
Chosen Option : --

Q.75 What is the purpose of virtual memory?

- Ans A. To allow execution of processes that may not be completely in main memory
 B. To increase storage capacity
 C. To back up data
 D. To increase the speed of the CPU

Question ID : 4410091152702
Option 1 ID : 4410094545718
Option 2 ID : 4410094545720
Option 3 ID : 4410094545721
Option 4 ID : 4410094545719
Status : Not Answered
Chosen Option : --

Q.76 Which of the following tests is conducted to measure impact energy of a material?

- Ans A. Charpy Test
 B. Brinell test
 C. Rockwell Test
 D. Vickers Test

Question ID : 441009753625
Option 1 ID : 4410092968485
Option 2 ID : 4410092968488
Option 3 ID : 4410092968487
Option 4 ID : 4410092968486
Status : Answered
Chosen Option : A

Q.77 A system is said to be critically damped if the damping factor for a vibrating system is

- Ans A. equal to one
 B. less than one
 C. equal to zero
 D. more than one

Question ID : 441009664754
 Option 1 ID : 4410092613044
 Option 2 ID : 4410092613045
 Option 3 ID : 4410092613046
 Option 4 ID : 4410092613043
 Status : Answered
 Chosen Option : A

Q.78 What is the basic form of Dunkerley's equation for a shaft with multiple discs?

- Ans A. $\frac{1}{w_n^2} = \frac{1}{w_1^2} \times \frac{1}{w_2^2} \times \dots \times \frac{1}{w_s^2}$
 B. $\frac{1}{w_n^2} = \frac{1}{w_1^2} - \frac{1}{w_2^2} - \dots - \frac{1}{w_s^2}$
 C. $\frac{1}{w_n^2} = \frac{w_n}{w_1^2} \times \frac{w_n}{w_2^2} \times \dots \times \frac{w_n}{w_s^2}$
 D. $\frac{1}{w_n^2} = \frac{1}{w_1^2} + \frac{1}{w_2^2} + \dots + \frac{1}{w_s^2}$

Question ID : 441009664918
 Option 1 ID : 4410092613692
 Option 2 ID : 4410092613693
 Option 3 ID : 4410092613694
 Option 4 ID : 4410092613691
 Status : Not Answered
 Chosen Option : --

Q.79 Which of the following statements best distinguishes between clearance, interference and transition fits?

- Ans A. Clearance fit permits free relative motion; an interference fit results in no clearance under any conditions; a transition fit may result in either a tight or loose fit, depending on the actual sizes.
 B. Clearance and interference fits are interchangeable; transition fit is used only when parts are press-fitted.
 C. Clearance fit prevents all relative motion; interference fit ensures easy assembly; transition fit allows parts to rotate freely.
 D. Clearance fit allows for intentional space between parts; an interference fit forces parts to deform during assembly; a transition fit always results in a loose connection.

Question ID : 441009672567
 Option 1 ID : 4410092644391
 Option 2 ID : 4410092644393
 Option 3 ID : 4410092644392
 Option 4 ID : 4410092644390
 Status : Answered
 Chosen Option : A

Q.80 Assignment problem is a special type of:

- Ans A. C++ programming problem
 B. exponential programming problem
 C. computer programming problem
 D. linear programming problem

Question ID : 441009562218
Option 1 ID : 4410092204118
Option 2 ID : 4410092204121
Option 3 ID : 4410092204120
Option 4 ID : 4410092204119
Status : Not Answered
Chosen Option : --

Q.81 Which of the following is the correct equation for Economic Order Quantity (EOQ)?

Consider S = Procurement Cost per order, I = Inventory carrying cost per year, C = Unit cost of required item and A = Annual demand

- Ans A. $EOQ = \sqrt{\frac{2IC}{AS}}$
 B. $EOQ = 5 \times \sqrt{\frac{AC}{IS}}$
 C. $EOQ = \sqrt{\frac{2AS}{IC}}$
 D. $EOQ = \sqrt{\frac{2AC}{IS}}$

Question ID : 441009605568
Option 1 ID : 4410092377392
Option 2 ID : 4410092377391
Option 3 ID : 4410092377389
Option 4 ID : 4410092377390
Status : Not Answered
Chosen Option : --

Q.82 The working principle of a transformer is based on which of the following laws?

- Ans A. Stephan Boltzmann law
 B. Wein displacement Law
 C. Faraday's law of electromagnetic induction
 D. Coulomb's Law

Question ID : 441009626304
Option 1 ID : 4410092459371
Option 2 ID : 4410092459370
Option 3 ID : 4410092459368
Option 4 ID : 4410092459369
Status : Answered
Chosen Option : C

Q.83 Taylor's tool life equation $VT^n = C$ does NOT account for:

- Ans A. depth of cut and feed
 B. tool wear
 C. cutting speed
 D. tool life constant

Question ID : 441009672559

Option 1 ID : 4410092644360

Option 2 ID : 4410092644358

Option 3 ID : 4410092644359

Option 4 ID : 4410092644361

Status : Answered

Chosen Option : A

Q.84 Calculate the value of smaller force if two forces act at an angle of 120° and larger force is 40 N in magnitude.
(Note: Resultant of these two forces is perpendicular to smaller force.)

- Ans A. 60 N
 B. 20 N
 C. 80 N
 D. 40 N

Question ID : 441009642006

Option 1 ID : 4410092522169

Option 2 ID : 4410092522168

Option 3 ID : 4410092522170

Option 4 ID : 4410092522167

Status : Answered

Chosen Option : B

Q.85 What is the shape of indenter in Vickers hardness test?

- Ans A. Diamond Pyramidal indenter with 180 degree included angle
 B. Spherical steel indenter
 C. Diamond Pyramidal indenter with 136 degree included angle
 D. Diamond Pyramidal indenter with 120 degree included angle

Question ID : 441009753667

Option 1 ID : 4410092968655

Option 2 ID : 4410092968656

Option 3 ID : 4410092968654

Option 4 ID : 4410092968653

Status : Answered

Chosen Option : D