



भारतीय विमानपत्तन प्राधिकरण
AIRPORTS AUTHORITY OF INDIA

(SCHEDULE – ‘A’ MINI RATNA- CATEGORY- 1 PUBLIC SECTOR ENTERPRISES)

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Test Time	1:00 PM - 3:00 PM
Subject	Junior Executive (Air Traffic Control)

Section : Part A General Knowledge

Q.1	In January 2025, the Government of India announced the appointment of V Narayanan as the new Chairman of _____.
Ans	☒ 1. Indian Olympic Association (IOA)
	☒ 2. Central Bureau of Investigation (CBI)
	☒ 3. Indian Council of Medical Research (ICMR)
	☒ 4. Indian Space Research Organization (ISRO)

Question ID :	44100962163
Option 1 ID :	441009247688
Option 2 ID :	441009247686
Option 3 ID :	441009247689
Option 4 ID :	441009247687
Status :	Answered
Chosen Option :	4

Q.2 Which international institution provided financial assistance to India during the 1991 crisis?**Ans** ☒ 1. United Nations (UN)☒ 2. International Monetary Fund (IMF)☒ 3. Asian Development Bank (ADB)☒ 4. World Health Organization (WHO)

Question ID : 44100943793

Option 1 ID : 441009174625

Option 2 ID : 441009174623

Option 3 ID : 441009174624

Option 4 ID : 441009174626

Status : Answered

Chosen Option : 2

Q.3 Which river is of significance in the southern part of the Thar Desert?**Ans** ☒ 1. Tapi☒ 2. Luni☒ 3. Godavari☒ 4. Ganga

Question ID : 44100946476

Option 1 ID : 441009185057

Option 2 ID : 441009185058

Option 3 ID : 441009185056

Option 4 ID : 441009185055

Status : Answered

Chosen Option : 2

Q.4 Which Constitutional Amendment led to the constitutional recognition and formalisation of the Panchayati Raj system in India?**Ans** ☒ 1. 42nd Amendment☒ 2. 73rd Amendment☒ 3. 74th Amendment☒ 4. 44th Amendment

Question ID : 44100939389

Option 1 ID : 441009157081

Option 2 ID : 441009157079

Option 3 ID : 441009157080

Option 4 ID : 441009157082

Status : Answered

Chosen Option : 2

Q.5	Which of the following is a stringed (Tantuvadya) musical instrument?
Ans	☒ 1. Cymbals
	☒ 2. Mridangam
	☒ 3. Veena
	☒ 4. Xylophone

Question ID :	44100946735
Option 1 ID :	441009186081
Option 2 ID :	441009186083
Option 3 ID :	441009186084
Option 4 ID :	441009186082
Status :	Answered
Chosen Option :	3

Q.6	Which coastal plain(s) of India is/are an example(s) of a submerged coast?
Ans	☒ 1. Eastern and Western Coastal Plains
	☒ 2. Only Western Coastal Plain
	☒ 3. Southern Coastal Plain
	☒ 4. Only Eastern Coastal Plain

Question ID :	44100943271
Option 1 ID :	441009172545
Option 2 ID :	441009172543
Option 3 ID :	441009172546
Option 4 ID :	441009172544
Status :	Answered
Chosen Option :	4

Q.7	On the eve of Republic Day 2025, how many Armed Forces and Central Armed Police Forces personnel were approved for gallantry awards by the President of India?
Ans	☒ 1. 83
	☒ 2. 103
	☒ 3. 93
	☒ 4. 73

Question ID :	44100940016
Option 1 ID :	441009159595
Option 2 ID :	441009159594
Option 3 ID :	441009159593
Option 4 ID :	441009159596
Status :	Answered
Chosen Option :	1

Q.8	Who is the author of the poetry titled 'Main Jab Tak Aai Bahar' for which Sahitya Akademi Award was conferred for the year 2024?
Ans	✓ 1. Gagan Gill
	✗ 2. Dileep Jhaveri
	✗ 3. Dipak Kumar Sharma
	✗ 4. Sohan Koul

Question ID :	44100962161
Option 1 ID :	441009247680
Option 2 ID :	441009247678
Option 3 ID :	441009247681
Option 4 ID :	441009247679
Status :	Answered
Chosen Option :	3

Q.9	When was the first Five-year Plan launched?
Ans	✓ 1. 1951
	✗ 2. 1956
	✗ 3. 1967
	✗ 4. 1961

Question ID :	44100940022
Option 1 ID :	441009159617
Option 2 ID :	441009159618
Option 3 ID :	441009159620
Option 4 ID :	441009159619
Status :	Answered
Chosen Option :	1

Q.10	What is a significant feature introduced by the 73 rd Amendment Act in the Panchayati Raj system?
Ans	✗ 1. Establishment of Panchayats without constitutional backing
	✗ 2. Direct election of urban municipal bodies
	✓ 3. Introduction of Gram Sabha as a constitutional body
	✗ 4. Provision for removal of Panchayat members only through judicial orders

Question ID :	44100939393
Option 1 ID :	441009157097
Option 2 ID :	441009157095
Option 3 ID :	441009157096
Option 4 ID :	441009157098
Status :	Answered
Chosen Option :	3

Q.1	In a certain code language, 'creativity sparks innovation' is coded as 'tk jo lo' and 'innovation is needed' is coded as 'mb pt jo'. How is 'innovation' coded in the given language?
Ans	✖ 1. tk
	✔ 2. jo
	✖ 3. mb
	✖ 4. pt

Question ID :	44100938946
Option 1 ID :	441009155334
Option 2 ID :	441009155331
Option 3 ID :	441009155332
Option 4 ID :	441009155333
Status :	Answered
Chosen Option :	2

Q.2	In the following triads, 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. NAMASTE - AMASTEN - MASTENA ETHICAL - THICALE - HICALET
Ans	✔ 1. CURTAIN - URTAINC - RTAINCU
	✖ 2. CURTAIN - URTAINC - RTIANCU
	✖ 3. CURTAIN - URTIANC - RTAINCU
	✖ 4. CURTAIN - URATINC - RTAINCU

Question ID :	44100940191
Option 1 ID :	441009160292
Option 2 ID :	441009160289
Option 3 ID :	441009160290
Option 4 ID :	441009160291
Status :	Answered
Chosen Option :	1

Q.3	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.)
Ans	✖ 1. GJ-MQ
	✔ 2. QT-WU
	✖ 3. IL-OS
	✖ 4. BE-HL

Question ID :	44100939766
Option 1 ID :	441009158594
Option 2 ID :	441009158596
Option 3 ID :	441009158595
Option 4 ID :	441009158593
Status :	Answered
Chosen Option :	2

Q.4 Which of the following letter-number clusters will replace the question mark (?) in the given series to make it logically complete?

BDQ8 DGO12 FJM16 HMK20 ?

Ans ☒ 1. KRJ21

☒ 2. IQH23

☒ 3. JPI24

☒ 4. QGK25

Question ID : 44100938982

Option 1 ID : 441009155477

Option 2 ID : 441009155476

Option 3 ID : 441009155475

Option 4 ID : 441009155478

Status : Answered

Chosen Option : 3

Q.5 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.)

Ans ☒ 1. CJE

☒ 2. HOK

☒ 3. RYT

☒ 4. MTO

Question ID : 44100939786

Option 1 ID : 441009158673

Option 2 ID : 441009158674

Option 3 ID : 441009158676

Option 4 ID : 441009158675

Status : Answered

Chosen Option : 2

Q.6 Six students, Adi, Poonam, Moni, Bulbul, Shikha and Arun, are sitting in a straight line, facing north.

Only one person sits to the right of Arun.

Only two people sit between Moni and Bulbul.

Only one person sits between Bulbul and Poonam.

Shikha sits to the immediate left of Adi.

Adi is not an immediate neighbour of Moni.

Who sits on the extreme left end?

Ans ☒ 1. Adi

☒ 2. Shikha

☒ 3. Bulbul

☒ 4. Moni

Question ID : 44100938950

Option 1 ID : 441009155348

Option 2 ID : 441009155349

Option 3 ID : 441009155347

Option 4 ID : 441009155350

Status : Answered

Chosen Option : 4

Q.7

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

(Left) N + @ # A ₹ M S T E % R & A K G W < O = P Z D ^ U * Q B F (Right)

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

Ans

✖ 1. Three

✖ 2. Two

✖ 3. None

✔ 4. One

Question ID :	44100939153
Option 1 ID :	441009156148
Option 2 ID :	441009156147
Option 3 ID :	441009156145
Option 4 ID :	441009156146
Status :	Answered
Chosen Option :	4

Q.8

In a certain code language,

'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 × B' means 'A is the wife of B' and
'A * B' means 'A is the father of B'.

How is M related to K if 'T + O - M + U ! K / S'?

Ans

✔ 1. Mother's brother

✖ 2. Father

✖ 3. Father's father

✖ 4. Mother

Question ID :	44100939756
Option 1 ID :	441009158556
Option 2 ID :	441009158554
Option 3 ID :	441009158555
Option 4 ID :	441009158553
Status :	Answered
Chosen Option :	1

Q.9

In a certain code language, 'MATTER' is coded as '83' and 'SOLIDS' is coded as '84'. What is the code for 'LIQUID' in the given code language?

Ans

✖ 1. 81

✖ 2. 80

✖ 3. 72

✔ 4. 78

Question ID :	44100939019
Option 1 ID :	441009155618
Option 2 ID :	441009155616
Option 3 ID :	441009155615
Option 4 ID :	441009155617
Status :	Answered
Chosen Option :	4

Q.1
0

Refer to the following number and symbol series and answer the question that follows.
Counting to be done from left to right only. All numbers are single-digit numbers.

(Left) 2 # ! 3 4 @ * \$ 5 1 = + > 8 9 & \$ (Right)

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

Ans

✗ 1. Three

✗ 2. Two

✗ 3. One

✓ 4. Four

Question ID :	44100938963
Option 1 ID :	441009155402
Option 2 ID :	441009155401
Option 3 ID :	441009155400
Option 4 ID :	441009155399
Status :	Answered
Chosen Option :	4

Q.1
1

What should come in place of the question mark (?) in the given series based on the English alphabetical order?

BDF EFI HHL KJO ?

Ans

✗ 1. FKJ

✗ 2. RNJ

✗ 3. NHY

✓ 4. NLR

Question ID :	44100938990
Option 1 ID :	441009155510
Option 2 ID :	441009155508
Option 3 ID :	441009155509
Option 4 ID :	441009155507
Status :	Answered
Chosen Option :	4

Q.1
2

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

 $47 \div 48 \times 2,256 + 513 - 518 = ?$

Ans

✓ 1. 6

✗ 2. -4

✗ 3. 4

✗ 4. 5

Question ID :	44100940282
Option 1 ID :	441009160646
Option 2 ID :	441009160645
Option 3 ID :	441009160644
Option 4 ID :	441009160647
Status :	Answered
Chosen Option :	1

Q.1 3	Seven boxes E, F, G, H, I, J and K are kept one over the other but not necessarily in the same order. K is kept immediately below E and immediately above F. G is kept immediately below F and immediately above I. J is kept immediately below I. H is kept immediately above E. Which box is kept at the bottommost position of the pile?
Ans	✖ 1. H
	✖ 2. K
	✖ 3. G
	✔ 4. J

Question ID :	44100938932
Option 1 ID :	441009155275
Option 2 ID :	441009155278
Option 3 ID :	441009155277
Option 4 ID :	441009155276
Status :	Answered
Chosen Option :	4

Q.1 4	Select the pair which follows the same pattern as that followed by the two pairs given below. Both pairs follow the same pattern. JDC:PJI MHE:SNK
Ans	✖ 1. FBD:JFH
	✔ 2. RSO:XYU
	✖ 3. GKN:HLO
	✖ 4. JFH:PNN

Question ID :	44100939814
Option 1 ID :	441009158785
Option 2 ID :	441009158786
Option 3 ID :	441009158788
Option 4 ID :	441009158787
Status :	Answered
Chosen Option :	2

Q.1 5	Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only. (LEFT) 1 # 2 4 & 8 ! 3 = > 6 + 5 / \$ 7 - 9 (RIGHT) If all the numbers are dropped from the series, which of the following will be 4 th from the left?
Ans	✖ 1. !
	✖ 2. \$
	✔ 3. =
	✖ 4. +

Question ID :	44100938964
Option 1 ID :	441009155406
Option 2 ID :	441009155405
Option 3 ID :	441009155403
Option 4 ID :	441009155404
Status :	Answered
Chosen Option :	3

Q.1	Find the third proportional of 48 and 120.
Ans	✖ 1. 350
	✖ 2. 200
	✖ 3. 250
	✔ 4. 300

Question ID :	44100956866
Option 1 ID :	441009226292
Option 2 ID :	441009226289
Option 3 ID :	441009226290
Option 4 ID :	441009226291
Status :	Answered
Chosen Option :	4

Q.2	A train covered first 640 km at a speed of 160 km/hr and then covered the remaining 960 km at a speed of 120 km/hr. Find its average speed (in km/hr).
Ans	✖ 1. $131\frac{1}{3}$
	✔ 2. $133\frac{1}{3}$
	✖ 3. $130\frac{1}{3}$
	✖ 4. $132\frac{1}{3}$

Question ID :	44100955057
Option 1 ID :	441009219189
Option 2 ID :	441009219191
Option 3 ID :	441009219188
Option 4 ID :	441009219190
Status :	Answered
Chosen Option :	2

Q.3	A sum of ₹6,00,000 becomes ₹6,84,699.68 in n years at an annual compound interest rate of 4.5%, compounded annually. What is the value of n? (Rounded to the nearest integer.)
Ans	✔ 1. 3
	✖ 2. 6
	✖ 3. 7
	✖ 4. 5

Question ID :	44100949534
Option 1 ID :	441009197408
Option 2 ID :	441009197410
Option 3 ID :	441009197411
Option 4 ID :	441009197409
Status :	Answered
Chosen Option :	1

Q.4 Water in a rectangular reservoir with a base measuring 54 metres by 40 metres and a depth of 3.5 metres needs to be emptied. If the water flows out through a pipe with a square cross-section of side 10 cm at a rate of 7.2 km/hr, how long will it take to empty the reservoir?

- Ans** ☒ 1. 105 hours
☐ 2. 90 hours
☐ 3. 98 hours
☐ 4. 100 hours

Question ID :	44100952317
Option 1 ID :	441009208386
Option 2 ID :	441009208383
Option 3 ID :	441009208384
Option 4 ID :	441009208385
Status :	Answered
Chosen Option :	1

Q.5 A person purchased 15 litres of petrol in a container at ₹110 per litre but forgot to close the container with a lid. As a result, 20% of the petrol evaporated. At what price should he sell the remaining petrol to earn a 10% profit?

- Ans** ☐ 1. ₹163.23
☒ 2. ₹151.25
☐ 3. ₹130.33
☐ 4. ₹140.59

Question ID :	44100951703
Option 1 ID :	441009205967
Option 2 ID :	441009205966
Option 3 ID :	441009205964
Option 4 ID :	441009205965
Status :	Answered
Chosen Option :	2

Q.6 A group of 20 workers is assigned to complete a project in 30 days. However, after 10 days, 10 workers leave the team permanently. In how long will the remaining project be completed?

- Ans** ☐ 1. 10 days
☐ 2. 30 days
☒ 3. 40 days
☐ 4. 20 days

Question ID :	44100952123
Option 1 ID :	441009207611
Option 2 ID :	441009207613
Option 3 ID :	441009207614
Option 4 ID :	441009207612
Status :	Answered
Chosen Option :	3

Q.7 Find the simple interest for a period of 5 years at the rate of 8% per annum for a principal of ₹65,000.

Ans ☒ 1. ₹26,000

☐ 2. ₹25,000

☐ 3. ₹28,000

☐ 4. ₹29,000

Question ID : 44100953444

Option 1 ID : 441009212767

Option 2 ID : 441009212766

Option 3 ID : 441009212768

Option 4 ID : 441009212769

Status : Answered

Chosen Option : 1

Q.8 A company increases the salaries of its employees by 10% in the first year, 15% in the second year, and 5% in the third year. If an employee's salary after three years is ₹1,59,390, then what was his initial salary?

Ans ☐ 1. ₹1,15,600

☒ 2. ₹1,20,000

☐ 3. ₹1,12,750

☐ 4. ₹1,05,310

Question ID : 44100951685

Option 1 ID : 441009205894

Option 2 ID : 441009205895

Option 3 ID : 441009205893

Option 4 ID : 441009205892

Status : Answered

Chosen Option : 2

Q.9 What is the mean proportional between $(9 + 3\sqrt{3})$ and $(18 - 6\sqrt{3})$?

Ans ☐ 1. $5\sqrt{3}$

☐ 2. $4\sqrt{3}$

☒ 3. $6\sqrt{3}$

☐ 4. $2\sqrt{3}$

Question ID : 44100956857

Option 1 ID : 441009226255

Option 2 ID : 441009226254

Option 3 ID : 441009226256

Option 4 ID : 441009226253

Status : Answered

Chosen Option : 3

Q.1
0 What is the equivalent common fraction form of $0.\overline{2} + 0.125$?

Ans ☒ 1. $\frac{25}{72}$

☒ 2. $\frac{24}{61}$

☒ 3. $\frac{13}{18}$

☒ 4. $\frac{19}{43}$

Question ID : 44100951573

Option 1 ID : 441009205443

Option 2 ID : 441009205442

Option 3 ID : 441009205440

Option 4 ID : 441009205441

Status : Answered

Chosen Option : 1

Q.1
1 A shopkeeper makes a net profit of 71% on selling an article at success. Find the net profit percentage, if the shopkeeper sells the same article

Ans ☒ 1. 85%

☒ 2. 75%

☒ 3. 80%

☒ 4. 70%

Question ID : 441009188294

Option 1 ID : 441009743067

Option 2 ID : 441009743065

Option 3 ID : 441009743066

Option 4 ID : 441009743064

Status : Answered

Chosen Option : 2

Q.1
2 The average of 5, 6, 4, 12, 8, 10, 16, 14, 9, 20, 18, 22, 15, and K is 16. Find K's value.

Ans ☒ 1. 65

☒ 2. 62

☒ 3. 58

☒ 4. 54

Question ID : 44100953367

Option 1 ID : 441009212463

Option 2 ID : 441009212462

Option 3 ID : 441009212461

Option 4 ID : 441009212460

Status : Answered

Chosen Option : 1

Q.1 3	Find the value of x, when $22^{-17} \times 22^{(3x+14)} = 22^{16} \div 22^{10}$.
Ans	✖ 1. 4
	✖ 2. 5
	✔ 3. 3
	✖ 4. 2

Question ID :	44100949404
Option 1 ID :	441009196898
Option 2 ID :	441009196899
Option 3 ID :	441009196897
Option 4 ID :	441009196896
Status :	Answered
Chosen Option :	3

Q.1 4	Two spheres made of the same metal weigh 1 kg and 3.5 kg. The smaller sphere has a radius of 1.5 cm. Both spheres are melted and reshaped into a single larger sphere. What is the cube of the radius of the newly formed sphere? (Use Mass = Density × Volume, rounded off to the nearest integer.)
Ans	✔ 1. 15
	✖ 2. 13
	✖ 3. 11
	✖ 4. 18

Question ID :	44100952350
Option 1 ID :	441009208498
Option 2 ID :	441009208497
Option 3 ID :	441009208496
Option 4 ID :	441009208499
Status :	Answered
Chosen Option :	3

Q.1 5	Kuldeep can swim with a speed of 10 km/hr in still water. If the speed of the stream is 4 km/hr, what will be the time taken by Kuldeep to go 98 km downstream?
Ans	✖ 1. 6 hours
	✖ 2. 5 hours
	✔ 3. 7 hours
	✖ 4. 8 hours

Question ID :	44100954996
Option 1 ID :	441009218954
Option 2 ID :	441009218953
Option 3 ID :	441009218955
Option 4 ID :	441009218956
Status :	Answered
Chosen Option :	3

Q.1	Select the INCORRECTLY spelt word.
Ans	✖ 1. Cacophony
	✖ 2. Unnecessary
	✖ 3. Embarrassment
	✔ 4. Bougeoise

Question ID :	44100965297
Option 1 ID :	441009260211
Option 2 ID :	441009260209
Option 3 ID :	441009260212
Option 4 ID :	441009260210
Status :	Answered
Chosen Option :	4

Q.2	Select the most appropriate meaning of the given word.
	Nefarious
Ans	✖ 1. Scrupulous
	✔ 2. Pernicious
	✖ 3. Sublime
	✖ 4. Virtuous

Question ID :	44100965379
Option 1 ID :	441009260518
Option 2 ID :	441009260517
Option 3 ID :	441009260520
Option 4 ID :	441009260519
Status :	Answered
Chosen Option :	2

Q.3	Select the most appropriate verb to fill in the blank.
	Can you ____ me where he lives?
Ans	✖ 1. suggest
	✖ 2. write
	✖ 3. ask
	✔ 4. tell

Question ID :	44100951362
Option 1 ID :	441009204593
Option 2 ID :	441009204594
Option 3 ID :	441009204592
Option 4 ID :	441009204591
Status :	Answered
Chosen Option :	4

Q.4	Select the most appropriate meaning of the given idiom. Bite the bullet
Ans	✗ 1. Doing something in an easier and least expensive manner ✓ 2. Finish something no matter how unsatisfying or unpleasant it is ✗ 3. Stuck in a difficult circumstance with no escape ✗ 4. Doing something that has never been done before

Question ID :	44100951357
Option 1 ID :	441009204574
Option 2 ID :	441009204572
Option 3 ID :	441009204571
Option 4 ID :	441009204573
Status :	Answered
Chosen Option :	2

Q.5	Select the most appropriate form of the past tense that can substitute the underlined segment to rectify the given sentence. By the time I reached the station, the train <u>already left</u> .
Ans	✓ 1. had already left ✗ 2. was already leaving ✗ 3. have already left ✗ 4. has already left

Question ID :	44100964739
Option 1 ID :	441009257904
Option 2 ID :	441009257906
Option 3 ID :	441009257905
Option 4 ID :	441009257903
Status :	Answered
Chosen Option :	1

Q.6	Select the most appropriate meaning of the given idiom. Cold feet
Ans	✓ 1. Becoming nervous ✗ 2. To have patience ✗ 3. Not feeling good ✗ 4. Going to sleep

Question ID :	44100951347
Option 1 ID :	441009204531
Option 2 ID :	441009204534
Option 3 ID :	441009204532
Option 4 ID :	441009204533
Status :	Answered
Chosen Option :	1

Q.7 Select the option that can be used as a one-word substitute for the given group of words.
A study of election trends

- Ans** ☒ 1. Acoustics
- ☒ 2. Philology
- ☒ 3. Theology
- ☒ 4. Psephology

Question ID :	44100946570
Option 1 ID :	441009185433
Option 2 ID :	441009185434
Option 3 ID :	441009185431
Option 4 ID :	441009185432
Status :	Answered
Chosen Option :	4

Q.8 Select the most appropriate option to fill in the blanks.

Although Jane had practised the dance routine for weeks, she still felt _____ than her teammates, who seemed to move with _____ grace.

- Ans** ☒ 1. clumsy; more effortless
- ☒ 2. clumsier; effortless
- ☒ 3. clumsy; effortless
- ☒ 4. clumsiest; more effortless

Question ID :	44100965055
Option 1 ID :	441009259252
Option 2 ID :	441009259249
Option 3 ID :	441009259251
Option 4 ID :	441009259250
Status :	Answered
Chosen Option :	2

Q.9 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. For centuries, humans have tried to master the art of flight.
 B. It was not until the early 20th century that the dream was realised with the invention of the airplane.
 C. Despite numerous attempts, many of these efforts ended in failure.
 D. Today, aviation is one of the most important modes of transportation.

- Ans** ☒ 1. BCAD
- ☒ 2. DABC
- ☒ 3. CBAD
- ☒ 4. BACD

Question ID :	44100957313
Option 1 ID :	441009228120
Option 2 ID :	441009228121
Option 3 ID :	441009228119
Option 4 ID :	441009228122
Status :	Answered
Chosen Option :	4

Q.1	Select the INCORRECTLY spelt word.
0	
Ans	1. Referred
	2. Occurrence
	3. Acknowledgment
	4. Supercede

Question ID :	44100965287
Option 1 ID :	441009260168
Option 2 ID :	441009260167
Option 3 ID :	441009260166
Option 4 ID :	441009260165
Status :	Answered
Chosen Option :	4

Q.1	Select the option that can be used as a one-word substitute for the given group of words.
1	One who demands strict conformity to rules
Ans	1. Martinet
	2. Ophthalmologist
	3. Endodontist
	4. Omnipotent

Question ID :	44100946576
Option 1 ID :	441009185457
Option 2 ID :	441009185456
Option 3 ID :	441009185455
Option 4 ID :	441009185458
Status :	Answered
Chosen Option :	1

Q.1	Identify the option that rectifies the given sentence to make it grammatically correct.
2	He never come here again.
Ans	1. comes
	2. would come
	3. coming
	4. came

Question ID :	44100947055
Option 1 ID :	441009187339
Option 2 ID :	441009187341
Option 3 ID :	441009187342
Option 4 ID :	441009187340
Status :	Answered
Chosen Option :	4

Q.1 3	Select the most appropriate article to fill in the blank. If no article is needed, select 'No article required'. The dictator's reign was characterised by a totalitarian form of government, where he controlled every aspect of life in _____ country.
Ans	✗ 1. an ✗ 2. a ✓ 3. the ✗ 4. No article required

Question ID :	44100960481
Option 1 ID :	441009240884
Option 2 ID :	441009240883
Option 3 ID :	441009240885
Option 4 ID :	441009240886
Status :	Answered
Chosen Option :	3

Q.1 4	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. Despite the significant benefits of globalisation, it has also exacerbated inequality, with wealth becoming concentrated in fewer hands. B. On the other hand, critics of globalisation argue that it has led to the erosion of local cultures and industries. C. Globalisation has led to unprecedented economic growth, connecting markets and fostering innovation on a global scale. D. Furthermore, it has had an uneven impact on different regions, leaving some countries struggling to adapt to rapidly changing global dynamics.
Ans	✗ 1. CDBA ✓ 2. CDAB ✗ 3. DBCA ✗ 4. ABCD

Question ID :	44100957340
Option 1 ID :	441009228187
Option 2 ID :	441009228189
Option 3 ID :	441009228190
Option 4 ID :	441009228188
Status :	Answered
Chosen Option :	1

Q.1 5	Select the most appropriate ANTONYM of the given word. Trivial
Ans	✗ 1. Obvious ✗ 2. Unimportant ✗ 3. Insignificant ✓ 4. Important

Question ID :	44100965325
Option 1 ID :	441009260319
Option 2 ID :	441009260318
Option 3 ID :	441009260320
Option 4 ID :	441009260317
Status :	Answered
Chosen Option :	4

Comprehension:
Read the given passage and answer the questions that follow. The First Wave of Feminism, emerging in the late 19 th and early 20 th centuries, was a pioneering movement advocating for women's legal and political rights. Rooted in Enlightenment ideals of equality and justice, this wave primarily focused on suffrage, property rights and access to education. Leaders like Susan B. Anthony, Elizabeth Cady Stanton and Emmeline Pankhurst played pivotal roles in mobilising women through writings, speeches and organised protests. The Seneca Falls Convention of 1848, often seen as the catalyst for the movement, produced the Declaration of Sentiments, demanding equal rights. Women's relentless activism culminated in landmark victories, such as the passage of the Nineteenth Amendment in the United States and the Representation of the People Act in Britain. Despite its successes, the movement was criticised for primarily addressing the concerns of white, middle-class women, often neglecting the experiences of women of colour and the working class. However, the First Wave laid the foundation for subsequent feminist movements, shaping future struggles for gender equality. Its achievements inspired later waves of feminism, which sought to address broader issues such as workplace rights, reproductive freedom and intersectionality. The First Wave remains a crucial chapter in the ongoing fight for women's empowerment.

SubQuestion No : 16
Q.1 Which word is the ANTONYM of 'pioneering' as used in the passage?
6
Ans ✗ 1. Revolutionary
✗ 2. Progressive
✗ 3. Innovative
✓ 4. Traditional

Question ID :	44100934586
Option 1 ID :	441009137740
Option 2 ID :	441009137741
Option 3 ID :	441009137739
Option 4 ID :	441009137738
Status :	Answered
Chosen Option :	4

Comprehension:
Read the given passage and answer the questions that follow. The First Wave of Feminism, emerging in the late 19 th and early 20 th centuries, was a pioneering movement advocating for women's legal and political rights. Rooted in Enlightenment ideals of equality and justice, this wave primarily focused on suffrage, property rights and access to education. Leaders like Susan B. Anthony, Elizabeth Cady Stanton and Emmeline Pankhurst played pivotal roles in mobilising women through writings, speeches and organised protests. The Seneca Falls Convention of 1848, often seen as the catalyst for the movement, produced the Declaration of Sentiments, demanding equal rights. Women's relentless activism culminated in landmark victories, such as the passage of the Nineteenth Amendment in the United States and the Representation of the People Act in Britain. Despite its successes, the movement was criticised for primarily addressing the concerns of white, middle-class women, often neglecting the experiences of women of colour and the working class. However, the First Wave laid the foundation for subsequent feminist movements, shaping future struggles for gender equality. Its achievements inspired later waves of feminism, which sought to address broader issues such as workplace rights, reproductive freedom and intersectionality. The First Wave remains a crucial chapter in the ongoing fight for women's empowerment.

SubQuestion No : 17
Q.1 Which of the following was NOT a major focus of the First Wave of Feminism?
7
Ans
✗ 1. Equal access to education
✗ 2. Property rights
✗ 3. Women's suffrage
✓ 4. Workplace discrimination laws

Question ID :	44100934584
Option 1 ID :	441009137731
Option 2 ID :	441009137733
Option 3 ID :	441009137730
Option 4 ID :	441009137732
Status :	Answered
Chosen Option :	4

Comprehension:
Read the given passage and answer the questions that follow. The First Wave of Feminism, emerging in the late 19 th and early 20 th centuries, was a pioneering movement advocating for women's legal and political rights. Rooted in Enlightenment ideals of equality and justice, this wave primarily focused on suffrage, property rights and access to education. Leaders like Susan B. Anthony, Elizabeth Cady Stanton and Emmeline Pankhurst played pivotal roles in mobilising women through writings, speeches and organised protests. The Seneca Falls Convention of 1848, often seen as the catalyst for the movement, produced the Declaration of Sentiments, demanding equal rights. Women's relentless activism culminated in landmark victories, such as the passage of the Nineteenth Amendment in the United States and the Representation of the People Act in Britain. Despite its successes, the movement was criticised for primarily addressing the concerns of white, middle-class women, often neglecting the experiences of women of colour and the working class. However, the First Wave laid the foundation for subsequent feminist movements, shaping future struggles for gender equality. Its achievements inspired later waves of feminism, which sought to address broader issues such as workplace rights, reproductive freedom and intersectionality. The First Wave remains a crucial chapter in the ongoing fight for women's empowerment.

SubQuestion No : 18
Q.1 What is the tone of the passage?
8
Ans  1. Sarcastic and dismissive
 2. Romanticised and exaggerated
 3. Passionate and biased
 4. Neutral and historical

Question ID :	44100934583
Option 1 ID :	441009137727
Option 2 ID :	441009137729
Option 3 ID :	441009137728
Option 4 ID :	441009137726
Status :	Answered
Chosen Option :	4

Comprehension:
Read the given passage and answer the questions that follow. The First Wave of Feminism, emerging in the late 19 th and early 20 th centuries, was a pioneering movement advocating for women's legal and political rights. Rooted in Enlightenment ideals of equality and justice, this wave primarily focused on suffrage, property rights and access to education. Leaders like Susan B. Anthony, Elizabeth Cady Stanton and Emmeline Pankhurst played pivotal roles in mobilising women through writings, speeches and organised protests. The Seneca Falls Convention of 1848, often seen as the catalyst for the movement, produced the Declaration of Sentiments, demanding equal rights. Women's relentless activism culminated in landmark victories, such as the passage of the Nineteenth Amendment in the United States and the Representation of the People Act in Britain. Despite its successes, the movement was criticised for primarily addressing the concerns of white, middle-class women, often neglecting the experiences of women of colour and the working class. However, the First Wave laid the foundation for subsequent feminist movements, shaping future struggles for gender equality. Its achievements inspired later waves of feminism, which sought to address broader issues such as workplace rights, reproductive freedom and intersectionality. The First Wave remains a crucial chapter in the ongoing fight for women's empowerment.

SubQuestion No : 19
Q.1 Which title best captures the essence of the passage?
9
Ans
1. Women's Struggles in the 21st Century
2. The Political Impact of the Nineteenth Amendment
3. The First Wave of Feminism: A Fight for Equality
4. The Evolution of Modern Feminism

Question ID :	44100934582
Option 1 ID :	441009137725
Option 2 ID :	441009137722
Option 3 ID :	441009137724
Option 4 ID :	441009137723
Status :	Answered
Chosen Option :	3

Comprehension:
Read the given passage and answer the questions that follow.
The First Wave of Feminism, emerging in the late 19th and early 20th centuries, was a pioneering movement advocating for women's legal and political rights. Rooted in Enlightenment ideals of equality and justice, this wave primarily focused on suffrage, property rights and access to education. Leaders like Susan B. Anthony, Elizabeth Cady Stanton and Emmeline Pankhurst played pivotal roles in mobilising women through writings, speeches and organised protests. The Seneca Falls Convention of 1848, often seen as the catalyst for the movement, produced the Declaration of Sentiments, demanding equal rights. Women's relentless activism culminated in landmark victories, such as the passage of the Nineteenth Amendment in the United States and the Representation of the People Act in Britain. Despite its successes, the movement was criticised for primarily addressing the concerns of white, middle-class women, often neglecting the experiences of women of colour and the working class. However, the First Wave laid the foundation for subsequent feminist movements, shaping future struggles for gender equality. Its achievements inspired later waves of feminism, which sought to address broader issues such as workplace rights, reproductive freedom and intersectionality. The First Wave remains a crucial chapter in the ongoing fight for women's empowerment.

SubQuestion No : 20
Q.2 What can be inferred about the limitations of the First Wave of Feminism?
0
Ans ✗ 1. It was largely ineffective and failed to achieve its goals.
✗ 2. It successfully addressed all issues of gender inequality.
✗ 3. It did not influence later feminist movements.
✓ 4. It only benefited elite women and ignored other marginalised groups.

Question ID :	44100934585
Option 1 ID :	441009137736
Option 2 ID :	441009137735
Option 3 ID :	441009137737
Option 4 ID :	441009137734
Status :	Not Answered
Chosen Option :	--

Section : Part B Discipline related

Q.1 According to the kinetic interpretation of temperature, what happens to an ideal gas at absolute zero temperature i.e. 0 K?
Ans ✓ 1. The motion of gas molecules completely stops.
✗ 2. The average kinetic energy of gas molecules is maximum.
✗ 3. The intermolecular collisions become more frequent.
✗ 4. The potential energy of gas molecules is at its peak.

Question ID :	441009130334
Option 1 ID :	441009517728
Option 2 ID :	441009517727
Option 3 ID :	441009517730
Option 4 ID :	441009517729
Status :	Answered
Chosen Option :	1

Q.2 Which of the following materials is commonly used as a pentavalent impurity in n-type semiconductors?

- Ans
- ☒ 1. Gallium
 - ☒ 2. Boron
 - ☒ 3. Indium
 - ☒ 4. Phosphorus

Question ID : 44100992518

Option 1 ID : 441009367792

Option 2 ID : 441009367789

Option 3 ID : 441009367790

Option 4 ID : 441009367791

Status : Answered

Chosen Option : 4

Q.3 The frequency of X-rays is less than the frequency of:

- Ans
- ☒ 1. microwaves
 - ☒ 2. gamma rays
 - ☒ 3. ultraviolet rays
 - ☒ 4. radio waves

Question ID : 441009135075

Option 1 ID : 441009536926

Option 2 ID : 441009536924

Option 3 ID : 441009536925

Option 4 ID : 441009536927

Status : Answered

Chosen Option : 2

Q.4 If $\cot(x) = -\frac{5}{12}$, x lies in the second quadrant, then which of the following

- Ans
- ☒ 1. $\sec(x) = -\frac{13}{5}$
 - ☒ 2. $\sec(x) = \frac{13}{5}$
 - ☒ 3. $\cos(x) = -\frac{12}{5}$
 - ☒ 4. $\cos(x) = -\frac{13}{5}$

Question ID : 441009143426

Option 1 ID : 441009569723

Option 2 ID : 441009569724

Option 3 ID : 441009569725

Option 4 ID : 441009569726

Status : Answered

Chosen Option : 1

Q.5 A battery with an EMF of 25 V and an internal resistance of $2\ \Omega$ is connected to a $4\ \Omega$ and $12\ \Omega$ resistor in parallel. What will be the total current drawn from the battery?

Ans ☒ 1. 5 A

☒ 2. 3 A

☒ 3. 1.5 A

☒ 4. 10 A

Question ID : 441009130446

Option 1 ID : 441009518198

Option 2 ID : 441009518197

Option 3 ID : 441009518195

Option 4 ID : 441009518196

Status : Answered

Chosen Option : 1

Q.6 The gravitational force between two bodies of the same mass m kept at a distance ' d ' apart is X . If the mass of both the bodies is doubled, then what should be the new distance (d') between the two bodies so that the gravitational force between the bodies remains X ?

Ans ☒ 1. $d' = 2d$

☒ 2. $d' = d/2$

☒ 3. $d' = 4d$

☒ 4. $d' = d/4$

Question ID : 441009110012

Option 1 ID : 441009438520

Option 2 ID : 441009438522

Option 3 ID : 441009438521

Option 4 ID : 441009438523

Status : Answered

Chosen Option : 1

Q.7 A light ray is incident on a smooth plane mirror at an angle $(90^\circ - \theta)$ with the mirror's surface. If the same ray were to strike the mirror at an angle 2θ with the normal instead, how much would the angle of reflection change?

Ans ☒ 1. Depends on the wavelength of light

☒ 2. θ

☒ 3. 2θ

☒ 4. No change

Question ID : 441009116339

Option 1 ID : 441009462791

Option 2 ID : 441009462788

Option 3 ID : 441009462789

Option 4 ID : 441009462790

Status : Answered

Chosen Option : 2

Q.8 Which of the following is a non-empty finite set?

- Ans
- ✓ 1. $C = \{x: x \in \mathbb{N} \text{ and } x^2 = 4\}$
- ✗ 2. $D = \{x: x^2 - 2 = 0 \text{ and } x \text{ is a rational number}\}$
- ✗ 3. $A = \{x \in \mathbb{N} \text{ and } 2x - 1 = 0\}$
- ✗ 4. $B = \{x: x \text{ is an even prime number greater than } 2\}$

Question ID : 441009118600

Option 1 ID : 441009471556

Option 2 ID : 441009471557

Option 3 ID : 441009471554

Option 4 ID : 441009471555

Status : Answered

Chosen Option : 1

Q.9 For an isothermal process, the work done 'W' in case of an ideal gas is given by:
(Symbols have their usual meanings)

- Ans
- ✗ 1. $W = \frac{PV}{T_2 - T_1}$
- ✗ 2. $W = nRT \ln P_1 P_2$
- ✓ 3. $W = nRT \ln \frac{V_2}{V_1}$
- ✗ 4. $W = PV(T_2 - T_1)$

Question ID : 441009149457

Option 1 ID : 441009593582

Option 2 ID : 441009593581

Option 3 ID : 441009593580

Option 4 ID : 441009593583

Status : Answered

Chosen Option : 3

Q.1 Which of the following expressions is true for the effective focal length f for the combination of two thin lenses having focal length f_1 and f_2 ?

- Ans
- ✓ 1. $f = \frac{f_1 f_2}{f_1 + f_2}$
- ✗ 2. $f = \frac{f_1 - f_2}{f_1 f_2}$
- ✗ 3. $f = \frac{f_1 f_2}{f_1 - f_2}$
- ✗ 4. $f = \frac{f_1 + f_2}{f_1 f_2}$

Question ID : 441009145760

Option 1 ID : 441009578943

Option 2 ID : 441009578946

Option 3 ID : 441009578944

Option 4 ID : 441009578945

Status : Answered

Chosen Option : 1

Q.1
1 A new unit of length is defined such that the speed of light in vacuum is numerically equal to 1 in this unit system. If the SI value of the speed of light is 3×10^8 m/s, what would be the unit conversion factor from metres to this new unit?

- Ans
- ☐ 1. 3.0×10^8
- ☐ 2. 9.0×10^{16}
- ☐ 3. 0
- ☒ 4. $\frac{1}{3.0 \times 10^8}$

Question ID : 441009136959

Option 1 ID : 441009544069

Option 2 ID : 441009544072

Option 3 ID : 441009544071

Option 4 ID : 441009544070

Status : Answered

Chosen Option : 4

Q.1
2 Which of the following is a solution for 'r' if $5 \cdot {}^4P_r = 6 \cdot {}^5P_{r-1}$?

- Ans
- ☐ 1. 4
- ☒ 2. 3
- ☐ 3. 6
- ☐ 4. 5

Question ID : 441009118792

Option 1 ID : 441009472297

Option 2 ID : 441009472296

Option 3 ID : 441009472295

Option 4 ID : 441009472294

Status : Answered

Chosen Option : 2

Q.1
3 $\lim_{x \rightarrow 0} \sin \left(\frac{e^x - x - 1 - \frac{x^2}{2}}{x^2} \right)$ is:

- Ans
- ☐ 1. 1
- ☒ 2. 0
- ☐ 3. does not exist
- ☐ 4. $\frac{1}{2}$

Question ID : 441009106364

Option 1 ID : 441009423479

Option 2 ID : 441009423480

Option 3 ID : 441009423482

Option 4 ID : 441009423481

Status : Answered

Chosen Option : 2

Q.1
4 The rectangle with length of non – parallel sides a and b , respectively, fixed circle. The area of rectangle is maximum if:

Ans ☒ 1. $a = 2b$ or $b = 2a$

☒ 2. $a \neq b$

☒ 3. $a = b$

☒ 4. $a = b^2$ or $b = a^2$

Question ID : 441009159295

Option 1 ID : 441009632054

Option 2 ID : 441009632051

Option 3 ID : 441009632052

Option 4 ID : 441009632053

Status : Answered

Chosen Option : 2

Q.1
5 A person moves 5 m north, then 4 m east, and then 8 m south. What is the total path length and displacement?

Ans ☒ 1. Path length = 7 m; Displacement = 5 m

☒ 2. Path length = 17 m; Displacement = 5 m

☒ 3. Path length = 7 m; Displacement = 3 m

☒ 4. Path length = 17 m; Displacement = 4 m

Question ID : 441009137005

Option 1 ID : 441009544260

Option 2 ID : 441009544257

Option 3 ID : 441009544258

Option 4 ID : 441009544259

Status : Answered

Chosen Option : 2

Q.1
6 What is the angle θ between the pair of lines given by $\vec{r} = 3\hat{i} + 2\hat{j} - 4\hat{k} + \lambda(\hat{i} + 2\hat{j} + 2\hat{k})$ and $\vec{r} = 5\hat{i} - 2\hat{j} + \mu(3\hat{i} + 2\hat{j} + 6\hat{k})$?

Ans ☒ 1. $\theta = \cos^{-1}\left(\frac{11}{29}\right)$

☒ 2. $\theta = \cos^{-1}\left(\frac{19}{21}\right)$

☒ 3. $\theta = \cos^{-1}\left(\frac{19}{29}\right)$

☒ 4. $\theta = \cos^{-1}\left(\frac{11}{21}\right)$

Question ID : 441009143639

Option 1 ID : 441009570542

Option 2 ID : 441009570544

Option 3 ID : 441009570541

Option 4 ID : 441009570543

Status : Answered

Chosen Option : 2

Q.1 Find the equation of lines, which make intercepts on the axes whose p
7 and sum are -8 and 2 , respectively.

- Ans
- ☒ 1. $x + 2y = 4$
☒ 2. $2x + y = 4$
- ☒ 3. $x + 2y = -4$
☒ 4. $2x + y = -4$
- ☒ 5. $x - 2y = 4$
☒ 6. $-2x + y = 4$
- ☒ 7. $-x + 2y = 4$
☒ 8. $2x - y = 4$

Question ID : 441009157194

Option 1 ID : 441009623955

Option 2 ID : 441009623958

Option 3 ID : 441009623957

Option 4 ID : 441009623956

Status : Answered

Chosen Option : 4

Q.1 A concave lens has a focal length of (-12 cm) . An object is placed 18 cm from the lens. What
8 is the image distance and the magnification?

- Ans
- ☒ 1. Image distance = $+7.2\text{ cm}$; Magnification = -0.4
- ☒ 2. Image distance = -7.2 cm ; Magnification = -0.4
- ☒ 3. Image distance = -7.2 cm ; Magnification = 0.4
- ☒ 4. Image distance = $+7.2\text{ cm}$; Magnification = 0.4

Question ID : 441009116305

Option 1 ID : 441009462659

Option 2 ID : 441009462657

Option 3 ID : 441009462656

Option 4 ID : 441009462658

Status : Answered

Chosen Option : 3

Q.1 Two wires of equal length and having radius 1 cm and 4 cm , respectively, are made up of
9 same material. The ratio of the resistance of the wires is given by:

- Ans
- ☒ 1. $1 : 4$
- ☒ 2. $4 : 1$
- ☒ 3. $1 : 16$
- ☒ 4. $16 : 1$

Question ID : 441009135011

Option 1 ID : 441009536673

Option 2 ID : 441009536674

Option 3 ID : 441009536675

Option 4 ID : 441009536672

Status : Answered

Chosen Option : 4

Q.2
0 If the matrix $A = \begin{bmatrix} x & y \\ z & w \end{bmatrix}$ is skew symmetric, then which of the follow

Ans ☒ 1. $x + w = 0$

☒ 2. $x + z = 0$

☒ 3. $x - y = 0$

☒ 4. $y - z = 0$

Question ID : 441009116763

Option 1 ID : 441009464174

Option 2 ID : 441009464173

Option 3 ID : 441009464171

Option 4 ID : 441009464172

Status : Answered

Chosen Option : 2

Q.2
1 Which of the following is true?

Ans ☒ 1. Vectors having same magnitude and directions are colinear.

☒ 2. Two vectors having same magnitude are colinear.

☒ 3. Two colinear vectors are always equal in magnitude.

☒ 4. Colinear vectors having same magnitude are equal.

Question ID : 441009118122

Option 1 ID : 441009469655

Option 2 ID : 441009469653

Option 3 ID : 441009469652

Option 4 ID : 441009469654

Status : Answered

Chosen Option : 4

Q.2
2 If $(a_n)_{n=1}^{\infty}$ is a Fibonacci sequence, then find $\sum_{n=1}^6 a_n$.

Ans ☒ 1. 19

☒ 2. 20

☒ 3. 31

☒ 4. 33

Question ID : 441009154414

Option 1 ID : 441009612827

Option 2 ID : 441009612826

Option 3 ID : 441009612829

Option 4 ID : 441009612828

Status : Answered

Chosen Option : 4

Q.2
3 If the lines $\frac{x-1}{-3} = \frac{y-2}{2k} = \frac{z-3}{2}$ and $\frac{x-1}{3k} = \frac{y-1}{1} = \frac{z-6}{-5}$ are perpendicular, what is the value of k?

- Ans
- ☐ 1. $k = -\frac{10}{11}$
- ☒ 2. $k = -\frac{10}{7}$
- ☐ 3. $k = -\frac{7}{10}$
- ☐ 4. $k = -\frac{5}{7}$

Question ID : 441009143636

Option 1 ID : 441009570531

Option 2 ID : 441009570530

Option 3 ID : 441009570532

Option 4 ID : 441009570529

Status : Answered

Chosen Option : 2

Q.2
4 A body of mass 4 kg is moved up a rough inclined plane of height 20m. If the total work done in sliding the body up the inclined plane is 1600 J, then how much is the work done against friction?
(Take $g = 10\text{m/s}^2$)

- Ans
- ☒ 1. 800 J
- ☐ 2. 2400 J
- ☐ 3. 1600 J
- ☐ 4. 0 J

Question ID : 441009116443

Option 1 ID : 441009463193

Option 2 ID : 441009463192

Option 3 ID : 441009463194

Option 4 ID : 441009463191

Status : Answered

Chosen Option : 1

Q.2
5 The capacitance of a parallel plate capacitor with air between the plates of the capacitor is C. Let the area of the plates be A and the distance between the plates be d. If the distance between the plates is reduced to $d/4$, the capacitance of this capacitor becomes C'. What will be the ratio of C:C'?

- Ans
- ☐ 1. 4:1
- ☐ 2. 1:2
- ☒ 3. 1:4
- ☐ 4. 2:1

Question ID : 441009109747

Option 1 ID : 441009436713

Option 2 ID : 441009436715

Option 3 ID : 441009436716

Option 4 ID : 441009436714

Status : Answered

Chosen Option : 3

Q.2	Which of the following is an infinite set?
6	
Ans	✔ 1. The set of all rational numbers between 0 and 1
	✘ 2. The set of all leaves on all the trees on earth
	✘ 3. The set of prime numbers less than 99
	✘ 4. The set of all insects on earth

Question ID :	441009118625
Option 1 ID :	441009471653
Option 2 ID :	441009471650
Option 3 ID :	441009471651
Option 4 ID :	441009471652
Status :	Answered
Chosen Option :	1

Q.2	According to Hooke's law:
7	
Ans	✔ 1. stress is directly proportional to strain
	✘ 2. stress is inversely proportional to strain
	✘ 3. stress is directly proportional to the square of strain
	✘ 4. stress is inversely proportional to the square of strain

Question ID :	441009146079
Option 1 ID :	441009580186
Option 2 ID :	441009580188
Option 3 ID :	441009580187
Option 4 ID :	441009580189
Status :	Answered
Chosen Option :	1

Q.2	Which of the following binary operations defined on the set of integers is associative?
8	
Ans	✔ 1. $a*b = \max\{a,b\}$
	✘ 2. $a*b = a^b$
	✘ 3. $a*b = 2a + b$
	✘ 4. $a*b = a - b$

Question ID :	441009143485
Option 1 ID :	441009569960
Option 2 ID :	441009569959
Option 3 ID :	441009569958
Option 4 ID :	441009569957
Status :	Answered
Chosen Option :	2

Q.2 When steam at 100°C is passed into 60 g of water at 10°C, the temperature of water rises to 40°C. What will be the total mass of water (in g) at 40°C?

- Ans
- ☒ 1. 57
- ☒ 2. 67
- ☒ 3. 4
- ☒ 4. 63

Question ID : 441009116289

Option 1 ID : 441009462593

Option 2 ID : 441009462595

Option 3 ID : 441009462592

Option 4 ID : 441009462594

Status : Answered

Chosen Option : 4

Q.3 Which of the following is the correct unit for the tensile stress acting on a metal wire?

- Ans
- ☒ 1. Nm^2
- ☒ 2. N/m^2
- ☒ 3. Nm
- ☒ 4. N/m

Question ID : 441009114641

Option 1 ID : 441009455995

Option 2 ID : 441009455994

Option 3 ID : 441009455996

Option 4 ID : 441009455997

Status : Answered

Chosen Option : 2

Q.3 The distance between the parallel lines L_1 and L_2 whose equations are given by

$$\vec{r} = \vec{a}_1 + \lambda \vec{b}$$

$$\vec{r} = \vec{a}_2 + \mu \vec{b}$$

where $\vec{a}_1$ and $\vec{a}_2$ are the position vectors on L_1 and L_2 is:

- Ans
- ☒ 1. $\frac{|\vec{b} \times (\vec{a}_2 + \vec{a}_1)|}{|\vec{a}_2 \times \vec{a}_1|}$
- ☒ 2. $|\vec{b} \times (\vec{a}_2 - \vec{a}_1)|$
- ☒ 3. $\frac{|\vec{b} \times (\vec{a}_2 - \vec{a}_1)|}{|\vec{b}|}$
- ☒ 4. $\frac{|\vec{b} \times (\vec{a}_2 + \vec{a}_1)|}{|\vec{b}|}$

Question ID : 441009143580

Option 1 ID : 441009570323

Option 2 ID : 441009570324

Option 3 ID : 441009570321

Option 4 ID : 441009570322

Status : Answered

Chosen Option : 3

Q.3 2 What will be the maximum speed with which a car can take a turn around a curve of 20 m radius on a level road if the coefficient of friction between the tyres and the road is 0.4? (Take $g = 10 \text{ m/s}^2$)

Ans ☒ 1. $4\sqrt{5} \text{ m/s}$

☐ 2. 80 m/s

☐ 3. $2\sqrt{5} \text{ m/s}$

☐ 4. 20 m/s

Question ID : 441009110479

Option 1 ID : 441009439493

Option 2 ID : 441009439492

Option 3 ID : 441009439494

Option 4 ID : 441009439495

Status : Answered

Chosen Option : 1

Q.3 3 Two capacitors of capacitance $3 \mu\text{F}$ and $6 \mu\text{F}$ are connected in series combination. The equivalent capacitance of the system is equal to:

Ans ☐ 1. $9 \mu\text{F}$

☒ 2. $2 \mu\text{F}$

☐ 3. $6 \mu\text{F}$

☐ 4. $3 \mu\text{F}$

Question ID : 441009138325

Option 1 ID : 441009549530

Option 2 ID : 441009549527

Option 3 ID : 441009549529

Option 4 ID : 441009549528

Status : Answered

Chosen Option : 2

Q.3 4 A conductor is having n number of free electrons. If the charge on each electron is e , mass of each electron is m and τ is the average time between two successive collisions between the electrons, then which of the following is the correct relation for the conductivity σ of the conductor?

Ans ☐ 1. $\sigma = \frac{n e \tau^2}{m}$

☐ 2. $\sigma = \frac{n e \tau}{m}$

☒ 3. $\sigma = \frac{n e^2 \tau}{m}$

☐ 4. $\sigma = \frac{n^2 e \tau}{m}$

Question ID : 441009108447

Option 1 ID : 441009431730

Option 2 ID : 441009431728

Option 3 ID : 441009431731

Option 4 ID : 441009431729

Status : Answered

Chosen Option : 2

Q.3 5	In how many ways the letters of the word 'ARRAY' can be arranged without altering the relative position of vowels and consonants?
Ans	✖ 1. 30
	✔ 2. 3
	✖ 3. 6
	✖ 4. 15

Question ID :	441009118479
Option 1 ID :	441009471076
Option 2 ID :	441009471078
Option 3 ID :	441009471079
Option 4 ID :	441009471077
Status :	Answered
Chosen Option :	2

Q.3 6	If the dimensional formula of force is $[MLT^{-2}]$ and that of energy is $[ML^2T^{-2}]$, what is the ratio of the dimensions of force and energy when expressed as $[M^aL^bT^c]$?
Ans	✖ 1. $[M^0L^1T^0]$
	✔ 2. $[M^0L^{-1}T^0]$
	✖ 3. $[M^1L^1T^1]$
	✖ 4. $[M^{-1}L^{-1}T^{-1}]$

Question ID :	441009136938
Option 1 ID :	441009543986
Option 2 ID :	441009543985
Option 3 ID :	441009543987
Option 4 ID :	441009543988
Status :	Answered
Chosen Option :	2

Q.3 7	What is the distance of the point $(3, -5)$ from the line $3x - 4y - 26 = 0$?
Ans	✖ 1. $\frac{2}{5}$
	✖ 2. $\frac{12}{5}$
	✔ 3. $\frac{3}{5}$
	✖ 4. $-\frac{27}{5}$

Question ID :	441009143562
Option 1 ID :	441009570262
Option 2 ID :	441009570261
Option 3 ID :	441009570263
Option 4 ID :	441009570264
Status :	Answered
Chosen Option :	2

Q.38 If $\hat{i}$ and $\hat{j}$ are the unit vectors along the x and y directions respectively, then what will be the magnitude of $\hat{i} - \hat{j}$?

- Ans

✓ 1. $\sqrt{2}$
- ✗ 2. $\frac{1}{\sqrt{2}}$
- ✗ 3. 2
- ✗ 4. $\frac{1}{2}$

Question ID :	441009110252
Option 1 ID :	441009438581
Option 2 ID :	441009438580
Option 3 ID :	441009438582
Option 4 ID :	441009438583
Status :	Answered
Chosen Option :	1

Q.39 Express the complex number $i^5(i^{20} + i^{10})$ in the form $c + id$.

- Ans

✓ 1. 0
- ✗ 2. 2
- ✗ 3. -2
- ✗ 4. -i

Question ID :	441009152663
Option 1 ID :	441009605808
Option 2 ID :	441009605809
Option 3 ID :	441009605810
Option 4 ID :	441009605807
Status :	Answered
Chosen Option :	4

Q.40 The value of $\frac{2}{1!} + \frac{4}{3!} + \frac{6}{5!} + \dots + \infty$ is:

- Ans

✓ 1. e
- ✗ 2. $e + 1$
- ✗ 3. $e^{-1} + 1$
- ✗ 4. e^{-1}

Question ID :	44100998082
Option 1 ID :	441009390438
Option 2 ID :	441009390439
Option 3 ID :	441009390440
Option 4 ID :	441009390437
Status :	Answered
Chosen Option :	3

Q.4
1 If $\int \frac{x^2 \sin(\tan^{-1} x^3)}{1+x^6} dx = f(x) + c$, then $f(1) =$ _____.

Ans ☒ 1. $\frac{1}{3\sqrt{2}}$

☒ 2. $\frac{1}{\sqrt{2}}$

☒ 3. $-\frac{1}{3\sqrt{2}}$

☒ 4. $-\frac{1}{\sqrt{2}}$

Question ID : 441009118418

Option 1 ID : 441009470835

Option 2 ID : 441009470832

Option 3 ID : 441009470834

Option 4 ID : 441009470833

Status : Answered

Chosen Option : 2

Q.4
2 If $D_r = \begin{vmatrix} 2r & 1 & n \\ 1 & -2 & 3 \\ 3 & 2 & 1 \end{vmatrix}$, then $\sum_{r=1}^n D_r =$ _____.

Ans ☒ 1. n

☒ 2. 0

☒ 3. -1

☒ 4. n^2

Question ID : 441009107750

Option 1 ID : 441009429011

Option 2 ID : 441009429013

Option 3 ID : 441009429012

Option 4 ID : 441009429014

Status : Answered

Chosen Option : 3

Q.4
3 If arcs of the same length in two circles subtend angles 70° and 120° then the ratio of their radii is:

Ans ☒ 1. 10 : 7

☒ 2. 12 : 7

☒ 3. 7 : 11

☒ 4. 7 : 9

Question ID : 441009188399

Option 1 ID : 441009743472

Option 2 ID : 441009743471

Option 3 ID : 441009743470

Option 4 ID : 441009743473

Status : Answered

Chosen Option : 2

Q.4 Two capacitors, 6 μF and 12 μF , are connected in series across a potential difference of 30 V.
 4 What is the voltage across the 12 μF capacitor?

- Ans ☒ 1. 15 V
- ☒ 2. 25 V
- ☒ 3. 10 V
- ☒ 4. 20 V

Question ID : 441009130394

Option 1 ID : 441009517968

Option 2 ID : 441009517970

Option 3 ID : 441009517967

Option 4 ID : 441009517969

Status : Answered

Chosen Option : 3

Q.4 If sum of an infinite gemetric progression is 6 and its first term is 3, th
 5

- Ans ☒ 1. $9/16$
- ☒ 2. $3/8$
- ☒ 3. $9/8$
- ☒ 4. $3/4$

Question ID : 441009107672

Option 1 ID : 441009428690

Option 2 ID : 441009428689

Option 3 ID : 441009428687

Option 4 ID : 441009428688

Status : Answered

Chosen Option : 2

Q.4 What is the value of $\cos(-1755^\circ) - \sin(45^\circ)$?
 6

- Ans ☒ 1. 1
- ☒ 2. 0
- ☒ 3. 2
- ☒ 4. $1/2$

Question ID : 441009188385

Option 1 ID : 441009743416

Option 2 ID : 441009743415

Option 3 ID : 441009743417

Option 4 ID : 441009743414

Status : Answered

Chosen Option : 2

Q.4 Find the determinant of the matrix

7
$$\begin{pmatrix} \sin^3\theta & \cos^3\theta & \tan^3\theta - \cot^2\theta \\ 2\sin\theta & 3\cos\theta\sin\theta & \sec^2\theta + 2 \\ 8\sin\theta & 6\sin(2\theta) & 4\sec^2\theta + 8 \end{pmatrix}.$$

Ans ☒ 1. 1

☒ 2. 0

☒ 3. $\sin^3\theta + \cos^3\theta$

☒ 4. $\sin(2\theta)$

Question ID : 441009154829

Option 1 ID : 441009614466

Option 2 ID : 441009614467

Option 3 ID : 441009614469

Option 4 ID : 441009614468

Status : Answered

Chosen Option : 2

Q.4 Evaluate $\sin\left(-\frac{5\pi}{2}\right) + \sin\left(\frac{3\pi}{2}\right).$

Ans ☒ 1. -2

☒ 2. 0

☒ 3. 2

☒ 4. 1

Question ID : 441009152414

Option 1 ID : 441009604813

Option 2 ID : 441009604811

Option 3 ID : 441009604812

Option 4 ID : 441009604814

Status : Answered

Chosen Option : 1

Q.4 $\lim_{x \rightarrow 0} \frac{x \ln(1 + 2 \tan x)}{1 - \cos x} = \underline{\hspace{2cm}}.$

Ans ☒ 1. 4

☒ 2. 1

☒ 3. does not exist

☒ 4. 2

Question ID : 441009118259

Option 1 ID : 441009470198

Option 2 ID : 441009470196

Option 3 ID : 441009470199

Option 4 ID : 441009470197

Status : Answered

Chosen Option : 3

Q.50 The property by virtue of which a body regains its shape and size when external force is removed is known as:

- Ans
- ☒ 1. plasticity
 - ☒ 2. elasticity
 - ☒ 3. ductile
 - ☒ 4. harmonicity

Question ID : 441009146049

Option 1 ID : 441009580067

Option 2 ID : 441009580066

Option 3 ID : 441009580069

Option 4 ID : 441009580068

Status : Answered

Chosen Option : 2

Q.51 Consider an infinitely long straight wire with uniform linear charge density λ . The electric field E at a distance r , perpendicular to the length of the wire, is:

- Ans
- ☒ 1. $E = \frac{\lambda}{\pi\epsilon_0 r}$
 - ☒ 2. $E = \frac{\lambda}{4\pi\epsilon_0 r}$
 - ☒ 3. $E = \frac{\lambda}{8\pi\epsilon_0 r}$
 - ☒ 4. $E = \frac{\lambda}{2\pi\epsilon_0 r}$

Question ID : 441009138439

Option 1 ID : 441009549991

Option 2 ID : 441009549993

Option 3 ID : 441009549994

Option 4 ID : 441009549992

Status : Answered

Chosen Option : 4

Q.52 Which of the following materials exhibit behaviour that violates Ohm's law under specific conditions?

- Ans
- ☒ 1. A wire made of copper at room temperature, where the current increases in direct proportion to the applied voltage.
 - ☒ 2. A semiconductor at low temperatures, where the current does not increase linearly with applied voltage.
 - ☒ 3. A resistor in a simple circuit with a constant voltage source, where the voltage is proportional to the current.
 - ☒ 4. A metallic wire at constant temperature, where current increases linearly with applied voltage.

Question ID : 441009130459

Option 1 ID : 441009518274

Option 2 ID : 441009518272

Option 3 ID : 441009518273

Option 4 ID : 441009518271

Status : Answered

Chosen Option : 2

Q.5 If ${}^n\text{P}_4 = 30 {}^n\text{P}_2$, then $n =$ _____.

Ans ☒ 1. 9

☒ 2. 8

☒ 3. 6

☒ 4. 12

Question ID : 44100998835

Option 1 ID : 441009393437

Option 2 ID : 441009393436

Option 3 ID : 441009393435

Option 4 ID : 441009393438

Status : Answered

Chosen Option : 2

Q.5 Which of the following statements about power is NOT correct?

Ans ☒ 1. Power is the rate of doing work.

☒ 2. Power can be measured in horsepower.

☒ 3. Power is directly proportional to both work done and time taken.

☒ 4. Power depends on both force and velocity.

Question ID : 441009116362

Option 1 ID : 441009462872

Option 2 ID : 441009462874

Option 3 ID : 441009462875

Option 4 ID : 441009462873

Status : Answered

Chosen Option : 3

Q.5 Which of the following conditions is correct for the constructive interference
 (ΔX represents path difference, $\Delta \phi$ represents phase difference, $n =$

Ans ☒ 1. $\Delta X = (2n+1)\lambda/2$ & $\Delta \phi = (2n+1)\pi$

☒ 2. $\Delta X = n\lambda$ & $\Delta \phi = (2n+1)\pi$

☒ 3. $\Delta X = n\lambda$ & $\Delta \phi = 2n\pi$

☒ 4. $\Delta X = (2n+1)\lambda/2$ & $\Delta \phi = 2n\pi$

Question ID : 441009145661

Option 1 ID : 441009578553

Option 2 ID : 441009578554

Option 3 ID : 441009578551

Option 4 ID : 441009578552

Status : Answered

Chosen Option : 3

Q.5
6 The set $\{x \in \mathbb{R} : x \neq 1\}$ is a/an _____.

- Ans
- ☒ 1. union of three disjoint open intervals
 - ☐ 2. union of four disjoint open intervals
 - ☐ 3. interval
 - ☐ 4. union of two disjoint open intervals

Question ID : 44100998428

Option 1 ID : 441009391823

Option 2 ID : 441009391824

Option 3 ID : 441009391821

Option 4 ID : 441009391822

Status : Answered

Chosen Option : 2

Q.5
7 The variance of the following data is _____.
6, 12, 8, 13, 4, 11

- Ans
- ☐ 1. 11.27
 - ☒ 2. 10.66
 - ☐ 3. 9.38
 - ☐ 4. 8.73

Question ID : 441009118182

Option 1 ID : 441009469891

Option 2 ID : 441009469890

Option 3 ID : 441009469888

Option 4 ID : 441009469889

Status : Answered

Chosen Option : 2

Q.5
8 Suppose l_1 and l_2 are perpendicular lines such that they intersect at (3, to y - axis, then find the equation of the line l_2 .

- Ans
- ☒ 1. $y = 4$
 - ☐ 2. $x = 3$
 - ☐ 3. $y = -4$
 - ☐ 4. $x = -3$

Question ID : 441009156728

Option 1 ID : 441009622075

Option 2 ID : 441009622076

Option 3 ID : 441009622077

Option 4 ID : 441009622078

Status : Answered

Chosen Option : 1

Q.59 A body executing simple harmonic motion with an angular velocity of 2 rad/s has a maximum acceleration of 0.8 m/s². What will be the amplitude of the oscillations of the body?

- Ans
- ☐ 1. 1.5 m
 - ☐ 2. 2.2 m
 - ☒ 3. 0.2 m
 - ☐ 4. 0.5 m

Question ID :	441009114574
Option 1 ID :	441009455735
Option 2 ID :	441009455734
Option 3 ID :	441009455736
Option 4 ID :	441009455737
Status :	Answered
Chosen Option :	3

Q.60 The law of static friction can be written as:
(where f_s is the static friction, μ_s is coefficient of static friction and N

- Ans
- ☐ 1. $f_s \geq \mu_s N$
 - ☐ 2. $f_s < \mu_s N$
 - ☐ 3. $f_s > \mu_s N$
 - ☒ 4. $f_s \leq \mu_s N$

Question ID :	441009145418
Option 1 ID :	441009577618
Option 2 ID :	441009577615
Option 3 ID :	441009577616
Option 4 ID :	441009577617
Status :	Answered
Chosen Option :	1