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भारतीय विमानपत्तन प्राधिकरण
AIRPORTS AUTHORITY OF INDIA

(SCHEDULE - 'A' MINI RATNA- CATEGORY-1 PUBLIC SECTOR ENTERPRISES)

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Application Sequence Number	
Participant Id	
Participant Name	
Test Center Name	
Test Date	14/07/2025
Test Time	9:00 AM - 11:00 AM
Subject	Junior Executive (Air Traffic Control)

Section : Part A General Knowledge

Q Why was Caitlin Sandra Neil, a 19-year-old Indian-American from Chennai, in the news in December 2024?

1
A 1. For getting nominated to parliament of USA
 2. For winning Oscar award
 3. For winning Kalinga prize
 4. For winning Miss India USA 2024

Question ID : 44100962151
Option 1 ID : 441009247640
Option 2 ID : 441009247641
Option 3 ID : 441009247638
Option 4 ID : 441009247639
Status : Answered
Chosen Option : 4

Q The Khilafat Movement, (1919-1920) was a movement of Indian Muslims, led by .

2
A 1. Maulana Mohammed Ali and Maulana Shaukat Ali
 2. Jawahar Lal Nehru and Shaukat Ali
 3. Muhammad Ali and Sardar Vallabhbhai Patel
 4. Maulana Abul Kalam Azad and Lala Lajpat Rai

Question ID : 44100939933
Option 1 ID : 441009159261
Option 2 ID : 441009159262
Option 3 ID : 441009159263
Option 4 ID : 441009159264
Status : Answered
Chosen Option : 1

Q Which Article of the Indian Constitution deals with the amendment procedure of the Constitution of India?

3
A 1. Article 370
 2. Article 356
 3. Article 368
 4. Article 21

Question ID : 44100939387
Option 1 ID : 441009157073
Option 2 ID : 441009157071
Option 3 ID : 441009157072
Option 4 ID : 441009157074
Status : Answered
Chosen Option : 3

Q Who was honoured with Lifetime Achievement Award for Hospitality and Education in March 2025 at the Vibrant Bharat Global Summit 2025?

4
A 1. Sithara Krishnakumar
 2. Neena Gupta
 3. Manasi Parekh
 4. Dr. Suborno Bose

Question ID : 44100940031
Option 1 ID : 441009159656
Option 2 ID : 441009159653
Option 3 ID : 441009159655
Option 4 ID : 441009159654
Status : Answered
Chosen Option : 2

Q In whom is the executive power of the Union vested as per the Indian Constitution?

5
A 1. Prime Minister
 2. Chief Justice of India
 3. Speaker of the Lok Sabha
 4. President of India

Question ID : 44100939396
Option 1 ID : 441009157107
Option 2 ID : 441009157110
Option 3 ID : 441009157109
Option 4 ID : 441009157108
Status : Answered
Chosen Option : 4

Q Shyama Shastri is considered the greatest composers of which kind of music in India?

6
A 1. Folk
 2. Raga
 3. Thumri
 4. Carnatic

Question ID : 44100946730
Option 1 ID : 441009186062
Option 2 ID : 441009186063
Option 3 ID : 441009186061
Option 4 ID : 441009186064
Status : Answered
Chosen Option : 4

Q What is the approximate east-to-west extent of the northern plains of India?

7
A 1. 1500 km
 2. 4200 km
 3. 2200 km
 4. 3200 km

Question ID : 44100946467
Option 1 ID : 441009185023
Option 2 ID : 441009185024
Option 3 ID : 441009185025
Option 4 ID : 441009185026
Status : Answered
Chosen Option : 2

Q Which of the following rivers is a tributary of the Ganga?

8
A 1. Kaveri
 2. Krishna
 3. Godavari
 4. Yamuna

Question ID : 44100947424
Option 1 ID : 441009188791
Option 2 ID : 441009188790
Option 3 ID : 441009188792
Option 4 ID : 441009188793
Status : Answered
Chosen Option : 4

Q Who was honoured with the Pravasi Bharatiya Samman Award in January 2025 for contributions to Medical Science?

9
A 1. Dr. Rohit Kumar
 2. Dr. Prem Kumar
 3. Dr. Ramendra Kumar
 4. Dr. Shobit Kumar

Question ID : 44100940114
Option 1 ID : 441009159982
Option 2 ID : 441009159981
Option 3 ID : 441009159984
Option 4 ID : 441009159983
Status : Answered
Chosen Option : 4

Q Which of the following is identified as a major reason for the decline in the growth rate of agriculture post-1991?

10
A 1. Decline in public investment in the agriculture sector
 2. Higher agricultural productivity
 3. Growth of the service sector
 4. Increase in agricultural subsidies

Question ID : 44100943764
Option 1 ID : 441009174503
Option 2 ID : 441009174505
Option 3 ID : 441009174506
Option 4 ID : 441009174504
Status : Answered
Chosen Option : 3

Section : Part A General Intelligence

Q 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 letter-cluster pair 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.)

A 1. FK-PS

n

s

2. BG-LO

3. JP-TX

4. KQ-WX

Question ID : 44100939776

Option 1 ID : 441009158634

Option 2 ID : 441009158633

Option 3 ID : 441009158635

Option 4 ID : 441009158636

Status : Answered

Chosen Option : 4

Q Which of the following letter-number clusters will replace the question mark (?) in the given series to make it logically complete?

2

BTE9 DQI12 FNM15 HKQ18 ?

A 1. KIV21

n

s

2. JHU21

3. IGW19

4. LFZ21

Question ID : 44100938989

Option 1 ID : 441009155503

Option 2 ID : 441009155506

Option 3 ID : 441009155504

Option 4 ID : 441009155505

Status : Answered

Chosen Option : 2

Q Refer to the following letter series and answer the question that follows. Counting to be done from left to right only.

3

(Left) S I N G L E R O F I H T P Q D U B W N M J A K E V G P (Right)

How many such consonants are there, each of which is immediately preceded by a vowel and also immediately followed by a vowel?

A 1. Two

n

s

2. Four

3. One

4. Three

Question ID : 44100939517

Option 1 ID : 441009157593

Option 2 ID : 441009157591

Option 3 ID : 441009157594

Option 4 ID : 441009157592

Status : Answered

Chosen Option : 4

Q In a certain code language,

4 'A + B' means 'A is the brother of B',
'A - B' means 'A is the sister of B',
'A / B' means 'A is the husband of B',
'A ! B' means 'A is the mother of B',
'A x B' means 'A is the wife of B',
'A * B' means A is the father of B.

How is O related to P if 'S x T * O - P ! V' ?

A 1. Sister

n

s

2. Mother's mother

3. Mother

4. Daughter

Question ID : 44100939757

Option 1 ID : 441009158559

Option 2 ID : 441009158560

Option 3 ID : 441009158557

Option 4 ID : 441009158558

Status : Answered

Chosen Option : 1



Q Which of the following letter-number clusters will replace the question mark (?) in the given series to make it logically complete?

5 AFH10 DJK15 GNN20 JRQ25 ?

A 1. LUS35

n

s

2. KSR30

3. MVT30

4. IQP30

Question ID : 44100938984

Option 1 ID : 441009155486

Option 2 ID : 441009155485

Option 3 ID : 441009155484

Option 4 ID : 441009155483

Status : Answered

Chosen Option : 3

Q Six students, Tejas, Rashmi, Pragya, Amit, Shiva and Vijay, are sitting in a straight line, facing north. Tejas sits second to the left of Vijay. Only one student is between Vijay and Amit. Only two are to the left of Pragya. Rashmi is not an immediate neighbour of Tejas.

Who sits second to the left of Pragya?

A 1. Vijay

n

s

2. Rashmi

3. Shiva

4. Amit

Question ID : 44100938935

Option 1 ID : 441009155288

Option 2 ID : 441009155289

Option 3 ID : 441009155287

Option 4 ID : 441009155290

Status : Answered

Chosen Option : 3

Q Based on the English alphabetical order, three of the following four letter-clusters are alike in a certain way and thus form a group. Which letter-cluster 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.)

A 1. MWQ

n

s

2. JTM

3. FPJ

4. BLF

Question ID : 44100939794

Option 1 ID : 441009158712

Option 2 ID : 441009158711

Option 3 ID : 441009158710

Option 4 ID : 441009158709

Status : Answered

Chosen Option : 2

Q Seven boxes A, B, C, D, E, F and G are kept one over the other but not necessarily in the same order. C is kept immediately below E and immediately above A. B is kept immediately below A and immediately above D. F is kept immediately below D and immediately above G. How many boxes are kept between A and G?

A 1. One

n

s

2. Three

3. Two

4. Four

Question ID : 44100938931

Option 1 ID : 441009155271

Option 2 ID : 441009155273

Option 3 ID : 441009155272

Option 4 ID : 441009155274

Status : Answered

Chosen Option : 2

Q What will come in the place of the question mark (?) in the following equation, if '+' and '-' are interchanged, and 'x' and '÷' are interchanged?
9

$$47 \div 44 \times 2,068 + 221 - 223 = ?$$

A 1. -1
 2. 1
 3. 2

2. 3
 3. 1
 4. 2

Question ID : 44100940273
Option 1 ID : 441009160608
Option 2 ID : 441009160611
Option 3 ID : 441009160609
Option 4 ID : 441009160610
Status : Answered
Chosen Option : 1

Q Refer to the following number series and answer the question that follows. Counting to be done from left to right only. All numbers are single-digit numbers. (Note: 1 is a perfect square.)
1

0 (Left) 1 4 2 3 9 4 8 1 5 7 9 7 2 5 1 3 4 6 7 8 2 9 5 6 3 6 8 (Right)

How many such perfect squares are there, each of which is immediately preceded by an even digit and immediately followed by an odd digit?

A 1. Two

2. One

3. None

4. Three

Question ID : 44100938978
Option 1 ID : 441009155461
Option 2 ID : 441009155460
Option 3 ID : 441009155459
Option 4 ID : 441009155462
Status : Answered
Chosen Option : 1

Q In a certain code language, 'heaven on earth' is coded as 'mo bk fd' and 'earth is home' is coded as 'fd zo ko'.
How is 'earth' coded in the given language?
1

1

A 1. fd

2. bk

3. zo

4. mo

Question ID : 44100938949
Option 1 ID : 441009155343
Option 2 ID : 441009155345
Option 3 ID : 441009155344
Option 4 ID : 441009155346
Status : Answered
Chosen Option : 1

Q PARENTS is related to TEVIRXW in a certain way based on the English alphabetical order. In the same way,
ACHIEVE is related to EGLMIZI. To which of the given options is PROUDLY related, following the same logic?
1

2

A 1. TVTZIPC

2. TVSYHPC

3. TWSZIQC

4. TSVYHRC

Question ID : 44100939578
Option 1 ID : 441009157835
Option 2 ID : 441009157838
Option 3 ID : 441009157836
Option 4 ID : 441009157837
Status : Answered
Chosen Option : 2

Q 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.

1
3 FROM-ROFM-OFRM
DUST-USDT-SDUT
A 1. TOES-TSOE-OETS
n
s
 2. HAIR-AIHR-IHAR
 3. JUMP-PJUM-MPJO
 4. BITE-ITEB-TEBI

Question ID : 44100939817
Option 1 ID : 441009158797
Option 2 ID : 441009158799
Option 3 ID : 441009158800
Option 4 ID : 441009158798
Status : Answered
Chosen Option : 2

Q In a certain code language, 'LOUNGE' is coded as '80' and 'PARCEL' is coded as '61'. What is the code for 'ZEALOT' in the given code language?

1
4
A 1. 86
n
s
 2. 83
 3. 79
 4. 85

Question ID : 44100939034
Option 1 ID : 441009155677
Option 2 ID : 441009155675
Option 3 ID : 441009155674
Option 4 ID : 441009155676
Status : Answered
Chosen Option : 4

Q Refer to the following letter and symbol series and answer the question that follows. Counting to be done from left to right only.

1
5 (LEFT) L # ? M ! / + O K @ N & A % E * \$ J = P { (RIGHT)

How many such symbols are there that are immediately preceded by a letter and immediately followed by another symbol?

A 1. One
n
s
 2. None
 3. Two
 4. Three

Question ID : 44100938960
Option 1 ID : 441009155388
Option 2 ID : 441009155387
Option 3 ID : 441009155389
Option 4 ID : 441009155390
Status : Answered
Chosen Option : 4

Section : Part A General Aptitude

Q What is the total area (in m^2) of the four walls of a room if the length, width, and height of the room are 50 m, 30 m, and 60 m, respectively?

1
A 1. 9400
n
s
 2. 9600
 3. 9800
 4. 9200

Question ID : 44100953265
Option 1 ID : 441009212121
Option 2 ID : 441009212122
Option 3 ID : 441009212123
Option 4 ID : 441009212120
Status : Answered
Chosen Option : 2

Q An athlete crosses 4500 m distance in 15 minutes. What is his speed in km/hr?

2
A 1. 18
n
s
 2. 20
 3. 22
 4. 16

Question ID : 44100955030
Option 1 ID : 441009219085
Option 2 ID : 441009219086
Option 3 ID : 441009219087
Option 4 ID : 441009219084
Status : Answered
Chosen Option : 1

Q A shopkeeper sells an article for ₹1,269 at a 10% loss. What should have been his selling price to earn a 10% profit?

3
A 1. ₹1,487
n
s
 2. ₹1,551
 3. ₹1,413
 4. ₹1,501

Question ID : 44100951694
Option 1 ID : 441009205930
Option 2 ID : 441009205928
Option 3 ID : 441009205931
Option 4 ID : 441009205929
Status : Answered
Chosen Option : 2

Q A retailer sells a microwave oven at a 10% discount on the marked price and still makes a 25% profit on the cost price. What is the ratio of the marked price to the cost price of the microwave?

4
A 1. 46 : 27
n
s
 2. 25 : 18
 3. 32 : 23
 4. 38 : 15

Question ID : 44100951743
Option 1 ID : 441009206124
Option 2 ID : 441009206126
Option 3 ID : 441009206125
Option 4 ID : 441009206127
Status : Answered
Chosen Option : 2

Q A number is increased by 25% and then it is decreased by 25%. What is the percentage change in the final value of the number?

5
A 1. 6.25% decrease
n
s
 2. 8.45% decrease
 3. No change
 4. 7.52% increase

Question ID : 44100951673
Option 1 ID : 441009205847
Option 2 ID : 441009205845
Option 3 ID : 441009205844
Option 4 ID : 441009205846
Status : Answered
Chosen Option : 1

Q Rashmi deposited ₹8,000 in a bank that promised 12% simple interest per annum. If Rashmi kept the money with the bank for 9 years, how much simple interest will she earn?

6

A 1. ₹8,640
 2. ₹8,840
 3. ₹8,740
 4. ₹8,940

Question ID : 44100953441
Option 1 ID : 441009212754
Option 2 ID : 441009212756
Option 3 ID : 441009212755
Option 4 ID : 441009212757
Status : Answered
Chosen Option : 1

Q In a circular race of 3700 m, Raju and Shiv start from the same point at the same time, running at speeds of 72 km/hr and 108 km/hr, respectively. When will they meet again for the first time on the track if they are running in the same direction?

A 1. 350 seconds
 2. 380 seconds
 3. 360 seconds
 4. 370 seconds

Question ID : 44100955044
Option 1 ID : 441009219140
Option 2 ID : 441009219143
Option 3 ID : 441009219141
Option 4 ID : 441009219142
Status : Answered
Chosen Option : 4

Q A cistern is normally filled in 40 minutes by an inlet pipe. Due to a leak, it takes 10 minutes longer to fill the cistern completely. How long would the leak alone take to empty the full cistern?

8

A 1. 200 min
 2. 150 min
 3. 100 min
 4. 250 min

Question ID : 44100952110
Option 1 ID : 441009207562
Option 2 ID : 441009207561
Option 3 ID : 441009207560
Option 4 ID : 441009207563
Status : Answered
Chosen Option : 1

Q What is the value of $3^3 \times 125 \div (11 - 6) - 1 - 20\% \text{ of } 25 + 4 + 17 - 1 \times 33$?

9

A 1. 657
 2. 311
 3. 578
 4. 402

Question ID : 44100951607
Option 1 ID : 441009205583
Option 2 ID : 441009205580
Option 3 ID : 441009205582
Option 4 ID : 441009205581
Status : Answered
Chosen Option : 1

Q Anil and Shawan together have ₹5,250. On taking ₹750 from Anil, Anil will have same amount as what Shawan had earlier. Find the ratio of amounts with Anil and Shawan initially.

1
0
A 1. 5 : 3
 2. 5 : 7
 3. 4 : 3
 4. 3 : 5

Question ID : 44100956842
Option 1 ID : 441009226198
Option 2 ID : 441009226200
Option 3 ID : 441009226197
Option 4 ID : 441009226199
Status : Answered
Chosen Option : 3

Q Aman needs to save ₹5,00,000 for a down payment on a house, which he plans to purchase 4 years from now. If his investment grows at an annual compound interest rate of 5%, what is the present value of the amount he needs to invest? (Ignore the decimal part in your answer.)

1
A 1. ₹4,11,351
 2. ₹4,31,105
 3. ₹4,45,102
 4. ₹4,22,305

Question ID : 44100951510
Option 1 ID : 441009205191
Option 2 ID : 441009205189
Option 3 ID : 441009205188
Option 4 ID : 441009205190
Status : Answered
Chosen Option : 3

Q Find the maximum length of a rod that can be placed in a room of dimensions 40 m × 40 m × 20 m?

1
2
A 1. 50 m
 2. 55 m
 3. 60 m
 4. 45 m

Question ID : 44100953276
Option 1 ID : 441009212161
Option 2 ID : 441009212162
Option 3 ID : 441009212163
Option 4 ID : 441009212160
Status : Answered
Chosen Option : 3

Q A paint manufacturer combines three types of paints priced at ₹50/litre, ₹70/litre and ₹100/litre and sells the mixture at ₹100/litre, earning a profit of 25%. If the mixture contains 7 litres of the third variant, which of the following CANNOT be the amount of the first variant included in the mixture?

3
A 1. 3 litres
 2. 5 litres
 3. 2 litres
 4. 4 litres

Question ID : 44100949452
Option 1 ID : 441009197085
Option 2 ID : 441009197087
Option 3 ID : 441009197084
Option 4 ID : 441009197086
Status : Answered
Chosen Option : 2

Q What is the value of $0.\overline{36} + 0.11 - 0.121$? (Give your answer correct to 2 decimal places.)

1
4

A 1. 0.35

2. 0.51

3. 0.23

4. 0.18

Question ID : 44100951586

Option 1 ID : 441009205493

Option 2 ID : 441009205492

Option 3 ID : 441009205494

Option 4 ID : 441009205495

Status : Answered

Chosen Option : 1

Q The ratio of the costs of orange juice and apple juice is 5 : 6 and the ratio of their quantities consumed by a family is 6 : 7. Find the ratio of the expenditures on orange juice and apple juice.

1

5

A 1. 6 : 7

2. 5 : 7

3. 5 : 6

4. 3 : 5

Question ID : 44100956835

Option 1 ID : 441009226172

Option 2 ID : 441009226171

Option 3 ID : 441009226170

Option 4 ID : 441009226169

Status : Answered

Chosen Option : 2

Section : Part A General English

Q Select the option that rectifies the incorrectly spelt word in the given sentence.

1 He gave an embarrassing presentation during the meeting.

A 1. embarasing

2. embarrassing

3. embarrasment

4. embarrassing

Question ID : 44100965304

Option 1 ID : 441009260238

Option 2 ID : 441009260237

Option 3 ID : 441009260239

Option 4 ID : 441009260240

Status : Answered

Chosen Option : 2

Q Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.

2

- A. In modern times, environmental sustainability has become a critical issue.
- B. Many industries have adopted eco-friendly practices to reduce their carbon footprint.
- C. Governments and organisations are also working towards creating policies that encourage green technologies.
- D. This movement aims to preserve the earth's resources for future generations.

A 1. DCAB

2. ACBD

3. BACD

4. ABCD

Question ID : 44100957321

Option 1 ID : 441009228136

Option 2 ID : 441009228137

Option 3 ID : 441009228138

Option 4 ID : 441009228135

Status : Answered

Chosen Option : 2

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

3 The weather has been _____ unpredictable this season, making it difficult to plan outdoor activities.

A 1. infrequently

n

s

2. extremely

3. occasionally

4. rarely

Question ID : 44100965087

Option 1 ID : 441009259379

Option 2 ID : 441009259377

Option 3 ID : 441009259378

Option 4 ID : 441009259380

Status : Answered

Chosen Option : 2

Q Select the most appropriate idiom that means the same as the given phrase.

4 To be in a difficult or troublesome situation

A 1. Bite the bullet

n

s

2. Between a rock and a hard place

3. A blessing in disguise

4. The ball is in your court

Question ID : 44100965252

Option 1 ID : 441009260036

Option 2 ID : 441009260034

Option 3 ID : 441009260033

Option 4 ID : 441009260035

Status : Answered

Chosen Option : 1

Q Select the most appropriate meaning of the given word.

5 Implacable

A 1. Easily calmed

n

s

2. Optimistic

3. Unable to be appeased

4. Peaceful

Question ID : 44100965382

Option 1 ID : 441009260530

Option 2 ID : 441009260532

Option 3 ID : 441009260531

Option 4 ID : 441009260529

Status : Answered

Chosen Option : 3

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

6 One who walks on ropes

6

A 1. Funambulist

n

s

2. Noctambulist

3. Iconclast

4. Somniloquist

Question ID : 44100946593

Option 1 ID : 441009185526

Option 2 ID : 441009185524

Option 3 ID : 441009185525

Option 4 ID : 441009185523

Status : Answered

Chosen Option : 1



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

Study of the law of the flow of the water and other liquids

7

A 1. Consummate
n
s
 2. Teetotaller
 3. Quixotic
 4. Hydraulics

Question ID : 44100946603

Option 1 ID : 441009185565

Option 2 ID : 441009185564

Option 3 ID : 441009185566

Option 4 ID : 441009185563

Status : Answered

Chosen Option : 4

Q Select the most appropriate preposition to fill in the blank.

I am going to science fair that is being held _____ our town.

A 1. by
n
s
 2. in
 3. on
 4. at

Question ID : 44100951858

Option 1 ID : 441009206575

Option 2 ID : 441009206573

Option 3 ID : 441009206574

Option 4 ID : 441009206572

Status : Answered

Chosen Option : 2

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

It was _____ one-in-a-million opportunity, and I couldn't pass it up.

A 1. an
n
s
 2. a
 3. No article required
 4. the

Question ID : 44100964695

Option 1 ID : 441009257725

Option 2 ID : 441009257724

Option 3 ID : 441009257727

Option 4 ID : 441009257726

Status : Answered

Chosen Option : 2

Q The following sentence has been split into four segments. Identify the segment that contains a grammatical error.

1 A. She do not understand
0 B. the concept,
C. so the teacher explained
D. it again.

A 1. B
n
s
 2. C
 3. A
 4. D

Question ID : 44100934513

Option 1 ID : 441009137467

Option 2 ID : 441009137468

Option 3 ID : 441009137466

Option 4 ID : 441009137469

Status : Answered

Chosen Option : 3

Q Select the most appropriate meaning of the given idiom.

1 Bite off more than you can chew

1

A 1. To eat too quickly

n

2. To refuse to help others

3. To take on more responsibility than you can handle

4. To take things slowly

Question ID : 44100934391

Option 1 ID : 441009136983

Option 2 ID : 441009136984

Option 3 ID : 441009136982

Option 4 ID : 441009136985

Status : Answered

Chosen Option : 3

Q Select the option that rectifies the incorrectly spelt word in the given sentence.

1 Her advise really helped me in making the right decision.

2

A 1. adbise

n

2. adwise

3. advice

4. advije

Question ID : 44100965317

Option 1 ID : 441009260285

Option 2 ID : 441009260288

Option 3 ID : 441009260286

Option 4 ID : 441009260287

Status : Answered

Chosen Option : 3

Q Select the correct future tense form of the word in brackets in the given sentence.

1 By the time you arrive, I _____ (finish) my homework.

3

A 1. will have finished

n

2. will finish

3. am finishing

4. will be finishing

Question ID : 44100964714

Option 1 ID : 441009257805

Option 2 ID : 441009257803

Option 3 ID : 441009257806

Option 4 ID : 441009257804

Status : Answered

Chosen Option : 1

Q Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.

1

4 A. The rapid advancement of artificial intelligence (AI) has sparked intense debates about its potential to disrupt

job markets globally.

B. Despite these concerns, many experts argue that AI could enhance productivity and create new opportunities

in various sectors.

C. AI, if properly regulated, could play a pivotal role in shaping industries like healthcare, and manufacturing.

D. As the technology continues to evolve, it is crucial to consider its ethical implications and how it may impact

society in both positive and negative ways.

A 1. BCAD

n

2. ABCD

3. ABCD

4. CABD

Question ID : 44100957353

Option 1 ID : 441009228240

Option 2 ID : 441009228242

Option 3 ID : 441009228239

Option 4 ID : 441009228241

Status : Answered

Chosen Option : 2



Q Select the most appropriate ANTONYM of the given word.

1 Obsequious

5

A 1. Submissive
 2. Evasive

3. Assertive

4. Proud

Question ID : 44100965329

Option 1 ID : 441009260334

Option 2 ID : 441009260336

Option 3 ID : 441009260335

Option 4 ID : 441009260333

Status : Answered

Chosen Option : 2

Comprehension:

Read the given passage and answer the questions that follow.

Attending school then was sheer joy. I loved being a student. I loved learning. School was the place of ecstasy — pleasure and danger. To be changed by ideas was pure pleasure. But to learn ideas that ran counter to values and beliefs learnt at home was to place oneself at risk, to enter the danger zone. Home was the place where I was forced to conform to someone else's image of who and what I should be. School was the place where I could forget that self and, through ideas, reinvent myself.

School changed utterly with racial integration. Gone was the messianic zeal to transform our minds and beings that had characterised teachers and their pedagogical practices in our all-black schools. Knowledge was suddenly about information only. It had no relation to how one lived, behaved. It was no longer connected to antiracist struggle. Bussed to white schools, we soon learnt that obedience, and not a zealous will to learn, was what was expected of us. Too much eagerness to learn could easily be seen as a threat to white authority.

SubQuestion No : 16

Q In the passage, what does the word 'pedagogical' refer to?

1

6

A 1. Teaching methods and practices
 2. A type of student behaviour
 3. A style of writing
 4. A form of political activism

Question ID : 44100967033

Option 1 ID : 441009266889

Option 2 ID : 441009266890

Option 3 ID : 441009266888

Option 4 ID : 441009266891

Status : Answered

Chosen Option : 1

Comprehension:

Read the given passage and answer the questions that follow.

Attending school then was sheer joy. I loved being a student. I loved learning. School was the place of ecstasy — pleasure and danger. To be changed by ideas was pure pleasure. But to learn ideas that ran counter to values and beliefs learnt at home was to place oneself at risk, to enter the danger zone. Home was the place where I was forced to conform to someone else's image of who and what I should be. School was the place where I could forget that self and, through ideas, reinvent myself.

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SubQuestion No : 17

Q What is the synonym of 'ecstasy' as used in the passage?

1

7

A 1. Boredom
 2. Confusion
 3. Sadness
 4. Joy

Question ID : 44100967035

Option 1 ID : 441009266899

Option 2 ID : 441009266898

Option 3 ID : 441009266896

Option 4 ID : 441009266897

Status : Answered

Chosen Option : 2

Comprehension:

Read the given passage and answer the questions that follow.

Attending school then was sheer joy. I loved being a student. I loved learning. School was the place of ecstasy — pleasure and danger. To be changed by ideas was pure pleasure. But to learn ideas that ran counter to values and beliefs learnt at home was to place oneself at risk, to enter the danger zone. Home was the place where I was forced to conform to someone else's image of who and what I should be. School was the place where I could forget that self and, through ideas, reinvent myself.

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SubQuestion No : 18

Q What can be inferred about the role of teachers in all-black schools before integration?

1
8
n
s

A 1. They focused strictly on academic performance.
 2. They discouraged the questioning authority.
 3. They saw education as a means of personal and political transformation.
 4. They were poorly trained and uninspired.

Question ID : 44100967034

Option 1 ID : 441009266892

Option 2 ID : 441009266893

Option 3 ID : 441009266894

Option 4 ID : 441009266895

Status : **Answered**

Chosen Option : 1

Comprehension:

Read the given passage and answer the questions that follow.

Attending school then was sheer joy. I loved being a student. I loved learning. School was the place of ecstasy — pleasure and danger. To be changed by ideas was pure pleasure. But to learn ideas that ran counter to values and beliefs learnt at home was to place oneself at risk, to enter the danger zone. Home was the place where I was forced to conform to someone else's image of who and what I should be. School was the place where I could forget that self and, through ideas, reinvent myself.

School changed utterly with racial integration. Gone was the messianic zeal to transform our minds and beings that had characterised teachers and their pedagogical practices in our all-black schools. Knowledge was suddenly about information only. It had no relation to how one lived, behaved. It was no longer connected to antiracist struggle. Bussed to white schools, we soon learnt that obedience, and not a zealous will to learn, was what was expected of us. Too much eagerness to learn could easily be seen as a threat to white authority.

SubQuestion No : 19

Q What is the central theme of the passage?

1
9
n
s

A 1. The impact of changing educational environments on black students
 2. The differences between public and private schools
 3. The importance of racial integration in schools
 4. The role of comic books in children's education

Question ID : 44100967032

Option 1 ID : 441009266885

Option 2 ID : 441009266887

Option 3 ID : 441009266884

Option 4 ID : 441009266886

Status : **Answered**

Chosen Option : 1

Comprehension:

Read the given passage and answer the questions that follow.

Attending school then was sheer joy. I loved being a student. I loved learning. School was the place of ecstasy — pleasure and danger. To be changed by ideas was pure pleasure. But to learn ideas that ran counter to values and beliefs learnt at home was to place oneself at risk, to enter the danger zone. Home was the place where I was forced to conform to someone else's image of who and what I should be. School was the place where I could forget that self and, through ideas, reinvent myself.

School changed utterly with racial integration. Gone was the messianic zeal to transform our minds and beings that had characterised teachers and their pedagogical practices in our all-black schools. Knowledge was suddenly about information only. It had no relation to how one lived, behaved. It was no longer connected to antiracist struggle. Bussed to white schools, we soon learnt that obedience, and not a zealous will to learn, was what was expected of us. Too much eagerness to learn could easily be seen as a threat to white authority.

SubQuestion No : 20

Q Why might the author describe school post-integration as less fulfilling?

2
0

A 1. Because the curriculum was outdated
 2. Because black students received less homework
 3. Because the facilities were worse than in all-black schools
 4. Because learning no longer encouraged critical thought or resistance

Question ID : 44100967036
Option 1 ID : 441009266900
Option 2 ID : 441009266901
Option 3 ID : 441009266902
Option 4 ID : 441009266903
Status : **Answered**
Chosen Option : 4

Section : Part B Discipline related

Q For a fixed pressure, the volume of a gas is proportional to its absolute temperature. This is known as:

1
1

A 1. Avogadro's hypothesis
 2. Charles' law
 3. Boyle's law
 4. Dalton's law

Question ID : 441009149395
Option 1 ID : 441009593338
Option 2 ID : 441009593337
Option 3 ID : 441009593336
Option 4 ID : 441009593339
Status : **Answered**
Chosen Option : 2

Q If A is a matrix of order 3×3 such that $\det(A) = 9$, then find $\det(4A)$.

2
2

A 1. 108
 2. 36
 3. 9
 4. 576

Question ID : 441009154853
Option 1 ID : 441009614562
Option 2 ID : 441009614564
Option 3 ID : 441009614563
Option 4 ID : 441009614565
Status : **Answered**
Chosen Option : 4

Q A reverse bias voltage of 10 V is applied across a p-n junction diode such that the current flowing through the diode in the reverse bias configuration is 2 μ A. What will be the resistance of the diode in this configuration?

3

A 1. 5000 k Ω
n
s
 2. 5 k Ω
 3. 500 k Ω
 4. 50 k Ω

Question ID : 441009109711
Option 1 ID : 441009436574
Option 2 ID : 441009436576
Option 3 ID : 441009436573
Option 4 ID : 441009436575
Status : Answered
Chosen Option : 1

Q

4 If $K = \{1, 2, 3, 4, 5, 6, 7\}$ and P_i be the number of 4 elements subsets of K out of which

A 1. 32
n
s
 2. 35
 3. 30
 4. 20

Question ID : 441009188332
Option 1 ID : 441009743219
Option 2 ID : 441009743217
Option 3 ID : 441009743216
Option 4 ID : 441009743218
Status : Answered
Chosen Option : 3

Q Which of the following is an INCORRECT statement regarding the surface tension of a liquid?

5

A 1. Surface tension of different liquids is different.
n
s
 2. Surface tension is equal to the surface energy per unit area of the liquid interface.
 3. Surface tension is independent of the temperature of the liquid.
 4. The S.I. unit of surface tension is N/m.

Question ID : 441009114646
Option 1 ID : 441009456016
Option 2 ID : 441009456017
Option 3 ID : 441009456014
Option 4 ID : 441009456015
Status : Answered
Chosen Option : 3

Q If $\frac{\cos 2\beta + \cos 3\beta + \cos 4\beta}{\sin 2\beta + \sin 3\beta + \sin 4\beta} = a$, then a is:

6

A 1. $\cot 9\beta$
n
s
 2. $\cot 3\beta$
 3. $\cot 4\beta$
 4. $\cot 2\beta$

Question ID : 441009152437
Option 1 ID : 441009604906
Option 2 ID : 441009604903
Option 3 ID : 441009604905
Option 4 ID : 441009604904
Status : Answered
Chosen Option : 2

Q If Bernoulli's equation is applied to a fluid flowing through a horizontal pipe of varying area of cross-section, then by using absolute pressure at one point and gauge pressure at another of the flowing fluid, what will be the final result?

A 1. No impact, as gauge and absolute pressures can be mixed.
 2. A correct velocity prediction.
 3. A pressure difference that includes atmospheric pressure incorrectly.
 4. The same as using only absolute pressures, since gauge pressure is relative.

Question ID : 441009136885
Option 1 ID : 441009543779
Option 2 ID : 441009543777
Option 3 ID : 441009543778
Option 4 ID : 441009543780
Status : Answered
Chosen Option : 4

Q Which of the following statements about magnification is true?

A 1. For a convex mirror, the image is always real and inverted, producing a negative magnification.
 2. In a concave mirror, the magnification is positive when the image is virtual and erect.
 3. The magnification produced by a convex lens is always positive for real images.
 4. The magnification produced by a concave lens is positive for real images.

Question ID : 441009116283
Option 1 ID : 441009462575
Option 2 ID : 441009462573
Option 3 ID : 441009462572
Option 4 ID : 441009462574
Status : Answered
Chosen Option : 2

Q The input voltage across the primary coil of a transformer is 200 V and the number of turns in this coil is X. If the output voltage across the secondary coil having 1500 turns is 3000 V, then what will be the value of X?

A 1. 100
 2. 0.01
 3. 1
 4. 10

Question ID : 441009108520
Option 1 ID : 441009432009
Option 2 ID : 441009432008
Option 3 ID : 441009432011
Option 4 ID : 441009432010
Status : Answered
Chosen Option : 1

Q A particle moves along the x-axis, and its position at time t is given by: $x(t) = 5t^3 - 3t^2 - 2t - 12$. What is the instantaneous velocity at $t=2s$?

A 1. 55 m/s
 2. 21 m/s
 3. 46 m/s
 4. 12 m/s

Question ID : 441009136999
Option 1 ID : 441009544234
Option 2 ID : 441009544233
Option 3 ID : 441009544236
Option 4 ID : 441009544235
Status : Answered
Chosen Option : 3

Q The mean deviation about median of 10 observations is 15. If each observation is multiplied by -3 , then find the new mean deviation about median of resulting observations.

A 1. 135

n

s

2. -135

3. 45

4. -45

Question ID : 441009159224
Option 1 ID : 441009631781
Option 2 ID : 441009631782

Option 3 ID : 441009631779
Option 4 ID : 441009631780

Status : Answered

Chosen Option : 2

Q If $f(x)$ is a polynomial of degree n , where $n \in \mathbb{N}$, then which of the following statements is NOT always true?

A 1. If $g(x) = f'(x)$, then $g'(x)$ can be a polynomial of degree less than $n - 2$

n

s

2. $f'(x)$ is a polynomial of degree $n - 1$

3. $f'(x)$ is differentiable for all $x \in \mathbb{R}$

4. $f'(a)$ exist for all $a \in \mathbb{R}$

Question ID : 441009159275
Option 1 ID : 441009631977
Option 2 ID : 441009631975
Option 3 ID : 441009631978
Option 4 ID : 441009631976

Status : Answered

Chosen Option : 3

Q How many three-digit even numbers can be formed using the digits 1, 2, 3, 4, 5, 6 if the digits can be repeated?

1

3

A 1. 36

n

s

2. 216

3. 54

4. 108

Question ID : 441009118736
Option 1 ID : 441009472071
Option 2 ID : 441009472070
Option 3 ID : 441009472073
Option 4 ID : 441009472072

Status : Answered

Chosen Option : 4

Q The working of which of the following devices is based on the Second law of Thermodynamics?

1

4

A 1. Electric Heater

n

s

2. Electric Fan

3. Refrigerator

4. Television

Question ID : 441009116329
Option 1 ID : 441009462751
Option 2 ID : 441009462749
Option 3 ID : 441009462748
Option 4 ID : 441009462750

Status : Answered

Chosen Option : 3

Q A body of mass 10 kg is initially at rest and is acted upon by a variable force $F(x)=6x^2$ N, where x is the displacement in metres. The body moves from $x=0$ to $x=4$ m. Calculate the work done by the force on the body

1 during this displacement.

5

A 1. 256 J

n

s 2. 0 J

3. 192 J

4. 128 J

Question ID : 441009130312

Option 1 ID : 441009517640

Option 2 ID : 441009517642

Option 3 ID : 441009517641

Option 4 ID : 441009517639

Status : Answered

Chosen Option : 4

Q If the AM (arithmetic mean) of 31 observations is 45 such that the AM of the first 16 ob:

1 AM of the last 16 observations is 60. Find the 16th observation of the AP.

6

A 1. 205

n

s 2. 105

3. 135

4. 145

Question ID : 441009154840

Option 1 ID : 441009614511

Option 2 ID : 441009614512

Option 3 ID : 441009614513

Option 4 ID : 441009614510

Status : Answered

Chosen Option : 1

Q The shortest distance between the lines $\frac{x+1}{7} = \frac{y+1}{-6} = \frac{z+1}{1}$ and $\frac{x-3}{1} = \frac{y-5}{-2} = \frac{z-7}{1}$ is:

1

7

A 1. 116

n

s 2. 1

3. $29\sqrt{2}$

4. $2\sqrt{29}$

Question ID : 441009143609

Option 1 ID : 441009570424

Option 2 ID : 441009570421

Option 3 ID : 441009570423

Option 4 ID : 441009570422

Status : Answered

Chosen Option : 4

Q According to work energy theorem, the change in _____ of a particle is equal to the work done on it by the net

1 force.

8

A 1. mechanical energy

n

s 2. total energy

3. potential energy

4. kinetic energy

Question ID : 441009149620

Option 1 ID : 441009594217

Option 2 ID : 441009594216

Option 3 ID : 441009594214

Option 4 ID : 441009594215

Status : Answered

Chosen Option : 4



Q A toy car is moving in a circular track of radius 2 m with a velocity of 36 km/hr. The centripetal acceleration of car is given by:

1
9
A 1. 1.50 m/s^2
n 2. 2.18 m/s^2
s 3. 100 m/s^2
 4. 36 m/s^2

Question ID : 441009145413
Option 1 ID : 441009577597

Option 2 ID : 441009577595
Option 3 ID : 441009577598
Option 4 ID : 441009577596

Status : Answered

Chosen Option : 1

Q A point charge Q is placed at the centre of a spherical conducting shell of inner radius r_1 and outer radius r_2 .

What is the electric field (E) at a point inside the conducting shell (at a distance r where $r_1 < r < r_2$)?

2
0
A 1. $E = Q/4\pi\epsilon_0 r^2$
n 2. $E = Q/4\pi\epsilon_0 r_1^2$
s 3. $E = 0$
 4. $E = Q/4\pi\epsilon_0 r_2^2$

Question ID : 441009130415

Option 1 ID : 441009518048
Option 2 ID : 441009518049
Option 3 ID : 441009518047
Option 4 ID : 441009518050

Status : Answered

Chosen Option : 1

Q If $x = \sin t - \cos 2t$ and $y = \cos t - \sin 2t$, then $\left(\frac{dy}{dx}\right)_{t=\frac{\pi}{4}} = \dots$.

2
1
A 1. $\frac{1+2\sqrt{2}}{7}$
n 2. $\frac{-1-2\sqrt{2}}{7}$
s 3. $\frac{1-2\sqrt{2}}{7}$
 4. $\frac{-1+2\sqrt{2}}{7}$

Question ID : 441009118333

Option 1 ID : 441009470493
Option 2 ID : 441009470495
Option 3 ID : 441009470492
Option 4 ID : 441009470494

Status : Answered

Chosen Option : 1

Q A cell of emf ϵ and internal resistance r is being used in a closed electric circuit. If the current flowing through the cell is I and the terminal potential difference across the cell is V , then which following represents the correct relation between ϵ and V ?

2
A 1. $V = \epsilon/Ir$
n 2. $V = \epsilon - Ir$
s 3. $V = \epsilon + Ir$
 4. $V = \epsilon \times Ir$

Question ID : 441009108368

Option 1 ID : 441009431454
Option 2 ID : 441009431455
Option 3 ID : 441009431456
Option 4 ID : 441009431457

Status : Answered

Chosen Option : 2

Q Which of the following is a subset of the set of isosceles triangle?

1
2
3
A 1. Set of all scalene triangles
 2. Set of all right-angled triangles
 3. Set of all triangles
 4. Set of all equilateral triangles

Question ID : 441009118654
Option 1 ID : 441009471761
Option 2 ID : 441009471760
Option 3 ID : 441009471759
Option 4 ID : 441009471758
Status : Answered
Chosen Option : 4

Q For which of the following values of p , distance of the point $(p, 2)$ from the line $3x - 2y + 1 = 0$ is $\frac{11}{3}$?

1
2
3
4
A 1. $\frac{8}{3}$
 2. 7
 3. $-\frac{11}{3}$
 4. -5

Question ID : 441009116990
Option 1 ID : 441009465088
Option 2 ID : 441009465089
Option 3 ID : 441009465087
Option 4 ID : 441009465086
Status : Answered
Chosen Option : 4

Q Power is a _____ quantity and its SI unit is _____.

1
2
3
4
5
A 1. scalar; volt
 2. scalar; watt
 3. vector; volt
 4. vector; watt

Question ID : 441009149625
Option 1 ID : 441009594235
Option 2 ID : 441009594234
Option 3 ID : 441009594237
Option 4 ID : 441009594236
Status : Answered
Chosen Option : 2

Q If a_n is the n^{th} term of a GP such that $A = \sum_{k=1}^n a_k$, $B = \sum_{k=1}^n \frac{1}{a_k}$ and $C = \prod_{k=1}^n a_k$,

then which of the following is true?

1
2
3
4
A 1. $B^2 C^n = A^n$
 2. $C^2 A^n = B^n$
 3. $A^2 B^n = C^n$
 4. $C^2 B^n = A^n$

Question ID : 441009154665
Option 1 ID : 441009613814
Option 2 ID : 441009613815
Option 3 ID : 441009613816
Option 4 ID : 441009613817
Status : Answered
Chosen Option : 4

Q If n is the number of 4-letter words (with or without meaning) formed by the letters of the word "FRACTION" without repeating letters, then $n = ?$

7

A 1. 70

n

2. 840

3. 280

4. 1680

Question ID : 441009188289

Option 1 ID : 441009743044

Option 2 ID : 441009743047

Option 3 ID : 441009743046

Option 4 ID : 441009743045

Status : Answered

Chosen Option : 4

Q Find the vector of length 4 units which is perpendicular to the vectors

$\vec{V}_1 = \hat{i} - \hat{j} + 2\hat{k}$ and $\vec{V}_2 = 2\hat{i} + \hat{j} + 3\hat{k}$.

A 1. $\frac{-20}{\sqrt{35}}\hat{i} + \frac{4}{\sqrt{35}}\hat{j} + \frac{12}{\sqrt{35}}\hat{k}$

2. $-\frac{20}{\sqrt{35}}\hat{i} - \frac{4}{\sqrt{35}}\hat{j} - \frac{12}{\sqrt{35}}\hat{k}$

3. $\frac{20}{\sqrt{35}}\hat{i} - \frac{4}{\sqrt{35}}\hat{j} + \frac{12}{\sqrt{35}}\hat{k}$

4. $\frac{20}{\sqrt{35}}\hat{i} + \frac{4}{\sqrt{35}}\hat{j} + \frac{12}{\sqrt{35}}\hat{k}$

Question ID : 441009159205

Option 1 ID : 441009631708

Option 2 ID : 441009631710

Option 3 ID : 441009631707

Option 4 ID : 441009631709

Status : Answered

Chosen Option : 1

Q Which of the following is a set?

.

2

9

A 1. The set of letters in the English Alphabet

n

s

2. A collection of most dangerous animals of the world

3. A team of eleven best-cricket batsmen of the world

4. The collection of ten most talented writers of India

Question ID : 441009114975

Option 1 ID : 441009457302

Option 2 ID : 441009457303

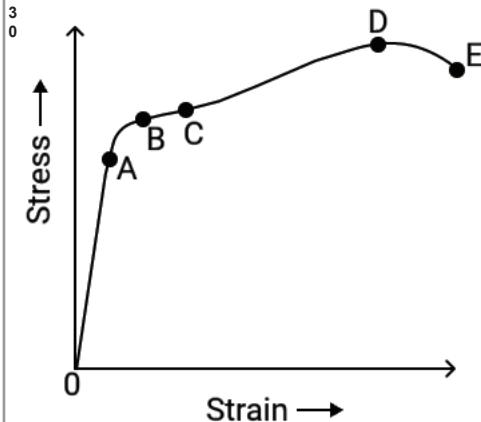
Option 3 ID : 441009457304

Option 4 ID : 441009457301

Status : Answered

Chosen Option : 1

Q Given below is a typical stress-strain curve for a metal. Which point is known as fracture point?



A 1. D
B 2. B
C 3. A
D 4. E

Question ID : 441009146087
Option 1 ID : 441009580220
Option 2 ID : 441009580219
Option 3 ID : 441009580218
Option 4 ID : 441009580221
Status : Answered
Chosen Option : 4

Q Which of the following angles is same as 135° ?

A 1. -315°
B 2. -225°
C 3. -45°
D 4. -135°

Question ID : 44100998457
Option 1 ID : 441009391939
Option 2 ID : 441009391940
Option 3 ID : 441009391942
Option 4 ID : 441009391941
Status : Answered
Chosen Option : 3

Q Suppose $A = \begin{pmatrix} a & b & c & d \\ e & f & g & h \\ i & j & k & l \\ m & n & o & p \end{pmatrix}$, where all elements of the matrix are real numbers

such that $\det(A) = 4$. Find $\det(B)$, where $B = \begin{pmatrix} i & j & k & l \\ e+2a & f+2b & g+2c & h+2d \\ 3a & 3b & 3c & 3d \\ m+e & n+f & o+g & p+h \end{pmatrix}$.

A 1. -12
B 2. -4
C 3. 12
D 4. 4

Question ID : 441009155580
Option 1 ID : 441009617468
Option 2 ID : 441009617469
Option 3 ID : 441009617466
Option 4 ID : 441009617467
Status : Answered
Chosen Option : 2

Q Which of the following statements is NOT true?

3
3
A
n
s

1. There exist matrices A and B of order 3×3 such that $A \neq 0$, $B \neq 0$ but $AB = 0$.

2.

If A and B are matrices of order 3×3 such that $AB = 2I_{3 \times 3}$, then $\det(A) \neq 0$ and $\det(B) \neq 0$.

3.

If A and B are matrices of order 3×3 such that $AB = 0$ (zero matrix), then either $A = 0$ or $B = 0$.

If A is a matrix of order 3×3 such that $\det(A) = 2$, then \exists a matrix B of order 3×3

4. such that $\det(B) = \frac{1}{2}$ and $AB = I_{3 \times 3}$.

Question ID : 441009155690

Option 1 ID : 441009617928

Option 2 ID : 441009617929

Option 3 ID : 441009617927

Option 4 ID : 441009617930

Status : Answered

Chosen Option : 3

Q Consider the statements given below:

1. There exist two lines l_1 and l_2 passing through origin with shortest distance 2 units.

4

2. There exist skew lines l_1 and l_2 with shortest distance 0 units.

Which of the following options is correct?

A 1. Both (I) and (II) are true

n

s

2. Only (II) is true

3. Neither (I) nor (II) is true

4. Only (I) is true

Question ID : 441009159171

Option 1 ID : 441009631577

Option 2 ID : 441009631576

Option 3 ID : 441009631578

Option 4 ID : 441009631575

Status : Answered

Chosen Option : 4

Q If a light ray is incident from air on a water surface by making an angle 30° with the normal, find the angle of refraction.

3 (Refractive index of water with respect to air is 1.5)

5

A 1. $\sin^{-1}\left(\frac{2}{3}\right)$

2. 30°

3. 45°

4. $\sin^{-1}\left(\frac{1}{3}\right)$

Question ID : 441009145765

Option 1 ID : 441009578966

Option 2 ID : 441009578963

Option 3 ID : 441009578964

Option 4 ID : 441009578965

Status : Answered

Chosen Option : 4

Q Which of the following is a universal set of $\mathbb{Q} \times \mathbb{N}$ and $\mathbb{N} \times \mathbb{Q}^c$?

3
6
A 1. $\mathbb{Q} \times \mathbb{R}$
n
s
 2. $\mathbb{R} \times \mathbb{N}$
 3. $\mathbb{R} \times \mathbb{Q}^c$
 4. $\mathbb{Q} \times \mathbb{Q}^c$

Question ID : 441009152194
Option 1 ID : 441009603942
Option 2 ID : 441009603941
Option 3 ID : 441009603940
Option 4 ID : 441009603939
Status : Answered
Chosen Option : 1

Q The expression $\cos(2x)\cos\left(\frac{x}{2}\right) - \cos(3x)\cos\left(\frac{9x}{2}\right)$ equals:

3
7
A 1. $\cos(5x)\cos\left(\frac{5x}{2}\right)$
 2. $\sin(x)\sin(4x)$
 3. $\cos(x)\cos(4x)$
 4. $\sin(5x)\sin\left(\frac{5x}{2}\right)$

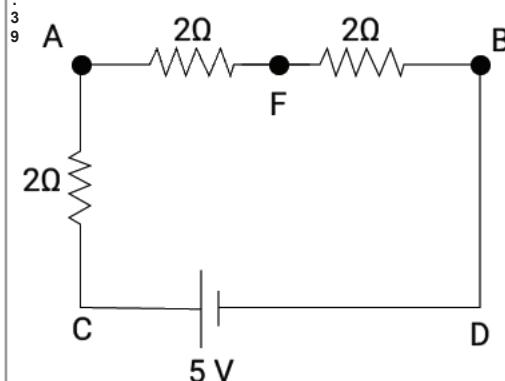
Question ID : 441009141415
Option 1 ID : 441009561857
Option 2 ID : 441009561859
Option 3 ID : 441009561856
Option 4 ID : 441009561858
Status : Answered
Chosen Option : 4

Q The equations of the lines, which cut-off intercepts on the axes whose sum and product are 1 and -6 is:

3
8
A 1. $2x + 3y = 6, -3x + 2y = 6$
n
s
 2. $2x - 3y = 6, -3x + 2y = 6$
 3. $2x + 3y = 0, 3x + 2y = 0$
 4. $2x + 3y = 6, 3x + 2y = 6$

Question ID : 441009143568
Option 1 ID : 441009570282
Option 2 ID : 441009570281
Option 3 ID : 441009570284
Option 4 ID : 441009570283
Status : Answered
Chosen Option : 2

Q Find the equivalent resistance between the points C and F for the given circuit.



A 1. $1.6\ \Omega$

B 2. $3/2\ \Omega$

C 3. $4\ \Omega$

D 4. $1\ \Omega$

Question ID : 441009134834

Option 1 ID : 441009535979

Option 2 ID : 441009535977

Option 3 ID : 441009535978

Option 4 ID : 441009535976

Status : Answered

Chosen Option : 3

Q Two particles of the same mass are moving in two circular paths having radii in the ratio of 1:3. What will be the ratio of their respective velocities for them to experience constant centripetal force?

A 1. 1:3

B 2. $1:\sqrt{3}$

C 3. 3:1

D 4. 1:9

Question ID : 441009110458

Option 1 ID : 441009439404

Option 2 ID : 441009439407

Option 3 ID : 441009439405

Option 4 ID : 441009439406

Status : Answered

Chosen Option : 2

Q A parallel plate capacitor with air between the plates of the capacitor is C. When a dielectric of dielectric constant k is introduced between the plates of the capacitor, its capacitance is C' . Which of the following is the correct relation between C and C' ?

A 1. $C' = k^2/C$

B 2. $C' = k^2C$

C 3. $C' = k/C$

D 4. $C' = kC$

Question ID : 441009109735

Option 1 ID : 441009436672

Option 2 ID : 441009436669

Option 3 ID : 441009436670

Option 4 ID : 441009436671

Status : Answered

Chosen Option : 4

Q If the velocity of a mosquito is given by $\vec{v} = 5\vec{i} + 3t\vec{j} + 2t^2\vec{k}$, the magnitude of its acceleration is

4
2
A 1. 3 m/s^2
 2. 1 m/s^2
 3. 2 m/s^2
 4. 5 m/s^2

Question ID : 441009145397
Option 1 ID : 441009577533
Option 2 ID : 441009577531
Option 3 ID : 441009577532
Option 4 ID : 441009577534
Status : Answered
Chosen Option : 4

Q Which of the following is an INCORRECT statement regarding the specific heat capacity of a substance?

4
3
A 1. The specific heat capacity is independent of the mass of the substance.
 2. The specific capacity of a substance at constant volume is always equal to the specific heat capacity of the substance at constant pressure.
 3. It depends on the nature of the substance.
 4. The S.I. unit of specific heat capacity is $\text{J kg}^{-1} \text{ K}^{-1}$.

Question ID : 441009116315
Option 1 ID : 441009462695
Option 2 ID : 441009462694
Option 3 ID : 441009462692
Option 4 ID : 441009462693
Status : Answered
Chosen Option : 2

Q The third term of a geometric progression is 3, then the product of first five terms of the g

4
4
A 1. 243
 2. 729
 3. 81
 4. 162

Question ID : 441009107615
Option 1 ID : 441009428468
Option 2 ID : 441009428470
Option 3 ID : 441009428467
Option 4 ID : 441009428469
Status : Answered
Chosen Option : 1

Q In a single slit diffraction pattern, how does the angular width of the central maximum change with the increasing slit width?

4
5
A 1. It will remain same.
 2. It may increase or decrease.
 3. It will decrease.
 4. It will increase.

Question ID : 441009145740
Option 1 ID : 441009578859
Option 2 ID : 441009578862
Option 3 ID : 441009578860
Option 4 ID : 441009578861
Status : Answered
Chosen Option : 3

Q In a closed circuit, a battery of emf 10 V and internal resistance of 0.4Ω is connected to an external resistor such that the current flowing through the circuit is 2 A. What will be the value of the external resistor?

4
6
A 1. $1.9.2 \Omega$
n 2. 2.5Ω
s 3. $3.5.2 \Omega$
 4. $4.4.6 \Omega$

Question ID : 441009108357
Option 1 ID : 441009431412
Option 2 ID : 441009431413
Option 3 ID : 441009431411
Option 4 ID : 441009431410
Status : Answered
Chosen Option : 4

Q Compute $\int_{-1}^1 |2x^3 - x| dx$.

4
7
A 1. 1
n 2. $\frac{1}{2}$
s 3. $\frac{3}{2}$
 4. 0

Question ID : 441009159302
Option 1 ID : 441009632087
Option 2 ID : 441009632089
Option 3 ID : 441009632090
Option 4 ID : 441009632088
Status : Answered
Chosen Option : 4

Q Find the argument of the complex number $\left(\frac{2+3i}{12-4i}\right)^4$.

4
8
A 1. $4\tan^{-1}\left(\frac{3}{11}\right)$
 2. $4\tan^{-1}\left(\frac{1}{3}\right)$
 3. $4\tan^{-1}\left(\frac{3}{2}\right)$
 4. $4\tan^{-1}\left(\frac{11}{3}\right)$

Question ID : 441009152718
Option 1 ID : 441009606027
Option 2 ID : 441009606030
Option 3 ID : 441009606029
Option 4 ID : 441009606028
Status : Answered
Chosen Option : 4

Q Direction cosines of x-axis are:

4
9
A 1. $0, 0, 0$
n 2. $1, 0, 0$
s 3. $0, 1, 1$
 4. $1, 1, 1$

Question ID : 441009143633
Option 1 ID : 441009570520
Option 2 ID : 441009570517
Option 3 ID : 441009570518
Option 4 ID : 441009570519
Status : Answered
Chosen Option : 2

Q Which of the following statements is FALSE regarding an extrinsic semiconductor?

5
0
A 1. An extrinsic semiconductor is electrically neutral.
n
s 2. The conductivity of an extrinsic semiconductor is less than an intrinsic semiconductor.
 3. In an n-type extrinsic semiconductor, the electrons are the majority charge carriers.
 4. In an extrinsic semiconductor, an impurity is added.

Question ID : 441009109728
Option 1 ID : 441009436644
Option 2 ID : 441009436641
Option 3 ID : 441009436643
Option 4 ID : 441009436642
Status : Answered
Chosen Option : 2

Q How much pressure will be experienced by a scuba diver 10 m below the surface of an ocean? (Take the atmospheric pressure as 1.01×10^5 Pa, the density of the water as 1000 kg/m^3 and $g = 10 \text{ m/s}^2$)

5
1
A 1. 2.01×10^6 Pa
n
s 2. 2.01×10^5 Pa
 3. 2.01×10^3 Pa
 4. 2.01×10^4 Pa

Question ID : 441009114636
Option 1 ID : 441009455976
Option 2 ID : 441009455974
Option 3 ID : 441009455975
Option 4 ID : 441009455977
Status : Answered
Chosen Option : 2

Q If origin is shifted to $(-2, 1)$, then the point $(2, -3)$ becomes _____.

5
2
A 1. $(0, 2)$
n
s 2. $(-4, 4)$
 3. $(0, -2)$
 4. $(4, -4)$

Question ID : 441009116863
Option 1 ID : 441009464582
Option 2 ID : 441009464580
Option 3 ID : 441009464581
Option 4 ID : 441009464579
Status : Answered
Chosen Option : 2

Q A 100 W electric bulb operates continuously for 10 hours and consumes 1 kWh of energy. Based on this, which of the following statements is correct?

5
3
A 1. The bulb draws a current of 0.5 A from a 100 V supply for 10 hours.
n
s 2. If two such bulbs are used for 5 hours each, the total energy consumption will still be 1 kWh.
 3. The energy consumed is equal to 36000 joules.
 4. The energy consumed can be calculated by multiplying the current and resistance of the bulb.

Question ID : 441009130306
Option 1 ID : 441009517615
Option 2 ID : 441009517617
Option 3 ID : 441009517616
Option 4 ID : 441009517618
Status : Answered
Chosen Option : 1

Q Two cylindrical wires, A and B, made of the same material with equal lengths but different radii r_1 and r_2 , are first connected in series and then in parallel. What is the ratio of the effective resistance in the series combination to 5 that in the parallel combination?

4

A 1. $[(r_1^2 + r_2^2)/(r_1 r_2)]^2$
B 2. $[r_1 r_2 / (r_1^2 + r_2^2)]^2$
C 3. $[r_1 r_2 / (r_1^2 + r_2^2)]^4$
D 4. $[(r_1^2 + r_2^2)/r_1 r_2]^4$

Question ID : 441009130453

Option 1 ID : 441009518240

Option 2 ID : 441009518242

Option 3 ID : 441009518239

Option 4 ID : 441009518241

Status : Answered

Chosen Option : 1

Q If a ray of light strikes a plane mirror at an angle of 30° with the normal, what will be the angle of reflection?

5

5

A 1. 30°
B 2. 0°
C 3. 90°
D 4. 60°

Question ID : 441009116333

Option 1 ID : 441009462767

Option 2 ID : 441009462765

Option 3 ID : 441009462764

Option 4 ID : 441009462766

Status : Answered

Chosen Option : 1

Q Let $p(x)$ be a polynomial. If all the roots of $p(x) = 0$ are real, then all the roots of $p'(x) = 0$ are:

6

6

A 1. complex
B 2. real
C 3. zero
D 4. rational

Question ID : 441009106886

Option 1 ID : 441009425579

Option 2 ID : 441009425578

Option 3 ID : 441009425580

Option 4 ID : 441009425581

Status : Answered

Chosen Option : 2

Q If A is the set of positive rational numbers and B is the set of natural numbers, then which

5 A and B?

7

A 1. \mathbb{Q}^+
B 2. \mathbb{R}
C 3. $\mathbb{R} \setminus \mathbb{N}$
D 4. $\mathbb{Q} \cup \mathbb{N}$

Question ID : 441009152061

Option 1 ID : 441009603416

Option 2 ID : 441009603415

Option 3 ID : 441009603418

Option 4 ID : 441009603417

Status : Answered

Chosen Option : 3

Q Satellites orbiting in the circular orbits above the Earth's equatorial plane with the time period $T =$ _____ hours, are called _____.

5

8

A 1. 12; geostationary satellites

n

s

2. 24; polar satellites

3. 12; polar satellites

4. 24; geostationary satellites

Question ID : 441009145250

Option 1 ID : 441009576964

Option 2 ID : 441009576961

Option 3 ID : 441009576963

Option 4 ID : 441009576962

Status : Answered

Chosen Option : 4

Q Which of the following is the best approximated degree measure of 4 radians?

5

9

A 1. $229^\circ 5' 27''$

n

s

2. $220^\circ 5' 27''$

3. $231^\circ 5' 27''$

4. $230^\circ 5'$

Question ID : 441009188417

Option 1 ID : 441009743544

Option 2 ID : 441009743542

Option 3 ID : 441009743545

Option 4 ID : 441009743543

Status : Answered

Chosen Option : 1

Q A parallel plate capacitor consists of two plates with a plate area of 0.25 m^2 and a distance between the plates of 0.002 m . The capacitor is placed in a vacuum, and the voltage across the plates is 15 V . The permittivity of free space is $\epsilon_0 = 8.854 \times 10^{-12} \text{ F/m}$. If the distance between the plates is reduced to half, calculate the capacitance and the energy stored in the capacitor when the same voltage is applied.

A 1. $4.2 \text{ nF}, 5.2 \times 10^{-7} \text{ J}$

n

s

2. $1.5 \mu\text{F}, 6 \times 10^{-7} \text{ J}$

3. $2.2 \text{ nF}, 2.5 \times 10^{-7} \text{ J}$

4. $0.2 \mu\text{F}, 3.4 \times 10^{-9} \text{ J}$

Question ID : 441009130379

Option 1 ID : 441009517910

Option 2 ID : 441009517908

Option 3 ID : 441009517907

Option 4 ID : 441009517909

Status : Answered

Chosen Option : 3

