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भारतीय विमानपत्तन प्राधिकरण
AIRPORTS AUTHORITY OF INDIA

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

राजीव गांधी भवन, सफदरजंग हवाई अड्डा, नईदिल्ली- 110003

RAJIV GANDHI BHAWAN, SAFDARJUNG AIRPORT, NEW DELHI-110003

Participant ID	
Participant Name	
Test Center Name	
Test Date	27/12/2023
Test Time	4:30 PM - 6:30 PM
Subject	JUNIOR EXECUTIVE AIR TRAFFIC CONTROL

Section : General Knowledge

Q.1 Which Article in the constitution grants the High Court the authority to sanction contempt of court?

- Ans
- 1. Article 217
 - 2. Article 214
 - 3. Article 215
 - 4. Article 216

Question ID : 630680529918
Option 1 ID : 6306802071599
Option 2 ID : 6306802071596
Option 3 ID : 6306802071597
Option 4 ID : 6306802071598
Status : Answered
Chosen Option : 3

Q.2 Between Maleku (Minicoy) in Lakshadweep and which of the following is the Minicoy Channel?

- Ans
- 1. Hambantota in Sri Lanka
 - 2. Mayabunder in Andaman & Nicobar Islands
 - 3. Ihavandippolhu in Maldives
 - 4. Kiltan in Lakshadweep

Question ID : 630680529920
Option 1 ID : 6306802071606
Option 2 ID : 6306802071607
Option 3 ID : 6306802071605
Option 4 ID : 6306802071604
Status : Answered
Chosen Option : 4

Q.3 Who was the initial person to initiate the Shuddhi movement?

- Ans 1. Mahatma Gandhi
 2. Swami Dayanand Saraswati
 3. Rabindranath Tagore
 4. Aurobindo

Question ID : 630680529912
Option 1 ID : 6306802071573
Option 2 ID : 6306802071572
Option 3 ID : 6306802071574
Option 4 ID : 6306802071575
Status : Answered
Chosen Option : 1

Q.4 When was the Economic Survey separated from the Indian Union Budget?

- Ans 1. 1954
 2. 1964
 3. 1960
 4. 1951

Question ID : 630680529907
Option 1 ID : 6306802071552
Option 2 ID : 6306802071554
Option 3 ID : 6306802071553
Option 4 ID : 6306802071555
Status : Answered
Chosen Option : 2

Q.5 What section of the Indian Penal Code addresses "Honour killing"?

- Ans 1. Section 285
 2. Section 315
 3. Section 280
 4. Section 300

Question ID : 630680529915
Option 1 ID : 6306802071586
Option 2 ID : 6306802071587
Option 3 ID : 6306802071584
Option 4 ID : 6306802071585
Status : Answered
Chosen Option : 2

Q.6 Siachen Glacier is located in which of the following mountain ranges?

- Ans 1. Hindu Kush Range
 2. Karakoram Range
 3. Himalayan Range
 4. Pir Panjal Range

Question ID : 630680529910
Option 1 ID : 6306802071565
Option 2 ID : 6306802071564
Option 3 ID : 6306802071566
Option 4 ID : 6306802071567
Status : Answered
Chosen Option : 3

Q.7 Who among the following received the 2022 Arjuna Award for boxing?

- Ans 1. Shiva Thapa
 2. Ankushita Boro
 3. Nikhat Zareen
 4. Atanu Das

Question ID : 630680529894
Option 1 ID : 6306802071501
Option 2 ID : 6306802071502
Option 3 ID : 6306802071500
Option 4 ID : 6306802071503
Status : Answered
Chosen Option : 1

Q.8 Who has won the most (Rajat Kamal) silver lotuses for finest choreography and is a three-time National Award winner?

- Ans 1. Ganesh Acharya
 2. Raju Sundaram
 3. Saroj Khan
 4. Prabhu Deva

Question ID : 630680529897
Option 1 ID : 6306802071512
Option 2 ID : 6306802071515
Option 3 ID : 6306802071513
Option 4 ID : 6306802071514
Status : Answered
Chosen Option : 4

Q.9 Which of the Pala kings found the University of Vikramshila?

- Ans 1. Gopala
 2. Krishnapala
 3. Ompala
 4. Dharmapala

Question ID : 630680529899
Option 1 ID : 6306802071523
Option 2 ID : 6306802071522
Option 3 ID : 6306802071521
Option 4 ID : 6306802071520
Status : Answered
Chosen Option : 2



Q.10 A compressor used extensively in the chemical, hydrocarbon, and gas industries to transport compressible fluids in a dependable manner is _____.

- Ans 1. Reciprocating compressor
 2. Roots Blower
 3. Centrifugal compressor
 4. Diaphragm compressor

Question ID : 630680529904
Option 1 ID : 6306802071543
Option 2 ID : 6306802071542
Option 3 ID : 6306802071540
Option 4 ID : 6306802071541
Status : Answered
Chosen Option : 4

Section : General Intelligence

Q.1 Consider the string given below made up of numbers and symbols. If every 3 is replaced by 5, then which of the following element will be at 7th position to the right from the 16th position element from the left end in the newly formed string?

3 # 3 4 # S 3 3 3 3 4 S 4 # 4 4 4 # 4 # 3 # # 3 S

- Ans 1. 4
 2. 5
 3. S
 4. #

Question ID : 630680529945
Option 1 ID : 6306802071705
Option 2 ID : 6306802071706
Option 3 ID : 6306802071707
Option 4 ID : 6306802071704
Status : Answered
Chosen Option : 4

Q.2 In the following question, four letter pairs are given. The letters on left side of (-) is related to the letters on the right side of (-) with some Logic/Rule/Relation. Three are similar on basis of same Logic/Rule/Relation. Select the odd one out from the given alternatives.

- Ans 1. XYCF – QTTU
 2. HIMP – ADDE
 3. NOSV – GJKK
 4. OURV – HPIL

Question ID : 630680529968
Option 1 ID : 6306802071799
Option 2 ID : 6306802071798
Option 3 ID : 6306802071796
Option 4 ID : 6306802071797
Status : Answered
Chosen Option : 4

Q.3 Which of the following meaningful four-letter English word can be formed from the second, sixth, eighth and tenth letters of the word "ARCHITECTURE"?

- Ans**
- 1. CURT
 - 2. RUCT
 - 3. TRUC
 - 4. URCT

Question ID : 630680529957
Option 1 ID : 6306802071750
Option 2 ID : 6306802071751
Option 3 ID : 6306802071748
Option 4 ID : 6306802071749
Status : Answered
Chosen Option : 1

Q.4 Marks of five girls A, F, J, T and V are compared. Each girl has different marks. Marks of J are less than T, V and A. Marks of V are less than A but more than T. Marks of F are less than J. Marks of how many girls are less than the marks of V?

- Ans**
- 1. 2
 - 2. 3
 - 3. 0
 - 4. 1

Question ID : 630680529941
Option 1 ID : 6306802071689
Option 2 ID : 6306802071690
Option 3 ID : 6306802071691
Option 4 ID : 6306802071688
Status : Answered
Chosen Option : 2

Q.5 A is the father of B. B is the brother of C. C is the sister of D. D is the daughter of E. How is E related to C?

- Ans**
- 1. Mother
 - 2. Brother
 - 3. Sister
 - 4. Father

Question ID : 630680529959
Option 1 ID : 6306802071756
Option 2 ID : 6306802071758
Option 3 ID : 6306802071759
Option 4 ID : 6306802071757
Status : Answered
Chosen Option : 1

Q.6 A series is given with one term wrong. Select the wrong term from the given alternatives.

42, 43, 46, 55, 84, 163, 406

- Ans**
- 1. 43
 - 2. 55
 - 3. 84
 - 4. 163

Question ID : 630680529969
Option 1 ID : 6306802071801
Option 2 ID : 6306802071803
Option 3 ID : 6306802071800
Option 4 ID : 6306802071802
Status : Answered
Chosen Option : 4

Q.7 By Interchanging the given two numbers which of the following equation will NOT be correct?

4 and 2

I. $8 + 4 \times 2 - 7 + 6 = 18$

II. $6 \times 4 - 8 + 2 + 3 = 15$

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

Question ID : 630680529973
Option 1 ID : 6306802071818
Option 2 ID : 6306802071817
Option 3 ID : 6306802071816
Option 4 ID : 6306802071819
Status : Answered
Chosen Option : 1

Q.8 Number of letters in six words W1, W2, W3, W4, W5 and W6 are compared. Number of letters in W1 are least. Number of letters in W2 are more than W1 but less than W4. Number of letters in W6 are more than W3 and W5. Number of letters in W3 are more than W4. If number of letters in W5 are more than W3, then the number of letters in W2 are less than the number of letters of how many words?

- Ans**
- 1. 1
 - 2. 2
 - 3. 3
 - 4. 4

Question ID : 630680529955
Option 1 ID : 6306802071740
Option 2 ID : 6306802071741
Option 3 ID : 6306802071742
Option 4 ID : 6306802071743
Status : Answered
Chosen Option : 4

Q.9 In the following question, select the related letter pair from the given alternatives.

BFVD : CCWA :: ?

- Ans**
- 1. ZAPS : AXAA
 - 2. PSUR : ONQT
 - 3. FKDH : GHEE
 - 4. MOAZ : NOLB

Question ID : 630680529972
Option 1 ID : 6306802071815
Option 2 ID : 6306802071812
Option 3 ID : 6306802071814
Option 4 ID : 6306802071813
Status : Answered
Chosen Option : 3

Q.10 A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.
RTS, NZF, JFS, FLF, ?

- Ans**
- 1. BRS
 - 2. RMO
 - 3. ARQ
 - 4. BMO

Question ID : 630680529956
Option 1 ID : 6306802071747
Option 2 ID : 6306802071744
Option 3 ID : 6306802071745
Option 4 ID : 6306802071746
Status : Answered
Chosen Option : 1

Q.11 In a certain code language, 'HORSE' is written as 'KRUVH'. What is the code for 'RULES' in that code language?

- Ans**
- 1. UXOIW
 - 2. UXOIV
 - 3. UXOHV
 - 4. UXOGV

Question ID : 630680529966
Option 1 ID : 6306802071789
Option 2 ID : 6306802071791
Option 3 ID : 6306802071788
Option 4 ID : 6306802071790
Status : Answered
Chosen Option : 3

Q.12 Five persons A, B, C, D and E are sitting around a circular table facing towards the centre (not necessarily in the same order). Only one person is sitting between C and D. B is sitting second to the left of D. A is sitting to the immediate right of B. Who is sitting to the immediate left of E?

- Ans**
- 1. D
 - 2. C
 - 3. B
 - 4. A

Question ID : 630680529953
Option 1 ID : 6306802071732
Option 2 ID : 6306802071735
Option 3 ID : 6306802071733
Option 4 ID : 6306802071734
Status : Answered
Chosen Option : 1

Q.13 What approximate value will come in place of (A)?

$$13 \times A = (127.68 + 88.71 + 96.38 + 2.62) \div 3.93$$

- Ans**
- 1. 8
 - 2. 6
 - 3. 10
 - 4. 4

Question ID : 630680529949
Option 1 ID : 6306802071721
Option 2 ID : 6306802071720
Option 3 ID : 6306802071723
Option 4 ID : 6306802071722
Status : Answered
Chosen Option : 2

Q.14 In the following question below are given some statements followed by some conclusions based on those statements.

Taking the given statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusion logically follows the given statements.

Statements:

I. No P is A.

II. Some H are A.

Conclusion:

I. No A is P.

II. Some H are P.

- Ans**
- 1. Neither conclusion follows
 - 2. Only conclusion I follows
 - 3. Both conclusions I and II follows
 - 4. Only conclusion II follows

Question ID : 630680529965
Option 1 ID : 6306802071787
Option 2 ID : 6306802071784
Option 3 ID : 6306802071786
Option 4 ID : 6306802071785
Status : Answered
Chosen Option : 2

Q.15 By interchanging which two signs will the following equation becomes correct?

$$13 - 3 \div 19 \times 6 + 2 = 67$$

- Ans**
- 1. - and ÷
 - 2. × and ÷
 - 3. ÷ and +
 - 4. - and ×

Question ID : 630680529950
Option 1 ID : 6306802071726
Option 2 ID : 6306802071725
Option 3 ID : 6306802071727
Option 4 ID : 6306802071724

Status : Answered
Chosen Option : 3

Section : General Aptitude

Q.1 Two numbers are in the ratio of 4 : 7. If the sum of the two numbers is 77, then what is the difference between the two numbers?

- Ans**
- 1. 15
 - 2. 24
 - 3. 21
 - 4. 27

Question ID : 630680530009
Option 1 ID : 6306802071962
Option 2 ID : 6306802071963
Option 3 ID : 6306802071960
Option 4 ID : 6306802071961

Status : Answered
Chosen Option : 3

Q.2 N is thrice as good a workman as M and therefore is able to finish a work in 20 days less than M. In how many days can they together complete the same work?

- Ans**
- 1. 45 days
 - 2. 15 days
 - 3. 22 days
 - 4. 7.5 days

Question ID : 630680530023
Option 1 ID : 6306802072016
Option 2 ID : 6306802072017
Option 3 ID : 6306802072019
Option 4 ID : 6306802072018

Status : Answered
Chosen Option : 2

Q.3 Rs. 6500 is divided among X, Y and Z such that 2 times of X's share is equal to 3 times of Y's share which is equal to 4 times of Z's share. What is the share of Y?

- Ans**
- 1. Rs. 1600
 - 2. Rs. 2800
 - 3. Rs. 2400
 - 4. Rs. 2000

Question ID : 630680530010
Option 1 ID : 6306802071964
Option 2 ID : 6306802071965
Option 3 ID : 6306802071966
Option 4 ID : 6306802071967
Status : Answered
Chosen Option : 4

Q.4 What is the discount percentage offered on a book having marked price Rs. 4300 being sold at Rs. 3784?

- Ans**
- 1. 12 percent
 - 2. 14 percent
 - 3. 11 percent
 - 4. 10 percent

Question ID : 630680530008
Option 1 ID : 6306802071958
Option 2 ID : 6306802071959
Option 3 ID : 6306802071956
Option 4 ID : 6306802071957
Status : Answered
Chosen Option : 1

Q.5 A man walking at the speed of 12 km/hr covers a certain distance in 2 hours and 45 minutes. If he covers the same distance by cycle in 3 hours, then what is the speed of cycle?

- Ans**
- 1. 15 km/hr
 - 2. 9 km/hr
 - 3. 11 km/hr
 - 4. 8 km/hr

Question ID : 630680530022
Option 1 ID : 6306802072015
Option 2 ID : 6306802072012
Option 3 ID : 6306802072014
Option 4 ID : 6306802072013
Status : Answered
Chosen Option : 3

Q.6 If $\operatorname{cosec}^2 \theta = \frac{100}{71}$, then what is the value of $\cot^2 \theta$?

- Ans
- ✓ 1. $\frac{29}{71}$
 - ✗ 2. $\frac{51}{71}$
 - ✗ 3. $\frac{39}{71}$
 - ✗ 4. $\frac{38}{51}$

Question ID : 630680529983
Option 1 ID : 6306802071857
Option 2 ID : 6306802071859
Option 3 ID : 6306802071856
Option 4 ID : 6306802071858
Status : Answered
Chosen Option : 1

Q.7 Suresh sells a car at the loss of 32 percent. What will be the ratio of cost price to selling price?

- Ans
- ✗ 1. 21 : 13
 - ✗ 2. 23 : 15
 - ✓ 3. 25 : 17
 - ✗ 4. 27 : 19

Question ID : 630680530006
Option 1 ID : 6306802071948
Option 2 ID : 6306802071951
Option 3 ID : 6306802071950
Option 4 ID : 6306802071949
Status : Answered
Chosen Option : 3

Q.8 Two trains, one 460 metres and the other 340 metres long are running in opposite directions on parallel tracks, at the speed of 81 km/hr and 63 km/hr respectively. How much time will they take to cross each other?

- Ans
- ✓ 1. 20 seconds
 - ✗ 2. 40 seconds
 - ✗ 3. 10 seconds
 - ✗ 4. 30 seconds

Question ID : 630680530021
Option 1 ID : 6306802072010
Option 2 ID : 6306802072008
Option 3 ID : 6306802072009
Option 4 ID : 6306802072011
Status : Answered
Chosen Option : 1

Q.9 If $a = 2 + \sqrt{3}$, $b = 2 - \sqrt{3}$, then what is the value of $a^2 + b^2$?

- Ans
- 1. 12
 - 2. 14
 - 3. 15
 - 4. 16

Question ID : 630680530020
Option 1 ID : 6306802072004
Option 2 ID : 6306802072005
Option 3 ID : 6306802072006
Option 4 ID : 6306802072007
Status : Answered
Chosen Option : 2

Q.10 The difference between cost price and selling price is Rs. 672. If loss percentage is 21 percent, then what is the selling price?

- Ans
- 1. Rs. 2854
 - 2. Rs. 2528
 - 3. Rs. 2372
 - 4. Rs. 2646

Question ID : 630680530007
Option 1 ID : 6306802071955
Option 2 ID : 6306802071952
Option 3 ID : 6306802071953
Option 4 ID : 6306802071954
Status : Answered
Chosen Option : 2

Q.11 If P gets 10 percent more marks than Q, then by what percentage marks of Q are less than the marks of P?

- Ans
- 1. 9.09 percent
 - 2. 10 percent
 - 3. 12.5 percent
 - 4. 8.75 percent

Question ID : 630680529989
Option 1 ID : 6306802071882
Option 2 ID : 6306802071881
Option 3 ID : 6306802071883
Option 4 ID : 6306802071880
Status : Answered
Chosen Option : 1

Q.12 Length, breadth and height of a cuboid are 6 cm, 10 cm and 15 cm respectively. What is the total surface area of the cuboid?

- Ans
- 1. 600 cm^2
 - 2. 750 cm^2
 - 3. 800 cm^2
 - 4. 900 cm^2

Question ID : 630680530014

Option 1 ID : 6306802071980

Option 2 ID : 6306802071981

Option 3 ID : 6306802071982

Option 4 ID : 6306802071983

Status : Answered

Chosen Option : 1

Q.13 Which of the following is divisible by 11?

- Ans
- 1. 33124
 - 2. 42647
 - 3. 45629
 - 4. 58243

Question ID : 630680530019

Option 1 ID : 6306802072000

Option 2 ID : 6306802072003

Option 3 ID : 6306802072001

Option 4 ID : 6306802072002

Status : Answered

Chosen Option : 2

Q.14 60 percent of selling price of a table is equal to $\frac{2}{5}$ of the cost price of the table. What is the loss percent?

- Ans
- 1. 33.33 percent
 - 2. 31.76 percent
 - 3. 30.48 percent
 - 4. 34.5 percent

Question ID : 630680530026

Option 1 ID : 6306802072031

Option 2 ID : 6306802072030

Option 3 ID : 6306802072028

Option 4 ID : 6306802072029

Status : Answered

Chosen Option : 1

Q.15 The average age of a class of 6 girls is x years. Four new girls having ages $x - 4$, $x + 8$, $x + 12$ and $x + 14$ joins the class. What is the new average age of the class?

- Ans
- 1. $x + 3$
 - 2. $x + 5$
 - 3. $x - 2$
 - 4. $x + 1$

Question ID : 630680530004
Option 1 ID : 6306802071941
Option 2 ID : 6306802071943
Option 3 ID : 6306802071942
Option 4 ID : 6306802071940
Status : Answered
Chosen Option : 1

Section : General English

Q.1 Select the most appropriate ANTONYM of the underlined word.

There is no proof of his involvement in the incident.

- Ans
- 1. Engagement
 - 2. Participation
 - 3. Non-engagement
 - 4. Obliviousness

Question ID : 630680530070
Option 1 ID : 6306802072206
Option 2 ID : 6306802072207
Option 3 ID : 6306802072208
Option 4 ID : 6306802072205
Status : Answered
Chosen Option : 3

Q.2 Identify the option in which the idiom correctly fits the context of the given sentence.

- Ans
- 1. She is the boss, but her secretary seems to hold the reins.
 - 2. She is the boss, but her secretary seems to see red.
 - 3. She is the boss, but her secretary seems to lead down.
 - 4. She is the boss, but her secretary seems to pay through the nose.

Question ID : 630680530058
Option 1 ID : 6306802072158
Option 2 ID : 6306802072159
Option 3 ID : 6306802072160
Option 4 ID : 6306802072157
Status : Answered
Chosen Option : 1

Comprehension:

Read the given passage and answer the questions that follow.

... when a man has a mind to venture his money in a lottery, every figure of it appears equally alluring, and as likely to succeed as any of its fellows. All of them have the same pretensions to good luck, stand upon the same foot of competition and no manner of reason can be given why a man should prefer one to the other before the lottery is drawn. In this case therefore, caprice very often acts in the place of reasons, and forms to itself some groundless imaginary motive, where real and substantial ones are wanting. I know a well-meaning man that is very well pleased to risk his good fortune upon the number 1711, because it is the year of our Lord. I am acquainted with a tracker that would give a good deal for the number 134. On the contrary, I have been told of a certain zealous dissenter, who being a great enemy to popery, and believing that bad men are the most fortunate in this world, will lay two to one on the number 666 against any other number, because, says he, it is the number of the beast. Several would prefer the number 12,000 before any other, as it is the number of pounds in the great prize. In short, some are pleased to find their own age in their number; some that have got a number which makes a pretty appearance in the ciphers; and others, because it is the same number that succeeded in the last lottery. Each of these upon no other grounds thinks he stands fairest for the great lot, and that he is possessed of what may not be improperly called the golden number.

SubQuestion No : 3

Q.3 What, according to the author, is true about the lottery explorer's attitude?

- Ans**
- 1. They assume that lucky numbers have demonic or heavenly attributes in themselves.
 - 2. They believe that different codes and numbers can do wonders for them.
 - 3. They pretend to have individual good luck and feel competition with the other lottery buyers.
 - 4. They are more driven by caprice and imaginary motives than any sound reason and substantial grounds.

Question ID : 630680530093

Option 1 ID : 6306802072288

Option 2 ID : 6306802072287

Option 3 ID : 6306802072285

Option 4 ID : 6306802072286

Status : Answered

Chosen Option : 4



Comprehension:

Read the given passage and answer the questions that follow.

... when a man has a mind to venture his money in a lottery, every figure of it appears equally alluring, and as likely to succeed as any of its fellows. All of them have the same pretensions to good luck, stand upon the same foot of competition and no manner of reason can be given why a man should prefer one to the other before the lottery is drawn. In this case therefore, caprice very often acts in the place of reasons, and forms to itself some groundless imaginary motive, where real and substantial ones are wanting. I know a well-meaning man that is very well pleased to risk his good fortune upon the number 1711, because it is the year of our Lord. I am acquainted with a tracker that would give a good deal for the number 134. On the contrary, I have been told of a certain zealous dissenter, who being a great enemy to popery, and believing that bad men are the most fortunate in this world, will lay two to one on the number 666 against any other number, because, says he, it is the number of the beast. Several would prefer the number 12,000 before any other, as it is the number of pounds in the great prize. In short, some are pleased to find their own age in their number; some that have got a number which makes a pretty appearance in the ciphers; and others, because it is the same number that succeeded in the last lottery. Each of these upon no other grounds thinks he stands fairest for the great lot, and that he is possessed of what may not be improperly called the golden number.

SubQuestion No : 4

Q.4 What is the chief concept of the given passage?

- Ans
- 1. Misconceptions and superstitions related to lottery numbers
 - 2. Different codes for good luck in lottery
 - 3. Good fortune of a person purchasing lottery tickets
 - 4. The whims of a lottery adventurer

Question ID : 630680530090

Option 1 ID : 6306802072274

Option 2 ID : 6306802072275

Option 3 ID : 6306802072273

Option 4 ID : 6306802072276

Status : Answered

Chosen Option : 1



Comprehension:

Read the given passage and answer the questions that follow.

... when a man has a mind to venture his money in a lottery, every figure of it appears equally alluring, and as likely to succeed as any of its fellows. All of them have the same pretensions to good luck, stand upon the same foot of competition and no manner of reason can be given why a man should prefer one to the other before the lottery is drawn. In this case therefore, caprice very often acts in the place of reasons, and forms to itself some groundless imaginary motive, where real and substantial ones are wanting. I know a well-meaning man that is very well pleased to risk his good fortune upon the number 1711, because it is the year of our Lord. I am acquainted with a tracker that would give a good deal for the number 134. On the contrary, I have been told of a certain zealous dissenter, who being a great enemy to popery, and believing that bad men are the most fortunate in this world, will lay two to one on the number 666 against any other number, because, says he, it is the number of the beast. Several would prefer the number 12,000 before any other, as it is the number of pounds in the great prize. In short, some are pleased to find their own age in their number; some that have got a number which makes a pretty appearance in the ciphers; and others, because it is the same number that succeeded in the last lottery. Each of these upon no other grounds thinks he stands fairest for the great lot, and that he is possessed of what may not be improperly called the golden number.

SubQuestion No : 5

Q.5 "...believing that bad men are the most fortunate in this world, will lay two to one on the number 666 against any other number, because, says he, it is the number of the beast."

What does the underlined phrase mean?

- Ans**
- 1. To spend more than one's income
 - 2. To regret doing something
 - 3. To reduce the speed
 - 4. To place a bet

Question ID : 630680530091
Option 1 ID : 6306802072280
Option 2 ID : 6306802072278
Option 3 ID : 6306802072277
Option 4 ID : 6306802072279
Status : Answered
Chosen Option : 4



Comprehension:

Read the given passage and answer the questions that follow.

... when a man has a mind to venture his money in a lottery, every figure of it appears equally alluring, and as likely to succeed as any of its fellows. All of them have the same pretensions to good luck, stand upon the same foot of competition and no manner of reason can be given why a man should prefer one to the other before the lottery is drawn. In this case therefore, caprice very often acts in the place of reasons, and forms to itself some groundless imaginary motive, where real and substantial ones are wanting. I know a well-meaning man that is very well pleased to risk his good fortune upon the number 1711, because it is the year of our Lord. I am acquainted with a tracker that would give a good deal for the number 134. On the contrary, I have been told of a certain zealous dissenter, who being a great enemy to popery, and believing that bad men are the most fortunate in this world, will lay two to one on the number 666 against any other number, because, says he, it is the number of the beast. Several would prefer the number 12,000 before any other, as it is the number of pounds in the great prize. In short, some are pleased to find their own age in their number; some that have got a number which makes a pretty appearance in the ciphers; and others, because it is the same number that succeeded in the last lottery. Each of these upon no other grounds thinks he stands fairest for the great lot, and that he is possessed of what may not be improperly called the golden number.

SubQuestion No : 6

Q.6 Identify the word that means 'whims'.

- Ans
- 1. Zealous
 - 2. Cipher
 - 3. Caprice
 - 4. Allure

Question ID : 630680530092

Option 1 ID : 6306802072283

Option 2 ID : 6306802072281

Option 3 ID : 6306802072282

Option 4 ID : 6306802072284

Status : Answered

Chosen Option : 2

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

- Ans
- 1. a European country
 - 2. European country
 - 3. an European country
 - 4. the European country

Question ID : 630680530035

Option 1 ID : 6306802072067

Option 2 ID : 6306802072068

Option 3 ID : 6306802072065

Option 4 ID : 6306802072066

Status : Answered

Chosen Option : 3

Q.8 Select the grammatically correct sentence.

- Ans 1. There were 100 books on that shelf, each one of them were classic.
 2. There were 100 books on that shelf, each one of them was a classic.
 3. There was 100 books on that shelf, each one of them is a classic.
 4. There were 100 books on that shelf, each one of them are a classic.

Question ID : 630680530048
Option 1 ID : 6306802072120
Option 2 ID : 6306802072119
Option 3 ID : 6306802072118
Option 4 ID : 6306802072117
Status : Answered
Chosen Option : 2

Q.9 Select the correctly spelt word.

- Ans 1. Beauraucrate
 2. Bureaucrat
 3. Bureaucrate
 4. Bureacrat

Question ID : 630680530078
Option 1 ID : 6306802072238
Option 2 ID : 6306802072239
Option 3 ID : 6306802072240
Option 4 ID : 6306802072237
Status : Answered
Chosen Option : 2

Q.10 Identify the option in which the proverb correctly fits the context of the given sentence.

- Ans 1. She was very houseproud and believed that cleanliness is next to godliness.
 2. She was very houseproud and believed that all is well that ends well.
 3. She was very houseproud and believed that beggars can't be choosers.
 4. She was very houseproud and believed that practice makes man perfect.

Question ID : 630680530061
Option 1 ID : 6306802072170
Option 2 ID : 6306802072169
Option 3 ID : 6306802072172
Option 4 ID : 6306802072171
Status : Answered
Chosen Option : 3

Q.11 Select the most appropriate ANTONYM of the underlined word.
We must acknowledge that something is wrong with the system.

- Ans 1. Recognise
 2. Deny
 3. Accord
 4. Misconstrue

Question ID : 630680530067
Option 1 ID : 6306802072193
Option 2 ID : 6306802072194
Option 3 ID : 6306802072195
Option 4 ID : 6306802072196
Status : Answered
Chosen Option : 2

Q.12 In which of the following sentences has the idiom been used correctly?

- Ans 1. The producer took a leaf out of his books when the movie received a poor box office collection.
 2. The producer was shown the ropes when the movie received a poor box office collection.
 3. The producer was led up the garden path when the movie received a poor box office collection.
 4. Everything went down in flames for the producer when the movie received a poor box office collection.

Question ID : 630680530064
Option 1 ID : 6306802072184
Option 2 ID : 6306802072183
Option 3 ID : 6306802072182
Option 4 ID : 6306802072181
Status : Answered
Chosen Option : 4

Q.13 Identify the option in which the idiom correctly fits the context of the given sentence.

- Ans 1. Maybe, I should get something off Rick's chest and start coming early every morning.
 2. Maybe, I should take something to Rick's heart and start coming early every morning.
 3. Maybe, I should hold the fort for Rick and start coming early every morning.
 4. Maybe, I should take a leaf out of Rick's book and start coming early every morning.

Question ID : 630680530057
Option 1 ID : 6306802072154
Option 2 ID : 6306802072153
Option 3 ID : 6306802072156
Option 4 ID : 6306802072155
Status : Answered
Chosen Option : 4

Q.14 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. That is perhaps the reason why she is perhaps lost in thought.
- B. Her stillness made her look like a halfpenny gingerbread horse.
- C. Anyone who has been torn away from the plough, from the familiar grey landscapes, and cast into this slough, full of monstrous lights, of unceasing uproar and hurrying people, is bound to think about the situation.
- D. Her little mare is white and motionless too.

- Ans
- 1. ADCB
 - 2. DABC
 - 3. CABD
 - 4. DBAC

Question ID : 630680530051

Option 1 ID : 6306802072131

Option 2 ID : 6306802072129

Option 3 ID : 6306802072132

Option 4 ID : 6306802072130

Status : Answered

Chosen Option : 3

Q.15 Select the most appropriate synonym of the underlined word.
Benares presents a striking maze of narrow streets.

- Ans
- 1. Vague
 - 2. Abstract
 - 3. Statuesque
 - 4. Picturesque

Question ID : 630680530074

Option 1 ID : 6306802072224

Option 2 ID : 6306802072223

Option 3 ID : 6306802072221

Option 4 ID : 6306802072222

Status : Answered

Chosen Option : 4

Q.16 Select the grammatically correct sentence.

- Ans
- 1. He was so late that he was being scolded by the teacher.
 - 2. He was so late that he was scolded by the teacher.
 - 3. He was so late that he is scolded by the teacher.
 - 4. He was late so he is scolded by the teacher.

Question ID : 630680530044

Option 1 ID : 6306802072104

Option 2 ID : 6306802072103

Option 3 ID : 6306802072102

Option 4 ID : 6306802072101

Status : Answered

Chosen Option : 2

Q.17 Select the most appropriate adverb to fill in the blank.

This lack of food was confirmed when one looked _____ in the faces of these people.

- Ans
- 1. generally
 - 2. mainly
 - 3. closely
 - 4. usually

Question ID : 630680530042

Option 1 ID : 6306802072095

Option 2 ID : 6306802072096

Option 3 ID : 6306802072093

Option 4 ID : 6306802072094

Status : Answered

Chosen Option : 3

Q.18 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. Carnival first took shape in the late 18th century on the island of Trinidad and Tobago, emerging in a ritual called Cannes Brulees (French for 'sugarcane burning').
- B. This musical performance was an act of reclaiming cultural vitality, taking ownership of their culture and enacting empowerment through these acts of rebellion.
- C. Instruments resembling drums and sticks were used during Cannes Brulees to perform percussive music linked to the African roots of enslaved people; this music reconnected the performers with their ancestors and the past spirits that guided and sustained them.
- D. Carnival's celebration of rebellion against enslavement has roots in both African and Indigenous cultures.
- E. Enslaved Africans purposefully set fire to sugarcane intended for sale, resisting plantation slavery through the destruction of its valuable export commodity-sugar.

- Ans
- 1. DCEBA
 - 2. CBDEA
 - 3. DAECB
 - 4. ABDEC

Question ID : 630680530054

Option 1 ID : 6306802072144

Option 2 ID : 6306802072142

Option 3 ID : 6306802072143

Option 4 ID : 6306802072141

Status : Answered

Chosen Option : 3

Q.19 Select the most appropriate abstract noun to fill in the blank.

She expressed her _____ of his comment with a frown.

- Ans
- 1. disagreement
 - 2. disapproval
 - 3. dejection
 - 4. disbelief

Question ID : 630680530039

Option 1 ID : 6306802072081

Option 2 ID : 6306802072083

Option 3 ID : 6306802072084

Option 4 ID : 6306802072082

Status : Answered

Chosen Option : 2

Q.20 Select the most appropriate option to fill in the blank.
I shall be back in less than _____.

- Ans
- 1. the hour
 - 2. a hour
 - 3. an hour
 - 4. hour

Question ID : 630680530036
Option 1 ID : 6306802072071
Option 2 ID : 6306802072069
Option 3 ID : 6306802072070
Option 4 ID : 6306802072072
Status : Answered
Chosen Option : 3

Section : Domain Knowledge

Q.1 The range of the function $f(x) = \sqrt{(36 - x^2)}$ is:

- Ans
- 1. $[0, 6]$
 - 2. $(0, 6)$
 - 3. $(-6, 6)$
 - 4. $[1, 6]$

Question ID : 630680530260
Option 1 ID : 6306802072946
Option 2 ID : 6306802072945
Option 3 ID : 6306802072947
Option 4 ID : 6306802072948
Status : Answered
Chosen Option : 1

Q.2 If $P_r^{10} : P_{r+1}^{12} = 1 : 22$, then the value of r is:

- Ans
- 1. 5
 - 2. 3
 - 3. 2
 - 4. 4

Question ID : 630680530256
Option 1 ID : 6306802072932
Option 2 ID : 6306802072930
Option 3 ID : 6306802072929
Option 4 ID : 6306802072931
Status : Answered
Chosen Option : 1

Q.3 The contrapositive of the statement 'if Mumbai is the capital of Maharashtra, then Mumbai is in India' is:

Ans 1.

if Mumbai is the capital of Maharashtra, then Mumbai is not in India.

2.

if Mumbai is not the capital of Maharashtra, then Mumbai is not the capital of India.

3.

if Mumbai is in India, then Mumbai is the capital of Maharashtra.

4.

if Mumbai is not in India, then Mumbai is not the capital of Maharashtra.

Question ID : 630680530253

Option 1 ID : 6306802072918

Option 2 ID : 6306802072917

Option 3 ID : 6306802072919

Option 4 ID : 6306802072920

Status : Answered

Chosen Option : 4

Q.4 Consider a pure inductor of 20 mH. It is connected to an alternating source of 240 V with frequency 100 Hz. The inductive reactance and RMS current in the circuit are _____ and _____, respectively (Consider $\pi \sim 3.0$).

Ans 1. 24 Ω ; 10 A

2. 6 Ω ; 20 A

3. 48 Ω ; 5 A

4. 12 Ω ; 20 A

Question ID : 630680530279

Option 1 ID : 6306802073018

Option 2 ID : 6306802073017

Option 3 ID : 6306802073020

Option 4 ID : 6306802073019

Status : Answered

Chosen Option : 4

Q.5 Suppose a block of mass 2 kg is attached with a spring of spring constant 800 N/m. If the block is displaced to a distance 15 cm from its equilibrium position and released, it executes a simple harmonic motion. The maximum potential energy of the block is:

Ans 1. 6.0 J

2. 3.0 J

3. 9.0 J

4. 12.0 J

Question ID : 630680530297

Option 1 ID : 6306802073090

Option 2 ID : 6306802073089

Option 3 ID : 6306802073091

Option 4 ID : 6306802073092

Status : Answered

Chosen Option : 3

Q.6 In a group of 95 people, 59 like tea, 33 like coffee and 17 people likes both tea and coffee. How many people like neither tea nor coffee?

- Ans**
- 1. 33
 - 2. 59
 - 3. 20
 - 4. 95

Question ID : 630680530265
Option 1 ID : 6306802072966
Option 2 ID : 6306802072967
Option 3 ID : 6306802072965
Option 4 ID : 6306802072968
Status : Answered
Chosen Option : 3

Q.7 Suppose a plane electromagnetic wave of frequency 10 MHz travels in free space along the y-direction. At a particular point in space and time, $E = 9.9 \hat{x}$ V/m. \vec{B} at this point is given by:

- Ans**
- 1. $\vec{B} = 3.3 \times 10^{-8} \hat{x}$ T
 - 2. $\vec{B} = 3.3 \times 10^{-6} \hat{y}$ T
 - 3. $\vec{B} = 3.3 \times 10^{-6} \hat{x}$ T
 - 4. $\vec{B} = 3.3 \times 10^{-8} \hat{z}$ T

Question ID : 630680530282
Option 1 ID : 6306802073030
Option 2 ID : 6306802073029
Option 3 ID : 6306802073032
Option 4 ID : 6306802073031
Status : Answered
Chosen Option : 4

Q.8 If the roots of the polynomial equation $(b - c)x^2 + (c - a)x + (a - b) = 0$ are not equal, then:

- Ans**
- 1. $2b < c + a$
 - 2. $2b \neq c + a$
 - 3. $2b = c + a$
 - 4. $2b > c + a$

Question ID : 630680530259
Option 1 ID : 6306802072943
Option 2 ID : 6306802072941
Option 3 ID : 6306802072944
Option 4 ID : 6306802072942
Status : Answered
Chosen Option : 4

Q.9 A physical quantity Z is related to four observables a , b , c and d as follows: $Z = [a^{\frac{1}{2}} b^{\frac{1}{4}}] / [cd^{\frac{2}{3}}]$. The percentage errors of measurement in a , b , c and d are 4%, 3%, 1% and 2%, respectively. The percentage error in the quantity Z is:

- Ans**
- 1. 6%
 - 2. 4%
 - 3. 8%
 - 4. 10%

Question ID : 630680530303
Option 1 ID : 6306802073114
Option 2 ID : 6306802073113
Option 3 ID : 6306802073115
Option 4 ID : 6306802073116
Status : Answered

Chosen Option : 1

Q.10 The depletion of ozone layers in the atmosphere is of international concern because:

- Ans**
- 1. they protect us from X-rays
 - 2. they protect us from UV rays
 - 3. they protect us from gamma rays
 - 4. they protect us from infrared waves

Question ID : 630680530281
Option 1 ID : 6306802073027
Option 2 ID : 6306802073026
Option 3 ID : 6306802073028
Option 4 ID : 6306802073025
Status : Answered

Chosen Option : 2

Q.11 The system of linear equations $x + 2y + 2z = 1$, $2x + 2y + 3z = 3$, $x - y + 3z = 5$ is:

- Ans**
- 1. inconsistent
 - 2. consistent with a unique solution
 - 3. may or may not be consistent
 - 4. consistent with an infinite solution

Question ID : 630680530254
Option 1 ID : 6306802072922
Option 2 ID : 6306802072921
Option 3 ID : 6306802072923
Option 4 ID : 6306802072924
Status : Answered

Chosen Option : 2

Q.12 The solution of the differential equation $(x + 2y^3)\frac{dy}{dx} = y$ is:

- Ans
- 1. $y = xy^2 + c$
 - 2. $\frac{x}{y} - y^2 = c$
 - 3. $\frac{x}{y} = -y^2 + c$
 - 4. $x = y^2 + c$

Question ID : 630680530246

Option 1 ID : 6306802072892

Option 2 ID : 6306802072890

Option 3 ID : 6306802072889

Option 4 ID : 6306802072891

Status : Answered

Chosen Option : 2

Q.13 $\int_1^2 \frac{1}{x\sqrt{x^2-1}} dx = ?$

- Ans
- 1. $\frac{\pi}{2}$
 - 2. $\frac{\pi}{5}$
 - 3. $\frac{\pi}{6}$
 - 4. $\frac{\pi}{3}$



Question ID : 630680530239

Option 1 ID : 6306802072862

Option 2 ID : 6306802072863

Option 3 ID : 6306802072864

Option 4 ID : 6306802072861

Status : Answered

Chosen Option : 4

Q.14 Identify the option that arranges the following in chronological order for Carnot cycle.

- A. Isothermal expansion
- B. Isothermal compression
- C. Adiabatic expansion
- D. Adiabatic compression

- Ans
- 1. B, C, D, A
 - 2. A, D, C, B
 - 3. A, B, C, D
 - 4. A, C, B, D

Question ID : 630680530299
Option 1 ID : 6306802073099
Option 2 ID : 6306802073100
Option 3 ID : 6306802073097
Option 4 ID : 6306802073098
Status : Answered
Chosen Option : 4

Q.15 If $A = \{5, 8, 9, 12\}$, then the total number of distinct relations that can be defined over A is:

- Ans
- 1. 2^{16}
 - 2. 4
 - 3. 2^8
 - 4. 8

Question ID : 630680530262
Option 1 ID : 6306802072955
Option 2 ID : 6306802072953
Option 3 ID : 6306802072954
Option 4 ID : 6306802072956
Status : Answered
Chosen Option : 1

Q.16 A biker comes to a sudden stop in 50 m. During this process, the force experienced by the bike due to the road is 200 N and this force directly opposes the motion of the bike. The work done by the road on the bike is:

- Ans
- 1. 5000 J
 - 2. 10000 J
 - 3. -5000 J
 - 4. -10000 J

Question ID : 630680530304
Option 1 ID : 6306802073119
Option 2 ID : 6306802073117
Option 3 ID : 6306802073120
Option 4 ID : 6306802073118
Status : Answered
Chosen Option : 4

Q.17 If $f(x) = x - \frac{1}{x}$, then the value of $f(2) + f(\frac{1}{2})$ is equal to:

- Ans
- 1. 1
 - 2. -1
 - 3. 3
 - 4. 0

Question ID : 630680530264

Option 1 ID : 6306802072963

Option 2 ID : 6306802072961

Option 3 ID : 6306802072964

Option 4 ID : 6306802072962

Status : Answered

Chosen Option : 4

Q.18 A car is moving with uniform motion. The velocity time graph for the car will be:

- Ans
- 1. a straight line passing through the origin with an angle 45° with x-axis
 - 2. a straight line parallel to y-axis
 - 3. a straight line parallel to x-axis
 - 4. a straight line passing through the origin with an angle 30° with x-axis

Question ID : 630680530287

Option 1 ID : 6306802073050

Option 2 ID : 6306802073052

Option 3 ID : 6306802073051

Option 4 ID : 6306802073049

Status : Answered

Chosen Option : 3

Q.19 The value of the limit $\lim_{x \rightarrow \infty} \left(\frac{7x^3 - 2x^2 + 5}{2x^2 - 7x} \right)$ is:

- Ans
- 1. 0
 - 2. $\frac{1}{2}$
 - 3. $-\frac{7}{2}$
 - 4. $\frac{7}{2}$

Question ID : 630680530236

Option 1 ID : 6306802072849

Option 2 ID : 6306802072850

Option 3 ID : 6306802072852

Option 4 ID : 6306802072851

Status : Answered

Chosen Option : 4

Q.20 Consider the following function

$$f(x) = -\frac{3}{4}x^4 - 8x^3 - \frac{45}{2}x^2 + 105.$$

Select the correct result from the following.

- Ans
- 1. The point $x = -5$ is a point of local minima.
 - 2. The point $x = 0$ is a point of local minima.
 - 3. The point $x = 0$ is a point of local maxima.
 - 4. The point $x = -3$ is a point of local maxima.

Question ID : 630680530240
Option 1 ID : 6306802072867
Option 2 ID : 6306802072868
Option 3 ID : 6306802072865
Option 4 ID : 6306802072866
Status : Answered
Chosen Option : 2

Q.21 Infrared waves are produced by:

- Ans
- 1. special vacuum tubes
 - 2. hot bodies and molecules
 - 3. accelerated motion of charges in conducting wire
 - 4. special lamps

Question ID : 630680530280
Option 1 ID : 6306802073023
Option 2 ID : 6306802073022
Option 3 ID : 6306802073021
Option 4 ID : 6306802073024
Status : Answered
Chosen Option : 2



Q.22 Consider the following Linear Programming problem:

$$\text{Maximise } Z = -x_1 + 2x_2$$

subject to the constraints

$$x_1 - x_2 \leq -1,$$

$$-0.5x_1 + x_2 \leq 2,$$

$$x_1, x_2 \geq 0.$$

Then the above problem has:

- Ans
- 1. no optimal solution
 - 2. unique optimal solutions Max $Z = 2$ for $x_1 = 0, x_2 = 1$
 - 3. multiple optimal solutions Max $Z = 4$ for $x_1 = 0, x_2 = 2$ and $x_1 = 2, x_2 = 3$
 - 4. unique optimal solution Max $Z = 4$ for $x_1 = 0, x_2 = 2$

Question ID : 630680530252
Option 1 ID : 6306802072915
Option 2 ID : 6306802072916
Option 3 ID : 6306802072914
Option 4 ID : 6306802072913
Status : Answered
Chosen Option : 4

Q.23 Suppose the heart of Raman Babu beats 75 times in a minute. The period of the heart is:

- Ans
- 1. 0.85 s
 - 2. 0.70 s
 - 3. 0.75 s
 - 4. 0.80 s

Question ID : 630680530295
Option 1 ID : 6306802073084
Option 2 ID : 6306802073081
Option 3 ID : 6306802073082
Option 4 ID : 6306802073083
Status : Answered
Chosen Option : 4

Q.24 Suppose a prism is made of a glass, whose refractive index is $\sqrt{2}$ and angle of prism is 90° . The angle of minimum deviation is:

- Ans
- 1. 60°
 - 2. 90°
 - 3. 30°
 - 4. 45°

Question ID : 630680530294
Option 1 ID : 6306802073078
Option 2 ID : 6306802073079
Option 3 ID : 6306802073080
Option 4 ID : 6306802073077
Status : Answered
Chosen Option : 2

Q.25 What is the common difference of an arithmetic progression in which $a_{22} - a_{16} = -54$?

- Ans
- 1. 6
 - 2. 9
 - 3. -6
 - 4. -9

Question ID : 630680530263
Option 1 ID : 6306802072959
Option 2 ID : 6306802072960
Option 3 ID : 6306802072958
Option 4 ID : 6306802072957
Status : Answered
Chosen Option : 4

Q.26 In the following equation $x(t) = A \exp(-Bt)$, $x(t)$ and t represent displacement and time, respectively. To make the given equation dimensionally consistent, the dimensions of A and B must be:

- Ans
- 1. $[L^{+1}]$ and $[T^{-1}]$, respectively
 - 2. $[L^{-1}]$ and $[T^{-1}]$, respectively
 - 3. $[L^0]$ and $[T^{-1}]$, respectively
 - 4. $[L^{-2}]$ and $[T^1]$, respectively

Question ID : 630680530301
Option 1 ID : 6306802073106
Option 2 ID : 6306802073105
Option 3 ID : 6306802073108
Option 4 ID : 6306802073107
Status : Answered
Chosen Option : 1

Q.27 While solving a Linear Programming problem, infeasibility may be removed by:

- Ans
- 1. removing a constraint
 - 2. adding another variable
 - 3. adding another constraint
 - 4. removing a variable

Question ID : 630680530250
Option 1 ID : 6306802072907
Option 2 ID : 6306802072906
Option 3 ID : 6306802072905
Option 4 ID : 6306802072908
Status : Answered
Chosen Option : 4

Q.28 Suppose n mole ideal gas goes isobarically (at Pressure P) from its initial state(T_1, V_1)to the final state(T_2, V_2). The work done during the process is: (R = Gas constant)

- Ans
- 1. $W = n R (V_1 - V_2)$
 - 2. $W = n R (V_2 - V_1)$
 - 3. $W = n R (T_1 - T_2)$
 - 4. $W = n R (T_2 - T_1)$

Question ID : 630680530300

Option 1 ID : 6306802073101

Option 2 ID : 6306802073104

Option 3 ID : 6306802073102

Option 4 ID : 6306802073103

Status : Answered

Chosen Option : 4

Q.29 For what value of λ , the function $f(x) = \begin{cases} 12x + 3\lambda, & x \neq 1 \\ 0, & x = 1 \end{cases}$ is continuous at $x = 1$?

- Ans
- 1. -4
 - 2. -3
 - 3. 4
 - 4. 3

Question ID : 630680530238

Option 1 ID : 6306802072857

Option 2 ID : 6306802072859

Option 3 ID : 6306802072858

Option 4 ID : 6306802072860

Status : Answered

Chosen Option : 1

Q.30 The order and degree of the differential equation $\sqrt{\frac{dy}{dx} \sqrt{\frac{d^2y}{dx^2}}} = \sqrt{5}$ is:

- Ans
- 1. 3, 1
 - 2. 3, 2
 - 3. 3, 6
 - 4. 3, 3

Question ID : 630680530245

Option 1 ID : 6306802072885

Option 2 ID : 6306802072886

Option 3 ID : 6306802072888

Option 4 ID : 6306802072887

Status : Answered

Chosen Option : 1

Q.31 The area between the curves $y = 3x^2 - x - 3$ and $y = -2x^2 + 4x + 7$ is (in sq. units):

- Ans
- ✓ 1. $\frac{45}{2}$
 - ✗ 2. $\frac{35}{2}$
 - ✗ 3. $\frac{55}{2}$
 - ✗ 4. $3(e^{\cos 2} + \sin^2 2)$

Question ID : 630680530241
Option 1 ID : 6306802072869
Option 2 ID : 6306802072871
Option 3 ID : 6306802072870
Option 4 ID : 6306802072872
Status : Answered
Chosen Option : 1

Q.32 If ω is an imaginary cube root of unity, then $(1 + \omega - \omega^2)^5$ equals to:

- Ans
- ✗ 1. -32
 - ✗ 2. 32
 - ✓ 3. -32ω
 - ✗ 4. $32\omega^2$

Question ID : 630680530243
Option 1 ID : 6306802072879
Option 2 ID : 6306802072878
Option 3 ID : 6306802072880
Option 4 ID : 6306802072877
Status : Answered
Chosen Option : 1

Q.33 An astronaut suddenly gets separated from his small spaceship. If the spaceship is accelerating in interstellar space at a constant rate of 60 m/s^2 and there are no nearby stars to exert gravitational force on the astronaut, then the acceleration of the astronaut after the instant he is outside the spaceship is:

- Ans
- ✓ 1. 0 m/s^2
 - ✗ 2. 30 m/s^2
 - ✗ 3. 20 m/s^2
 - ✗ 4. 60 m/s^2

Question ID : 630680530289
Option 1 ID : 6306802073059
Option 2 ID : 6306802073057
Option 3 ID : 6306802073060
Option 4 ID : 6306802073058
Status : Answered
Chosen Option : 1

Q.34 Which of the following pairs correctly describe(s) the thermodynamic processes?

Thermodynamic process	Thermodynamic variable remains constant during the process
A. Isothermal expansion	Temperature T
B. Isobaric process	Pressure P
C. Isochoric process	Internal energy U
D. Adiabatic process	Volume V

Ans 1. Only A and B

2. Only A, B and C

3. Only A

4. A, B, C and D

Question ID : 630680530298

Option 1 ID : 6306802073094

Option 2 ID : 6306802073095

Option 3 ID : 6306802073093

Option 4 ID : 6306802073096

Status : Answered

Chosen Option : 2

Q.35 The position-time graph of an object moving in uniform motion is:

Ans 1. a straight line parallel to the position axis

2.

a straight line passing through origin with an angle 30° with the time axis

3. a straight line parallel to the time axis

4.

a straight line passing through origin with an angle 45° with the time axis

Question ID : 630680530283

Option 1 ID : 6306802073034

Option 2 ID : 6306802073036

Option 3 ID : 6306802073033

Option 4 ID : 6306802073035

Status : Answered

Chosen Option : 4

Q.36 A particle is moving in a plane and its position is given by $\vec{r} = 5t^2\hat{i} + 4t\hat{j}$, where t is in seconds and r is in meters. The velocity of the particle at time $t = 2$ s is:

Ans 1. $10\hat{i} + 8\hat{j}$

2. $20\hat{i} + 4\hat{j}$

3. $20\hat{i} - 4\hat{j}$

4. $10\hat{i} - 8\hat{j}$

Question ID : 630680530284

Option 1 ID : 6306802073038

Option 2 ID : 6306802073040

Option 3 ID : 6306802073039

Option 4 ID : 6306802073037

Status : Answered

Chosen Option : 2

Q.37 The distance travelled by a car is given by the following equation $x(t) = A + Bt + Ct^2$. Then the dimensions of A, B and C are:

- Ans**
- 1. $[L^{-1}]$, $[L^1T^{-1}]$ and $[L^{-1}T^{-2}]$ respectively
 - 2. $[L^1]$, $[L^1T^{-1}]$ and $[L^1T^{-2}]$ respectively
 - 3. $[L^1]$, $[L^{-2}T^{-1}]$ and $[L^{-3}T^{-2}]$ respectively
 - 4. $[L^{-1}]$, $[L^2T^{-1}]$ and $[L^{-2}T^{-2}]$ respectively

Question ID : 630680530302
Option 1 ID : 6306802073109
Option 2 ID : 6306802073111
Option 3 ID : 6306802073112
Option 4 ID : 6306802073110

Status : Answered
Chosen Option : 2

Q.38 A block is kept on an inclined plane of angle 30° . The coefficient of maximum static friction between the block and the inclined plane is $\frac{1}{\sqrt{3}}$. The acceleration of the block will be ($g = 9.8 \text{ m/s}^2$):

- Ans**
- 1. 2.45 m/s^2
 - 2. 0 m/s^2
 - 3. 4.9 m/s^2
 - 4. 9.8 m/s^2

Question ID : 630680530291
Option 1 ID : 6306802073068
Option 2 ID : 6306802073065
Option 3 ID : 6306802073067
Option 4 ID : 6306802073066

Status : Answered
Chosen Option : 2

Q.39 The polar form of the complex number $(i^{21})^3$ is:

- Ans**
- 1. $\cos \frac{\pi}{2} - i \sin \frac{\pi}{2}$
 - 2. $\cos \frac{\pi}{2} + i \sin \frac{\pi}{2}$
 - 3. $2\cos \frac{\pi}{2} - 3i \sin \frac{\pi}{2}$
 - 4. $\cos \frac{3\pi}{2} - i \sin \frac{3\pi}{2}$

Question ID : 630680530242
Option 1 ID : 6306802072875
Option 2 ID : 6306802072873
Option 3 ID : 6306802072876
Option 4 ID : 6306802072874

Status : Answered
Chosen Option : 1

Q.40 Consider an alternating current circuit consisting of a resistance R , an inductor of inductance L and a capacitor with capacitance C in series and driven by a voltage of amplitude V_m , such that the current flowing through the circuit is maximum. The current in the circuit is:

Ans

1. $\frac{V_m}{\sqrt{LC}}$

2. $\frac{V_m}{R}$

3. $\frac{V_m}{L}$

4. $\frac{V_m}{C}$

Question ID : 630680530277

Option 1 ID : 6306802073012

Option 2 ID : 6306802073010

Option 3 ID : 6306802073011

Option 4 ID : 6306802073009

Status : Answered

Chosen Option : 2

Q.41 Consider the following Linear Programming problem:

Maximise $Z = 40x_1 + 50x_2$

subject to the constraints

$x_1 + 2x_2 \leq 40,$

$4x_1 + 3x_2 \leq 120,$

$x_1, x_2 \geq 0.$

Then the optimal solution is:

Ans

1. $Z = 1600$
for $x_1 = 30, x_2 = 8$

2. $Z = 1360$
for $x_1 = 24, x_2 = 8$

3. $Z = 1460$
for $x_1 = 24, x_2 = 10$

4. $Z = 1360$
for $x_1 = 19, x_2 = 12$

Question ID : 630680530251

Option 1 ID : 6306802072910

Option 2 ID : 6306802072909

Option 3 ID : 6306802072911

Option 4 ID : 6306802072912

Status : Answered

Chosen Option : 2

Q.42 The action and reaction forces in the third law:

Ans 1. action acts before reaction force

2.

either action or reaction force may come into play before the other

3. reaction force acts before action force

4. act simultaneously

Question ID : 630680530288

Option 1 ID : 6306802073054

Option 2 ID : 6306802073055

Option 3 ID : 6306802073056

Option 4 ID : 6306802073053

Status : Answered

Chosen Option : 4

Q.43 If $|x - 4|/(x - 4) \geq 0$, then:

Ans 1. $x \in (-\infty, 4]$

2. $x \in (-\infty, 4)$

3. $x \in (4, \infty)$

4. $x \in [4, \infty)$

Question ID : 630680530248

Option 1 ID : 6306802072897

Option 2 ID : 6306802072898

Option 3 ID : 6306802072899

Option 4 ID : 6306802072900

Status : Answered

Chosen Option : 3

Q.44 Suppose a canon of mass 600 kg fires a cannonball of mass 5 kg with a speed of 40 m/s. The recoil speed of the canon is:

Ans 1. $\frac{1}{4}$ m/s

2. $\frac{1}{2}$ m/s

3. $\frac{1}{5}$ m/s

4. $\frac{1}{3}$ m/s

Question ID : 630680530290

Option 1 ID : 6306802073063

Option 2 ID : 6306802073061

Option 3 ID : 6306802073064

Option 4 ID : 6306802073062

Status : Answered

Chosen Option : 4

Q.45 The function $f: \mathbb{R} \rightarrow \mathbb{R}$ defined by $f(x) = \sin x$ is:

- Ans
- 1. surjective but not injective
 - 2. neither injective nor surjective
 - 3. injective but not surjective
 - 4. not a relation

Question ID : 630680530261
Option 1 ID : 6306802072950
Option 2 ID : 6306802072951
Option 3 ID : 6306802072949
Option 4 ID : 6306802072952

Status : Answered
Chosen Option : 3

Q.46 The shortest wavelength in the Paschen series in terms of Rydberg constant R is:

- Ans
- 1. $\frac{1}{R}$
 - 2. $\frac{9}{R}$
 - 3. $\frac{4}{R}$
 - 4. $\frac{16}{R}$

Question ID : 630680530293
Option 1 ID : 6306802073076
Option 2 ID : 6306802073074
Option 3 ID : 6306802073073
Option 4 ID : 6306802073075

Status : Answered
Chosen Option : 2

Q.47 If x satisfies, $|x - 2| + |x - 4| + |x - 9| < 15$, then:

- Ans
- 1. $0 \geq x$ or $x \geq 10$
 - 2. $0 \geq x$ or $x \leq 10$
 - 3. $0 \leq x \leq 10$
 - 4. $0 < x < 10$

Question ID : 630680530249
Option 1 ID : 6306802072903
Option 2 ID : 6306802072902
Option 3 ID : 6306802072901
Option 4 ID : 6306802072904

Status : Answered
Chosen Option : 4

Q.48 The distances traversed during equal intervals of time by a body falling from rest stand to one another in the same ratio as the:

- Ans**
- 1. fractional numbers starting with 0
 - 2. even numbers starting with zero
 - 3. fractional numbers starting with 1/2
 - 4. odd numbers starting with unity

Question ID : 630680530286

Option 1 ID : 6306802073048

Option 2 ID : 6306802073045

Option 3 ID : 6306802073047

Option 4 ID : 6306802073046

Status : Answered

Chosen Option : 2

Q.49 Starting from rest, if a system undergoes a one-dimensional motion with acceleration proportional to t^2 , where t is the elapsed time, the power delivered to it at time t is proportional to:

- Ans**
- 1. t^4
 - 2. t^3
 - 3. t^5
 - 4. t^2

Question ID : 630680530305

Option 1 ID : 6306802073123

Option 2 ID : 6306802073122

Option 3 ID : 6306802073124

Option 4 ID : 6306802073121

Status : Answered

Chosen Option : 1

Q.50 In Rutherford's scattering experiment, the alpha particles are scattered from a:

- Ans**
- 1. thin iron foil
 - 2. thin aluminum foil
 - 3. thin silver foil
 - 4. thin gold foil

Question ID : 630680530292

Option 1 ID : 6306802073072

Option 2 ID : 6306802073069

Option 3 ID : 6306802073071

Option 4 ID : 6306802073070

Status : Answered

Chosen Option : 4

Q.51 Suppose a particle trapped in a circular groove of radius 10 cm moves along the groove steadily and completes 14 revolutions in 50 s.
The linear speed of the particle is:

- Ans**
- 1. 17.6 cm/s
 - 2. 4.4 cm/s
 - 3. 8.8 cm/s
 - 4. 13.2 cm/s

Question ID : 630680530285
Option 1 ID : 6306802073044
Option 2 ID : 6306802073041
Option 3 ID : 6306802073042
Option 4 ID : 6306802073043
Status : Answered
Chosen Option : 1

Q.52 A value of x satisfying $85x \equiv 45 \pmod{15}$ is:

- Ans**
- 1. 25
 - 2. 10
 - 3. 35
 - 4. 15

Question ID : 630680530247
Option 1 ID : 6306802072895
Option 2 ID : 6306802072893
Option 3 ID : 6306802072896
Option 4 ID : 6306802072894
Status : Answered
Chosen Option : 2

Q.53 If the current reaches its maximum value I_m at time $t = \frac{T}{4}$ for an LC oscillator (T = time period of the oscillator), then the energy stored in the oscillator at that particular instant is:

- Ans**
- 1. fully mechanical energy
 - 2. partially electrical and partially magnetic energy
 - 3. fully electrical energy
 - 4. fully magnetic energy

Question ID : 630680530278
Option 1 ID : 6306802073016
Option 2 ID : 6306802073015
Option 3 ID : 6306802073013
Option 4 ID : 6306802073014
Status : Answered
Chosen Option : 2

Q.54 A block of mass 0.4 kg is moving with a velocity of 6 m/s and it makes a head-on collision with a stationary block of mass 0.8 kg. After the collision, both the blocks move together. The final velocity with which they move will be:

- Ans
- 1. 6 m/s
 - 2. 4 m/s
 - 3. 2 m/s
 - 4. 0

Question ID : 630680530306
Option 1 ID : 6306802073127
Option 2 ID : 6306802073126
Option 3 ID : 6306802073125
Option 4 ID : 6306802073128
Status : Answered
Chosen Option : 3

Q.55 The value of the limit $\lim_{x \rightarrow 0} \frac{\sin 3x - 3 \sin x}{x^3}$ is:

- Ans
- 1. 4
 - 2. -4
 - 3. -3
 - 4. 3

Question ID : 630680530237
Option 1 ID : 6306802072856
Option 2 ID : 6306802072854
Option 3 ID : 6306802072853
Option 4 ID : 6306802072855
Status : Answered
Chosen Option : 2

Q.56 Suppose A and B are two independent events such that $P(B) = 0.4$ and $P(A \cup B) = 0.8$. The value of $P(A)$ is:

- Ans
- 1. $\frac{1}{2}$
 - 2. $\frac{2}{3}$
 - 3. $\frac{1}{3}$
 - 4. $\frac{3}{4}$

Question ID : 630680530258
Option 1 ID : 6306802072937
Option 2 ID : 6306802072938
Option 3 ID : 6306802072939
Option 4 ID : 6306802072940
Status : Answered
Chosen Option : 2

Q.57 If A , B and C are symmetric matrices of same order, then $ABC - CBA$ is a:

- Ans**
- 1. symmetric matrix
 - 2. skew-symmetric matrix
 - 3. identity matrix
 - 4. zero matrix

Question ID : 630680530255

Option 1 ID : 6306802072926

Option 2 ID : 6306802072927

Option 3 ID : 6306802072928

Option 4 ID : 6306802072925

Status : Answered

Chosen Option : 4

Q.58 The common tangent of the two touching circles $x^2 + y^2 + 6x - 2y + 7 = 0$ and $x^2 + y^2 - 4x + 7y - 9 = 0$ is:

- Ans**
- 1. $10x + 9y + 16 = 0$
 - 2. $10x + 9y - 16 = 0$
 - 3. $10x - 9y - 16 = 0$
 - 4. $10x - 9y + 16 = 0$

Question ID : 630680530244

Option 1 ID : 6306802072882

Option 2 ID : 6306802072884

Option 3 ID : 6306802072881

Option 4 ID : 6306802072883

Status : Answered

Chosen Option : 1

Q.59 Rahul was asked to prove a statement $P(n)$ by the principle of mathematical induction. He proved that $P(k + 1)$ is true whenever $P(k)$ is true for all natural numbers k and also that $P(9)$ is true. Then $P(n)$ is true:

- Ans**
- 1. for all $n > 8$
 - 2. for all $n < 9$
 - 3. for all natural numbers n
 - 4. for all $n \geq 9$

Question ID : 630680530257

Option 1 ID : 6306802072935

Option 2 ID : 6306802072933

Option 3 ID : 6306802072936

Option 4 ID : 6306802072934

Status : Answered

Chosen Option : 2

Q.60 Suppose a body is executing oscillatory motion. The displacement $x(t)$ of the body from the origin as a function of time t is given by $x(t) = 10[\cos(\omega t) + \sin(2\omega t) + \cos(6\omega t)]$. The period of the body T is given by:

- Ans**
- ✓ 1. $T = \frac{2\pi}{\omega}$
 - ✗ 2. $T = \frac{\pi}{2\omega}$
 - ✗ 3. $T = \frac{\pi}{\omega}$
 - ✗ 4. $T = \frac{\pi}{3\omega}$

Question ID : 630680530296

Option 1 ID : 6306802073087

Option 2 ID : 6306802073086

Option 3 ID : 6306802073088

Option 4 ID : 6306802073085

Status : Answered

Chosen Option : 1

