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**Previous Year Paper
27 Dec, 2023 Shift 2**





भारतीय विमानपत्तन प्राधिकरण
AIRPORTS AUTHORITY OF INDIA

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

राजीव गांधी अवन, सफदरजंग हवाई अड्डा, नई दिल्ली- 110003
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Participant ID	
Participant Name	
Test Center Name	
Test Date	27/12/2023
Test Time	12:30 PM - 2:30 PM
Subject	JUNIOR EXECUTIVE AIR TRAFFIC CONTROL

Section : General Knowledge

Q.1 Who presided over the 'Committee on the Rules of Procedure' within the Constituent Assembly?

Ans 1. Jawaharlal Nehru
 2. Mahatma Gandhi
 3. Rajendra Prasad
 4. K.M. Munshi

Question ID : 630680529919
Option 1 ID : 6306802071601
Option 2 ID : 6306802071602
Option 3 ID : 6306802071600
Option 4 ID : 6306802071603
Status : Answered
Chosen Option : 3

Q.2 Who was responsible for founding the Namdhari Movement?

Ans 1. Guru Gobind Singh
 2. Balak Singh
 3. Satguru Ram Singh
 4. Uday Singh

Question ID : 630680529911
Option 1 ID : 6306802071569
Option 2 ID : 6306802071568
Option 3 ID : 6306802071571
Option 4 ID : 6306802071570
Status : Answered
Chosen Option : 3

Q.3 What is the day after Lohri celebrated as, in Punjab?

Ans 1. Baisakhi
 2. Teej
 3. Hola Mohalla
 4. Maghi

Question ID : 630680529898
Option 1 ID : 6306802071519
Option 2 ID : 6306802071518
Option 3 ID : 6306802071516
Option 4 ID : 6306802071517
Status : Answered
Chosen Option : 3

Q.4 Which of the following is the complete name of the NaBFID Act, 2021?

Ans 1. National Bank for Financing Infrastructure and Development Act
 2. National Bank for Financial Interest and Development Act
 3. National Bank for Fiscal Infrastructure and Development Act
 4. National Bank for Foster Improvement and Development Act

Question ID : 630680529906
Option 1 ID : 6306802071548
Option 2 ID : 6306802071551
Option 3 ID : 6306802071550
Option 4 ID : 6306802071549
Status : Answered
Chosen Option : 1

Q.5 What is the expansion for the acronym IEAE, the world's centre for co-operation in the nuclear field and seeks to promote the safe, secure and peaceful use of nuclear technologies?

Ans 1. International Agency for Atomic Environment
 2. International Edwin Atomic Emergency
 3. International Atomic Energy Agency
 4. International Agency for Education and Empowerment

Question ID : 630680529903
Option 1 ID : 6306802071537
Option 2 ID : 6306802071536
Option 3 ID : 6306802071539
Option 4 ID : 6306802071538
Status : Answered
Chosen Option : 2

Q.6 Which of the following Chief Justices of India was cleared in a sexual harassment investigation?

Ans 1. Justice S.A.Bobde
 2. Justice R.F. Nariman
 3. Justice Ranjan Gogoi
 4. Justice Rishikesh Roy

Question ID : 630680529893

Option 1 ID : 6306802071496

Option 2 ID : 6306802071499

Option 3 ID : 6306802071497

Option 4 ID : 6306802071498

Status : Answered

Chosen Option : 2

Q.7 In which year was the Essential Commodities (Amendment) Bill passed?

Ans 1. 2018
 2. 2019
 3. 2020
 4. 2021

Question ID : 630680529914

Option 1 ID : 6306802071580

Option 2 ID : 6306802071581

Option 3 ID : 6306802071582

Option 4 ID : 6306802071583

Status : Answered

Chosen Option : 2

Q.8 The renowned Taj Mahal combines Islamic, Indian, and which of the following architectural styles?

Ans 1. Persian
 2. Uruk
 3. Mayaddin
 4. Baku Tirana



Question ID : 630680529896

Option 1 ID : 6306802071511

Option 2 ID : 6306802071510

Option 3 ID : 6306802071508

Option 4 ID : 6306802071509

Status : Answered

Chosen Option : 4

Q.9 With which of the following states does Bhutan NOT share a border?

Ans 1. Assam
 2. Sikkim
 3. Nagaland
 4. Arunachal Pradesh

Question ID : 630680529909
Option 1 ID : 6306802071562
Option 2 ID : 6306802071563
Option 3 ID : 6306802071561
Option 4 ID : 6306802071560
Status : Answered
Chosen Option : 4

Q.10 Which Article of the Constitution stipulates that the President and the Council of States (Rajya Sabha) and the House of the People (Lok Sabha) comprise the council of the Parliament of the Union?

Ans 1. Article 79
 2. Article 76
 3. Article 75
 4. Article 78

Question ID : 630680529917
Option 1 ID : 6306802071595
Option 2 ID : 6306802071593
Option 3 ID : 6306802071592
Option 4 ID : 6306802071594
Status : Answered
Chosen Option : 2

Section : General Intelligence

Q.1 In a certain code language, 'PATENT' is written as 'RCVGPV'. What is the code for 'REWARD' in that code language?

Ans 1. TGYCUE
 2. TFYDTG
 3. TGZDUG
 4. TGYCTF

Question ID : 630680529958
Option 1 ID : 6306802071755
Option 2 ID : 6306802071753
Option 3 ID : 6306802071752
Option 4 ID : 6306802071754
Status : Answered
Chosen Option : 4

Q.2 In the following question, select the related letter pair from the given alternatives.

CXIR : EAMW :: ?

Ans 1. RULM : TLFU

2. QUHF : SXLH

3. RUBX : MUNO

4. VZRN : XCVS

Question ID : 630680529967

Option 1 ID : 6306802071795

Option 2 ID : 6306802071794

Option 3 ID : 6306802071792

Option 4 ID : 6306802071793

Status : Answered

Chosen Option : 4

Q.3 After interchanging the given two signs what will be the values of equation (I) and (II) respectively?

+ and -

I. $15 \times 6 - 25 + 50 \div 5$

II. $7 \times 8 + 18 \div 3 - 5$

Ans 1. 85 and 45

2. 105 and 40

3. 75 and 95

4. 105 and 55

Question ID : 630680529970

Option 1 ID : 6306802071806

Option 2 ID : 6306802071804

Option 3 ID : 6306802071807

Option 4 ID : 6306802071805

Status : Answered

Chosen Option : 4

Q.4 A series is given with one term wrong. Select the wrong term from the given alternatives.

66, 61, 54, 39, 30, 13, -6

Ans 1. 39

2. 30

3. 54

4. -6

Question ID : 630680529962

Option 1 ID : 6306802071771

Option 2 ID : 6306802071770

Option 3 ID : 6306802071768

Option 4 ID : 6306802071769

Status : Answered

Chosen Option : 1

Q.5 Eight boys A, B, C, D, E, F, G and H are sitting around a circular table facing towards the centre (not necessarily in the same order). B is fourth to the right of H. Only two boys sit between F and B. E is second to the right of D. F is second to the right of C. C is an immediate neighbour of G. C is not an immediate neighbour of B. Which of the following statement(s) is/are correct?

I. A is to immediate right of F.

II. G is to immediate left of C.

Ans 1. Both I and II

2. Neither I nor II

3. Only I

4. Only II

Question ID : 630680529940

Option 1 ID : 6306802071686

Option 2 ID : 6306802071687

Option 3 ID : 6306802071684

Option 4 ID : 6306802071685

Status : Answered

Chosen Option : 1

Q.6 Weight of six mobiles M1, M2, M3, M4, M5 and M6 is compared. Weight of M5 is less than only M3. Weight of M4 is less than M6 but more than M1 and M2. Which of the following statements can be correct?

Ans 1. Weight of M4 is more than the weight of M5

2. Weight of M2 is same as the weight of M5

3. Weight of M4 is the least

4. Weight of M5 is same as the weight of M6

Question ID : 630680529925

Option 1 ID : 6306802071626

Option 2 ID : 6306802071624

Option 3 ID : 6306802071627

Option 4 ID : 6306802071625

Status : Answered

Chosen Option : 4

Q.7 What approximate value will come in place of (x)?

$$22.321 \times 11.23 \div 43.73348 = \frac{x}{8}$$

Ans 1. 26

2. 28

3. 36

4. 44

Question ID : 630680529935

Option 1 ID : 6306802071665

Option 2 ID : 6306802071666

Option 3 ID : 6306802071667

Option 4 ID : 6306802071664

Status : Answered

Chosen Option : 4

Q.8 Maximum marks of five exams D, K, F, P and R are compared. Maximum marks of each exam are different. Maximum marks of D are more than F and K. Maximum marks of R are more than P and maximum marks of P are more than D. Maximum marks of K are not the least among them. If the maximum marks of K are 190, then what can be the maximum marks of P?

Ans 1. 189

2. 194

3. 188

4. 186

Question ID : 630680529942

Option 1 ID : 6306802071695

Option 2 ID : 6306802071692

Option 3 ID : 6306802071694

Option 4 ID : 6306802071693

Status : Answered

Chosen Option : 2

Q.9 Consider the string given below made up of number and symbol. If all the 1's are replaced by 3 and the symbol '!' replaced by symbol '#', then which digit will be at 5th position from the left end in the newly formed string?

2 2 @ ! 1 2 ! 1 1 2 1 ! @ 1 1 @ ! ! @ 2 2 @ @ 2 1

Ans 1. 2

2. @

3. #

4. 3

Question ID : 630680529931

Option 1 ID : 6306802071651

Option 2 ID : 6306802071649

Option 3 ID : 6306802071648

Option 4 ID : 6306802071650

Status : Answered

Chosen Option : 4

Q.10 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. SPRT - RSQX

2. HFMO - RLIG

3. RPWY - BVSQ

4. BZGI - LFCA

Question ID : 630680529961

Option 1 ID : 6306802071766

Option 2 ID : 6306802071764

Option 3 ID : 6306802071765

Option 4 ID : 6306802071767

Status : Answered

Chosen Option : 1

Q.11 Which of the following meaningful five-letter English word can be formed from the first, third, fifth, eighth and eleventh letters of the word "AEROCITYAIR"?

Ans 1. CARRY

2. CRARY

3. YARRC

4. RACY

Question ID : 630680529944

Option 1 ID : 6306802071702

Option 2 ID : 6306802071701

Option 3 ID : 6306802071700

Option 4 ID : 6306802071703

Status : Answered

Chosen Option : 1

Q.12 If $123 @ 45 @ 37 = 205$ and $10 @ 173 @ 121 = 304$, then $217 @ 46 @ 13 = ?$

Ans 1. 188

2. 330

3. 287

4. 441

Question ID : 630680529937

Option 1 ID : 6306802071675

Option 2 ID : 6306802071672

Option 3 ID : 6306802071674

Option 4 ID : 6306802071673

Status : Answered

Chosen Option : 3

Q.13 A is the sister of B. C is the sister of B. D is the father of C. B is the son of E. How is E related to D?

Ans 1. Daughter

2. Mother

3. Sister

4. Wife

Question ID : 630680529947

Option 1 ID : 6306802071715

Option 2 ID : 6306802071714

Option 3 ID : 6306802071713

Option 4 ID : 6306802071712

Status : Answered

Chosen Option : 4

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 Light is Electricity.
- II. Some Light are Circuit.

Conclusion:

- I. No Electricity is Light.
- II. No Circuit is Electricity.

Ans 1. Both conclusions I and II follows

2. Only conclusion II follows

3. Only conclusion I follows

4. Neither conclusion follows

Question ID : 630680529954

Option 1 ID : 6306802071738

Option 2 ID : 6306802071737

Option 3 ID : 6306802071736

Option 4 ID : 6306802071739

Status : Answered

Chosen Option : 3

Q.15 A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.

CKR, GSC, KAN, OIY, ?

Ans 1. NOP

2. SMO

3. SQJ

4. MNP

Question ID : 630680529943

Option 1 ID : 6306802071699

Option 2 ID : 6306802071697

Option 3 ID : 6306802071696

Option 4 ID : 6306802071698

Status : Answered

Chosen Option : 3

Section : General Aptitude

Q.1 A man buys 10 pens for a rupee. How many pens should he sell for a rupee to earn a profit of 25 percent?

Ans 1. 7

2. 6

3. 8

4. 12

Question ID : 630680529990

Option 1 ID : 6306802071884

Option 2 ID : 6306802071886

Option 3 ID : 6306802071887

Option 4 ID : 6306802071885

Status : Answered

Chosen Option : 3

Q.2 If $3A = 7B = 21C$, then what is the value of $A : B : C$?

Ans 1. $5 : 3 : 2$
 2. $3 : 2 : 1$
 3. $7 : 3 : 1$
 4. $7 : 2 : 5$

Question ID : 630680529994
Option 1 ID : 6306802071903
Option 2 ID : 6306802071900
Option 3 ID : 6306802071901
Option 4 ID : 6306802071902
Status : Answered
Chosen Option : 3

Q.3 How many two digit numbers are there, which are divisible by 4?

Ans 1. 20
 2. 22
 3. 23
 4. 21

Question ID : 630680530003
Option 1 ID : 6306802071939
Option 2 ID : 6306802071937
Option 3 ID : 6306802071936
Option 4 ID : 6306802071938
Status : Answered
Chosen Option : 2

Q.4 Radius of a hemisphere is thrice of the radius of a sphere. What is the ratio of total surface area of hemisphere and sphere?

Ans 1. $27 : 4$
 2. $4 : 27$
 3. $23 : 5$
 4. $21 : 4$

Question ID : 630680530001
Option 1 ID : 6306802071928
Option 2 ID : 6306802071929
Option 3 ID : 6306802071930
Option 4 ID : 6306802071931
Status : Answered
Chosen Option : 1

Q.5 What will be the average of all the prime numbers less than 16?

Ans 1. 7.73

2. 8.43

3. 6.83

4. 5.93

Question ID : 630680529987

Option 1 ID : 6306802071875

Option 2 ID : 6306802071872

Option 3 ID : 6306802071874

Option 4 ID : 6306802071873

Status : Answered

Chosen Option : 3

Q.6 A person goes from L to M at a speed of 80 km/hr. He comes back from M to L at a certain speed. If his average speed is $240/11$ km/hr, then what was his speed while moving from M towards L?

Ans 1. $260/23$ km/hr

2. $240/19$ km/hr

3. $210/19$ km/hr

4. 10 km/hr

Question ID : 630680530012

Option 1 ID : 6306802071975

Option 2 ID : 6306802071974

Option 3 ID : 6306802071973

Option 4 ID : 6306802071972

Status : Answered

Chosen Option : 2

Q.7 The average of 5 consecutive even numbers is A. If next 7 even numbers are also included, then what is the average of these 12 numbers?

Ans 1. $A + 9$

2. $A + 5$

3. $A + 7$

4. $A + 2$

Question ID : 630680529988

Option 1 ID : 6306802071879

Option 2 ID : 6306802071878

Option 3 ID : 6306802071876

Option 4 ID : 6306802071877

Status : Answered

Chosen Option : 3

Q.8 Selling price of a glass is Rs. 2124 and loss percentage is 28 percent. If selling price is Rs. 3481, then what will be the profit percentage?

Ans 1. 22 percent

2. 15 percent

3. 18 percent

4. 25 percent

Question ID : 630680529991

Option 1 ID : 6306802071890

Option 2 ID : 6306802071888

Option 3 ID : 6306802071889

Option 4 ID : 6306802071891

Status : Answered

Chosen Option : 3

Q.9 When 20 percent of a number is added to 80, then the result is that number only. What is the value of the number?

Ans 1. 75

2. 100

3. 120

4. 80

Question ID : 630680530005

Option 1 ID : 6306802071944

Option 2 ID : 6306802071946

Option 3 ID : 6306802071947

Option 4 ID : 6306802071945

Status : Answered

Chosen Option : 2

Q.10 Rs. 65450 is divided among P, Q and R such that P's share is $\frac{4}{7}$ of total share of Q and R together and Q's share is $\frac{2}{5}$ of total share of P and R together. What is the share of R?

Ans 1. Rs. 28050

2. Rs. 20400

3. Rs. 25500

4. Rs. 22950

Question ID : 630680529995

Option 1 ID : 6306802071907

Option 2 ID : 6306802071904

Option 3 ID : 6306802071906

Option 4 ID : 6306802071905

Status : Answered

Chosen Option : 4

Q.11 A sum becomes Rs. 14000 in 4 years on simple interest at the rate of 10 percent per annum. What is the total interest for the 4 years?

Ans 1. Rs. 4000
 2. Rs. 6000
 3. Rs. 2000
 4. Rs. 10000

Question ID : 630680529997
Option 1 ID : 6306802071914
Option 2 ID : 6306802071915
Option 3 ID : 6306802071913
Option 4 ID : 6306802071912

Status : **Answered**
Chosen Option : 1

Q.12 A trader allowed a discount of 25 percent on a trolley bag having list price of Rs. 1362 and earns a profit of 12.5 percent. What is the cost price of the trolley bag?

Ans 1. Rs. 950
 2. Rs. 908
 3. Rs. 958
 4. Rs. 900

Question ID : 630680529993
Option 1 ID : 6306802071897
Option 2 ID : 6306802071896
Option 3 ID : 6306802071898
Option 4 ID : 6306802071899

Status : **Answered**
Chosen Option : 2

Q.13 The speed of A and B are 36 km/hr and 15 m/s respectively. What is the ratio of the distance covered by them in one hour?

Ans 1. 2 : 3
 2. 2 : 7
 3. 4 : 9
 4. 3 : 5

Question ID : 630680530011
Option 1 ID : 6306802071969
Option 2 ID : 6306802071968
Option 3 ID : 6306802071970
Option 4 ID : 6306802071971

Status : **Answered**
Chosen Option : 1

Q.14 What is the value of $\frac{12 \div 6 \text{ of } 3 + 16 \text{ of } 8 \div 64}{8 \div 4 \times 2}$?

Ans

✓ 1. $\frac{2}{3}$

✗ 2. $\frac{4}{5}$

✗ 3. $\frac{4}{3}$

✗ 4. $\frac{1}{3}$

Question ID : 630680530002

Option 1 ID : 6306802071932

Option 2 ID : 6306802071935

Option 3 ID : 6306802071934

Option 4 ID : 6306802071933

Status : Answered

Chosen Option : 1

Q.15 A and B together can complete a work in 15 days. B alone can complete the same work in 24 days. In how many days will A alone complete the same work?

Ans ✗ 1. 30 days

✓ 2. 60 days

✗ 3. 40 days

✗ 4. 50 days

Question ID : 630680530013

Option 1 ID : 6306802071979

Option 2 ID : 6306802071978

Option 3 ID : 6306802071977

Option 4 ID : 6306802071976

Status : Answered

Chosen Option : 3

Section : General English

Q.1 Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.

A. The unique feature of the temple is that Krishna is worshipped not with a spouse, but with his siblings, his elder brother Balabhadra and his younger sister Subhadra.
B. They are not made of metal or stone, but of wood and cloth and resin, and therefore must be replaced from time to time, leading to rituals in which the enshrined deities fall sick, die and are reborn.
C. Jagannath means 'lord of the world' and is the form of Hindu gods Krishna/Vishnu worshipped in Odisha. Locally, Jagannath is called Kaliya, for its black colour, with great affection, although modern colour prejudice makes many insist that Krishna is actually blue.
D. The images are malformed, with no hands or feet and disproportionately large heads.
E. He is God, of course, spelt with a capital G, but more than that he is your friend, as the dominant mood in the temple is of sakha-bhaav, devotion through the emotion of friendship.

Ans 1. BDACE
 2. CEADB
 3. CDEAB
 4. EACBD

Question ID : 630680530053
Option 1 ID : 6306802072140
Option 2 ID : 6306802072138
Option 3 ID : 6306802072137
Option 4 ID : 6306802072139
Status : Answered
Chosen Option : 2

Q.2 Select the most appropriate synonym of the underlined word.
The village by the sea is home to attractive shops and restaurants.

Ans 1. Good
 2. Awful
 3. Admirable
 4. Alluring

Question ID : 630680530073
Option 1 ID : 6306802072220
Option 2 ID : 6306802072218
Option 3 ID : 6306802072217
Option 4 ID : 6306802072219
Status : Answered
Chosen Option : 1

Q.3 Identify the option in which the proverb correctly fits the context of the given sentence.

Ans 1. She may want to argue, but it takes two to tango and I won't stoop to her level.
 2. She may want to argue, but it takes blood thicker than water and I won't stoop to her level.
 3. She may want to argue, but it takes practice to preach and I won't stoop to her level.
 4. She may want to argue, but it takes easy come, easy go and I won't stoop to her level.

Question ID : 630680530060
Option 1 ID : 6306802072166
Option 2 ID : 6306802072165
Option 3 ID : 6306802072168
Option 4 ID : 6306802072167
Status : Answered
Chosen Option : 1

Q.4 Select the most appropriate pronoun to fill in the blank.

Revathy wrote two books during her younger days. One of _____ became a bestseller.

Ans 1. those

2. it

3. which

4. them

Question ID : 630680530040

Option 1 ID : 6306802072085

Option 2 ID : 6306802072087

Option 3 ID : 6306802072088

Option 4 ID : 6306802072086

Status : Answered

Chosen Option : 1

Q.5 Identify the option in which the idiom correctly fits the context of the given sentence.

Ans 1. I had spent two months worrying about it and I was glad to turn a new leaf.

2. I had spent two months worrying about it and I was glad to get it off my chest.

3. I had spent two months worrying about it and I was glad to show the ropes.

4. I had spent two months worrying about it and I was glad to pay through the nose.

Question ID : 630680530056

Option 1 ID : 6306802072150

Option 2 ID : 6306802072151

Option 3 ID : 6306802072149

Option 4 ID : 6306802072152

Status : Marked For Review

Chosen Option : 4

Q.6 Select the most appropriate ANTONYM of the underlined word.

The chairperson omitted mentioning some important names in his speech.

Ans 1. Receded

2. Added

3. Deleted

4. Subsided

Question ID : 630680530066

Option 1 ID : 6306802072191

Option 2 ID : 6306802072189

Option 3 ID : 6306802072192

Option 4 ID : 6306802072190

Status : Answered

Chosen Option : 2

Q.7 Select the grammatically correct sentence.

Ans 1. Thousands of tourists viewed the Taj Mahal every year.
 2. A thousands of tourists views the Taj Mahal every year.
 3. Thousands of tourists view the Taj Mahal every year.
 4. Thousands of tourists are viewing the Taj Mahal every year.

Question ID : 630680530046

Option 1 ID : 6306802072112

Option 2 ID : 6306802072110

Option 3 ID : 6306802072109

Option 4 ID : 6306802072111

Status : Answered

Chosen Option : 3

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

_____ have been a sea-fearing people for many centuries.

Ans 1. English
 2. A English
 3. The English
 4. An English

Question ID : 630680530032

Option 1 ID : 6306802072054

Option 2 ID : 6306802072056

Option 3 ID : 6306802072055

Option 4 ID : 6306802072053

Status : Answered

Chosen Option : 3

Q.9 Select the most appropriate adverb to fill in the blank.

No one has _____ been to Mars.

Ans 1. ever
 2. sometimes
 3. seldom
 4. never



Question ID : 630680530038

Option 1 ID : 6306802072078

Option 2 ID : 6306802072080

Option 3 ID : 6306802072079

Option 4 ID : 6306802072077

Status : Answered

Chosen Option : 1

Q.10 Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.

A. I cannot help but wonder about the clever marketing person who invented this pink-blue binary.
B. I was struck by this. I had not quite realised how early society starts to invent ideas of what a boy should be and what a girl should be.
C. It is interesting to me how early the world starts to invent gender roles. Yesterday, I went to a children's shop to buy Chiza Lum, an outfit. In the girls' section were pale creations in washed-out shades of pink. I disliked them.
D. I looked at the toy section, which was also arranged by gender. Toys for boys are mostly active, and involve some sort of doing - trains, cars - and toys for girls are mostly passive and are overwhelmingly dolls.
E. The boys' section had outfits in vibrant shades of blue. Because I thought blue would be adorable against her brown skin - and photograph better - I bought one.

Ans 1. BACED

2. CDAEB

3. CABDE

4. CEADB

Question ID : 630680530050

Option 1 ID : 6306802072128

Option 2 ID : 6306802072127

Option 3 ID : 6306802072126

Option 4 ID : 6306802072125

Status : Answered

Chosen Option : 4

Q.11 Select the grammatically correct sentence.

Ans 1. Each one of us has some work experience.

2. Each one of us have some work experience.

3. Each one of us is having some work experience.

4. Each one of us have had some work experience.

Question ID : 630680530047

Option 1 ID : 6306802072114

Option 2 ID : 6306802072113

Option 3 ID : 6306802072115

Option 4 ID : 6306802072116

Status : Answered

Chosen Option : 1

Q.12 Identify the option in which the proverb correctly fits the context of the given sentence.

Ans 1. Owing to the want of a well-framed agenda, the members were led down the garden path during the meeting.

2. Owing to the want of well-framed agenda, the members beat around the bush during the meeting.

3. Owing to the want of a well-framed agenda, the members were made to pay through their nose during the meeting.

4. Owing to the want of a well-framed agenda, the members saw red during the meeting.

Question ID : 630680530063

Option 1 ID : 6306802072179

Option 2 ID : 6306802072178

Option 3 ID : 6306802072177

Option 4 ID : 6306802072180

Status : Answered

Chosen Option : 2

Q.13 Select the most appropriate option to fill in the blank.
_____ in that field is very green.

Ans 1. The grass
 2. Grasses
 3. A grass
 4. The grasses

Question ID : 630680530034
Option 1 ID : 6306802072061
Option 2 ID : 6306802072062
Option 3 ID : 6306802072064
Option 4 ID : 6306802072063
Status : Answered
Chosen Option : 1

Q.14 Select the correctly spelt word.

Ans 1. Entrapreneur
 2. Entrepreneur
 3. Entreprenur
 4. Entreprenor

Question ID : 630680530077
Option 1 ID : 6306802072236
Option 2 ID : 6306802072234
Option 3 ID : 6306802072235
Option 4 ID : 6306802072233
Status : Answered
Chosen Option : 2

Q.15 Select the correctly spelt word.

Ans 1. Privelege
 2. Privilege
 3. Previlege
 4. Priviledge



Question ID : 630680530079
Option 1 ID : 6306802072244
Option 2 ID : 6306802072243
Option 3 ID : 6306802072241
Option 4 ID : 6306802072242
Status : Answered
Chosen Option : 2

Q.16 Select the most appropriate ANTONYM of the underlined word.
The minister expressed his concern and sympathy for the flood victims.

Ans 1. Difference
 2. Pity
 3. Apathy
 4. Interest

Question ID : 630680530069

Option 1 ID : 6306802072202

Option 2 ID : 6306802072201

Option 3 ID : 6306802072203

Option 4 ID : 6306802072204

Status : Answered

Chosen Option : 1

Comprehension:

Read the given passage and answer the questions that follow.

Among those things that man has devised to acquire knowledge, or seek inner delight with, language has an important place. It is the vehicle for literature, science and philosophy. Literature certainly provides man inner delight, but its field of expression is limited. Art, music, dance and the like make up for this. They have their own specialties of expression as literature has its. Man apprehends the world with his mind and senses, derives aesthetic delight and communicates this to others. Education in the arts heightens man's knowledge and aesthetic experience and trains him in various modes of expression. This education in art, music and dance cannot be achieved through the medium of reading and writing, like the ear cannot do what the eye is meant to do. If the objective of our education is total development, art training should have the same status and importance as reading and writing. But, the provision that our universities make for this is sorely inadequate at present. This is due to the general notion that art is the exclusive preserve of a few professionals and common people have nothing to do with it. When the educated do not feel any sense of shame at not understanding art, what question can there be of commoners?

SubQuestion No : 17

Q.17 "...art is the exclusive preserve of a few professionals and common people have nothing to do with it." Identify the most appropriate synonym of the underlined word.

Ans 1. Craft
 2. Profession
 3. Realm
 4. Vocation

Question ID : 630680530087

Option 1 ID : 6306802072265

Option 2 ID : 6306802072267

Option 3 ID : 6306802072266

Option 4 ID : 6306802072268

Status : Answered

Chosen Option : 1

Comprehension:

Read the given passage and answer the questions that follow.

Among those things that man has devised to acquire knowledge, or seek inner delight with, language has an important place. It is the vehicle for literature, science and philosophy. Literature certainly provides man inner delight, but its field of expression is limited. Art, music, dance and the like make up for this. They have their own specialties of expression as literature has its. Man apprehends the world with his mind and senses, derives aesthetic delight and communicates this to others. Education in the arts heightens man's knowledge and aesthetic experience and trains him in various modes of expression. This education in art, music and dance cannot be achieved through the medium of reading and writing, like the ear cannot do what the eye is meant to do. If the objective of our education is total development, art training should have the same status and importance as reading and writing. But, the provision that our universities make for this is sorely inadequate at present. This is due to the general notion that art is the exclusive preserve of a few professionals and common people have nothing to do with it. When the educated do not feel any sense of shame at not understanding art, what question can there be of commoners?

SubQuestion No : 18**Q.18 Identify the theme of the given passage.**

Ans 1. Importance of art education along with routine subjects
 2. Art education as a domain of professionals
 3. Importance of language and literature
 4. Dance, music and painting as integral art forms

Question ID : 630680530085

Option 1 ID : 6306802072259

Option 2 ID : 6306802072260

Option 3 ID : 6306802072257

Option 4 ID : 6306802072258

Status : Answered

Chosen Option : 3



Comprehension:

Read the given passage and answer the questions that follow.

Among those things that man has devised to acquire knowledge, or seek inner delight with, language has an important place. It is the vehicle for literature, science and philosophy. Literature certainly provides man inner delight, but its field of expression is limited. Art, music, dance and the like make up for this. They have their own specialties of expression as literature has its. Man apprehends the world with his mind and senses, derives aesthetic delight and communicates this to others. Education in the arts heightens man's knowledge and aesthetic experience and trains him in various modes of expression. This education in art, music and dance cannot be achieved through the medium of reading and writing, like the ear cannot do what the eye is meant to do. If the objective of our education is total development, art training should have the same status and importance as reading and writing. But, the provision that our universities make for this is sorely inadequate at present. This is due to the general notion that art is the exclusive preserve of a few professionals and common people have nothing to do with it. When the educated do not feel any sense of shame at not understanding art, what question can there be of commoners?

SubQuestion No : 19

Q.19 According to the author, what provisions should be made in the education system to achieve the object of holistic development of the students?

Ans

- 1. Art training should be given to the professionals seeking expertise.
- 2. Literature, science and philosophy should be taught through art education.
- 3. Art training should have the same status and importance as reading and writing.
- 4. Art training should be given through the exercises of reading and writing.

Question ID : **630680530088**

Option 1 ID : **6306802072269**

Option 2 ID : **6306802072272**

Option 3 ID : **6306802072270**

Option 4 ID : **6306802072271**

Status : **Answered**

Chosen Option : **3**



Comprehension:

Read the given passage and answer the questions that follow.

Among those things that man has devised to acquire knowledge, or seek inner delight with, language has an important place. It is the vehicle for literature, science and philosophy. Literature certainly provides man inner delight, but its field of expression is limited. Art, music, dance and the like make up for this. They have their own specialties of expression as literature has its. Man apprehends the world with his mind and senses, derives aesthetic delight and communicates this to others. Education in the arts heightens man's knowledge and aesthetic experience and trains him in various modes of expression. This education in art, music and dance cannot be achieved through the medium of reading and writing, like the ear cannot do what the eye is meant to do. If the objective of our education is total development, art training should have the same status and importance as reading and writing. But, the provision that our universities make for this is sorely inadequate at present. This is due to the general notion that art is the exclusive preserve of a few professionals and common people have nothing to do with it. When the educated do not feel any sense of shame at not understanding art, what question can there be of commoners?

SubQuestion No : 20

Q.20 Why do the educated NOT feel any sense of shame at not understanding art?

Ans 1. Because it is assumed that education in art is not meant for commoners
 2. Because they carry the notion that art is the exclusive preserve of a few professionals.
 3. Because they feel that education in art can be gained through reading and writing
 4. Because they are not trained to understand and appreciate art

Question ID : 630680530086
Option 1 ID : 6306802072264
Option 2 ID : 6306802072262
Option 3 ID : 6306802072263
Option 4 ID : 6306802072261

Status : **Answered**
Chosen Option : 2

Section : Domain Knowledge

Q.1 Ball A (3.0 kg) moving with velocity $v_0 \hat{i}$ makes a head-on elastic collision with another ball B, initially at rest. After collision, ball A continues to move with velocity $(v_0/5) \hat{i}$. The mass of ball B is (\hat{i} is unit vector along x-axis):

Ans 1. 1.0 kg
 2. 0.5 kg
 3. 2.0 kg
 4. 1.5 kg

Question ID : 630680530231
Option 1 ID : 6306802072830
Option 2 ID : 6306802072829
Option 3 ID : 6306802072832
Option 4 ID : 6306802072831

Status : **Not Answered**
Chosen Option : --

Q.2 The temperature of the bottom and the surface of a lake 50 m deep is 7°C and 27°C, respectively. An air bubble of volume 1.4 cm³ rises from the bottom and reaches the surface. The volume of the bubble at the surface becomes (take 1 Atm Pressure = 1.0×10^5 Pa and $g = 10 \text{ m/s}^2$):

Ans 1. 9.0 cm³
 2. 6.5 cm³
 3. 3.0 cm³
 4. 4.2 cm³

Question ID : 630680530225
Option 1 ID : 6306802072808
Option 2 ID : 6306802072807
Option 3 ID : 6306802072805
Option 4 ID : 6306802072806
Status : Not Answered
Chosen Option : --

Q.3 What is the integrating factor of the differential equation $x \frac{dy}{dx} - y = 5x^3$?

Ans 1. x^2
 2. $10x^2$
 3. $\frac{1}{x}$
 4. x

Question ID : 630680530181
Option 1 ID : 6306802072631
Option 2 ID : 6306802072632
Option 3 ID : 6306802072630
Option 4 ID : 6306802072629
Status : Answered
Chosen Option : 3

Q.4 Which of the following represents the general form of an objective function of a Linear Programming Problem?

Ans 1. $Z = ax + by$
 2. $Z = ax + by + c$
 3. $ax + by + c = 1$
 4. $ax + by + c = 0$

Question ID : 630680530185
Option 1 ID : 6306802072646
Option 2 ID : 6306802072645
Option 3 ID : 6306802072648
Option 4 ID : 6306802072647
Status : Answered
Chosen Option : 1

Q.5 If the n^{th} term of a sequence is defined as $a_n = 5n + 3$, what is its 21st term?

Ans 1. 124
 2. 120
 3. 118
 4. 108

Question ID : 630680530196

Option 1 ID : 6306802072692

Option 2 ID : 6306802072690

Option 3 ID : 6306802072691

Option 4 ID : 6306802072689

Status : Answered

Chosen Option : 4

Q.6 Which of the following phenomena are exhibited by electromagnetic waves?

(i) Diffraction, (ii) Polarization, (iii) Refraction

Ans 1. (i) and (iii)
 2. (ii) and (iii)
 3. (i) and (ii)
 4. (i), (ii) and (iii)

Question ID : 630680530206

Option 1 ID : 6306802072730

Option 2 ID : 6306802072731

Option 3 ID : 6306802072729

Option 4 ID : 6306802072732

Status : Answered

Chosen Option : 4



Q.7 Let C_p and C_V be the specific heats of a monatomic gas at constant pressure and constant volume, respectively. Then, according to Kinetic theory of gases, the ratio (C_p/C_V) is:

Ans

1. $\frac{9}{7}$

2. $\frac{4}{3}$

3. $\frac{7}{5}$

4. $\frac{5}{3}$

Question ID : 630680530223

Option 1 ID : 6306802072800

Option 2 ID : 6306802072797

Option 3 ID : 6306802072799

Option 4 ID : 6306802072798

Status : Answered

Chosen Option : 2

Q.8 The 9th term of an Arithmetic Progression is 0. Which term is double its 19th term?

Ans 1. 20

2. 29

3. 18

4. 38

Question ID : 630680530198

Option 1 ID : 6306802072699

Option 2 ID : 6306802072700

Option 3 ID : 6306802072698

Option 4 ID : 6306802072697

Status : Answered

Chosen Option : 1

Q.9 The potential energy of an object is given by $U = -Cx + Dx^2$, where C and D are constants. The force acting on the object is given by $F = \dots$.

Ans 1. $C - 2Dx$

2. $-(Cx^2)/2 + (Dx^3)/3$

3. $-C + 2Dx$

4. $(Cx^2)/2 + (Dx^3)/3$

Question ID : 630680530230

Option 1 ID : 6306802072826

Option 2 ID : 6306802072827

Option 3 ID : 6306802072825

Option 4 ID : 6306802072828

Status : Answered

Chosen Option : 3

Q.10 Which of the following statements is the inverse of the statement, 'if two lines are parallel then they do not have any common point'?

Ans 1.

If two lines are not parallel, then they have a common point.

2. If two lines are parallel, then they have a common point.

3.

If two lines are not parallel, then they do not have any common point.

4.

If two lines are intersecting, then they do not have any common point.

Question ID : 630680530188

Option 1 ID : 6306802072659

Option 2 ID : 6306802072657

Option 3 ID : 6306802072658

Option 4 ID : 6306802072660

Status : Answered

Chosen Option : 1

Q.11 In which of the following intervals is the given function $f(x) = 4x^3 - 6x^2 - 72x + 25$ decreasing?

Ans 1. $(-\infty, \infty)$

2. $(2, 3)$

3. $(-2, 3)$

4. $(3, \infty)$

Question ID : 630680530171

Option 1 ID : 6306802072589

Option 2 ID : 6306802072590

Option 3 ID : 6306802072591

Option 4 ID : 6306802072592

Status : Answered

Chosen Option : 3

Q.12 If $A = \{45, 54, 63, 72\}$, $B = \{54, 81, 90\}$ and $C = \{45, 54, 60\}$, what is $(A \cap B) \cup C$?

Ans 1. $\{45, 54, 60, 63, 72\}$

2. $\{54\}$

3. $\{45, 54, 60, 63, 72, 81, 90\}$

4. $\{45, 54, 60\}$

Question ID : 630680530199

Option 1 ID : 6306802072704

Option 2 ID : 6306802072701

Option 3 ID : 6306802072703

Option 4 ID : 6306802072702

Status : Answered

Chosen Option : 4

Q.13 Which of the following are pairs of consecutive odd positive integers both of which are smaller than 14 such that their sum is more than 20?

Ans 1. (11, 13)

2. (9, 11)

3. (9, 11), (11, 13)

4. (7, 9), (9, 11)

Question ID : 630680530183

Option 1 ID : 6306802072638

Option 2 ID : 6306802072640

Option 3 ID : 6306802072637

Option 4 ID : 6306802072639

Status : Answered

Chosen Option : 1

Q.14 What is the general solution of the differential equation $\frac{dy}{dx} = \sqrt{9 - y^2}$, $-3 < y < 3$?

Ans 1. $y = \sin 3x + C$

2. $\sin^{-1} y = 3x + C$

3. $y = 3\sin(x + C)$

4. $\sin y = 3x + C$

Question ID : 630680530180

Option 1 ID : 6306802072625

Option 2 ID : 6306802072626

Option 3 ID : 6306802072628

Option 4 ID : 6306802072627

Status : Answered

Chosen Option : 3

Q.15 What is the degree of the differential equation $\frac{d^3y}{dx^3} + \left(\frac{dy}{dx}\right)^5 = \cos\left(\frac{dy}{dx}\right)$?

Ans 1. 1

2. 5

3. Not defined

4. 3

Question ID : 630680530179

Option 1 ID : 6306802072623

Option 2 ID : 6306802072622

Option 3 ID : 6306802072624

Option 4 ID : 6306802072621

Status : Answered

Chosen Option : 3

Q.16 If $f(x) = \frac{4 \cos(x^3)}{\sin x}$, then what is the derivative of $f(x)$?

Ans ✗ 1. $f(x) = -12x^2 \sin(x^2) \csc x - 4 \cos(x^3) \sec x \cot x$

✗ 2. $f(x) = \frac{-12x^2 \sin(x^3)}{\cos x}$

✗ 3. $f(x) = \frac{12x \sin(x^3)}{\cos x}$

✓ 4. $f(x) = -12x^2 \sin(x^3) \csc x - 4 \cos(x^3) \csc x \cot x$

Question ID : 630680530174

Option 1 ID : 6306802072601

Option 2 ID : 6306802072602

Option 3 ID : 6306802072603

Option 4 ID : 6306802072604

Status : Answered

Chosen Option : 4

Q.17 A circular loop of radius 10 cm is placed in a magnetic field normal to the plane of the loop. The magnetic field is decreased uniformly at the rate of 0.2 T/s. The induced EMF in the coil is:

Ans ✗ 1. 1.57 mV

✗ 2. -6.28 mV

✓ 3. 6.28 mV

✗ 4. -1.57 mV

Question ID : 630680530203

Option 1 ID : 6306802072718

Option 2 ID : 6306802072719

Option 3 ID : 6306802072720

Option 4 ID : 6306802072717

Status : Answered

Chosen Option : 3

Q.18 A particle is moving at a constant speed π m/s on a circular path of radius 1 m. It will complete one revolution in:

Ans ✗ 1. 1.0 s

✗ 2. 4.0 s

✗ 3. 0.5 s

✓ 4. 2.0 s

Question ID : 630680530211

Option 1 ID : 6306802072750

Option 2 ID : 6306802072752

Option 3 ID : 6306802072749

Option 4 ID : 6306802072751

Status : Answered

Chosen Option : 4

Q.19 The following is the probability distribution of a random variable.

X	3	2	1	0
P(X)	0.465	0.125	0.205	k

What is the value of k?

Ans 1. 0.205
 2. 0
 3. 0.795
 4. 1

Question ID : 630680530192
Option 1 ID : 6306802072674
Option 2 ID : 6306802072673
Option 3 ID : 6306802072676
Option 4 ID : 6306802072675
Status : Answered
Chosen Option : 1

Q.20 What is the equation of a line passing through the point $(-3, 8)$ and perpendicular to the line $3x + y = 8$?

Ans 1. $3x - y + 27 = 0$
 2. $x - 3y + 27 = 0$
 3. $x - 3y + 24 = 0$
 4. $x + 3y + 27 = 0$

Question ID : 630680530178
Option 1 ID : 6306802072617
Option 2 ID : 6306802072619
Option 3 ID : 6306802072620
Option 4 ID : 6306802072618
Status : Answered
Chosen Option : 2

Q.21 An object starts from rest and moves along a straight line with velocity (in m/s) $v(t) = 27 - 3t^2$. Its acceleration, at the instant it stops is:

Ans 1. -9.0 m/s^2
 2. -12 m/s^2
 3. -18 m/s^2
 4. 24 m/s^2

Question ID : 630680530210
Option 1 ID : 6306802072745
Option 2 ID : 6306802072746
Option 3 ID : 6306802072747
Option 4 ID : 6306802072748
Status : Answered
Chosen Option : 3

Q.22 A particle is executing simple harmonic motion with time period T. Its kinetic energy also changes periodically with a time period of _____.

Ans 1. $2T$

2. $\frac{T}{2}$

3. $\frac{T}{4}$

4. T

Question ID : 630680530221

Option 1 ID : 6306802072792

Option 2 ID : 6306802072790

Option 3 ID : 6306802072789

Option 4 ID : 6306802072791

Status : **Answered**

Chosen Option : 4

Q.23 If $f(x) = 3x^2 \sin x + \tan x$, then what is the derivative of $f(x)$?

Ans 1. $f'(x) = 6x \sin x + 3x^2 \cos x + \cot^2 x$

2. $f'(x) = 6x \cos x + \sec^2 x$

3. $f'(x) = 6x \sin x + 3x^2 \cos x + \sec^2 x$

4. $f'(x) = 6x \cos x - \cosec^2 x$

Question ID : 630680530173

Option 1 ID : 6306802072600

Option 2 ID : 6306802072597

Option 3 ID : 6306802072599

Option 4 ID : 6306802072598

Status : **Answered**

Chosen Option : 3

Q.24 Sheela (mass 60 kg) stands on a weighing scale in a lift. The lift moves downward with a uniform acceleration of 5 m/s^2 . The reading of the scale will be (take $g = 10 \text{ m/s}^2$):

Ans 1. 300 kg

2. 60 kg

3. 90 kg

4. 30 kg

Question ID : 630680530214

Option 1 ID : 6306802072764

Option 2 ID : 6306802072762

Option 3 ID : 6306802072763

Option 4 ID : 6306802072761

Status : **Answered**

Chosen Option : 2

Q.25 A = {24, 36, 48} and B = {12, 18, 24}, f : A → B. Which of the following is an onto function?

Ans 1. $h = \{(24, 12), (36, 12), (48, 24)\}$
 2. $g = \{(24, 12), (36, 12), (48, 12)\}$
 3. $f = \{(24, 12), (36, 18), (48, 24)\}$
 4. $s = \{(24, 24), (36, 12), (48, 12)\}$

Question ID : 630680530195

Option 1 ID : 6306802072687

Option 2 ID : 6306802072686

Option 3 ID : 6306802072685

Option 4 ID : 6306802072688

Status : Answered

Chosen Option : 3

Q.26 An alpha particle with kinetic energy 4.1 MeV is approaching head-on a lead nucleus (Z = 82). Its distance of closest approach is about:

Ans 1. 57.6 fm
 2. 6.2 fm
 3. 45.3 fm
 4. 51.4 fm

Question ID : 630680530218

Option 1 ID : 6306802072779

Option 2 ID : 6306802072780

Option 3 ID : 6306802072777

Option 4 ID : 6306802072778

Status : Answered

Chosen Option : 1

Q.27 What is the value of $\lim_{x \rightarrow 0} \frac{\sin 2x - \tan 2x}{x^3}$?

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

Question ID : 630680530176

Option 1 ID : 6306802072611

Option 2 ID : 6306802072610

Option 3 ID : 6306802072612

Option 4 ID : 6306802072609

Status : Answered

Chosen Option : 3

Q.28 An electromagnetic wave travels from one medium to the other. Which of the following quantities change?

- (i) Wavelength, (ii) Frequency , (iii) Speed

Ans 1. (i) and (ii)

2. (i) and (iii)

3. (i), (ii) and (iii)

4. (ii) and (iii)

Question ID : 630680530205

Option 1 ID : 6306802072725

Option 2 ID : 6306802072726

Option 3 ID : 6306802072728

Option 4 ID : 6306802072727

Status : **Answered**

Chosen Option : 2

Q.29 For all $n \in \mathbb{N}$, $n(n + 1)(2n + 1)$ is divisible by which of the following numbers?

Ans 1. 7

2. 12

3. 6

4. 9

Question ID : 630680530191

Option 1 ID : 6306802072669

Option 2 ID : 6306802072671

Option 3 ID : 6306802072672

Option 4 ID : 6306802072670

Status : **Answered**

Chosen Option : 3

Q.30 The radius of the n^{th} orbit in Bohr model of hydrogen atom is proportional to:

Ans 1. $\frac{1}{n^2}$

2. n

3. $\frac{1}{n}$

4. n^2

Question ID : 630680530216

Option 1 ID : 6306802072772

Option 2 ID : 6306802072769

Option 3 ID : 6306802072771

Option 4 ID : 6306802072770

Status : **Answered**

Chosen Option : 4

Q.31 In an inelastic collision of two objects, consider the following physical quantities of the system.

- (i) Total linear momentum
- (ii) Total kinetic energy

Which of the following is true?

Ans

- ✓ 1. (i) is conserved, but (ii) is not conserved
- ✗ 2. (i) is not conserved, but (ii) is conserved
- ✗ 3. Both (i) and (ii) are conserved
- ✗ 4. Neither (i) nor (ii) is conserved

Question ID : 630680530228

Option 1 ID : 6306802072818

Option 2 ID : 6306802072820

Option 3 ID : 6306802072817

Option 4 ID : 6306802072819

Status : Answered

Chosen Option : 1

Q.32 Which of the following statements represents the conjunction of the following simple statements?

p: Guava is a fruit.

q: Rose is a flower.

Ans

- ✗ 1. Guava is not a fruit and rose is a flower.
- ✗ 2. Guava is a fruit and rose is not a flower.
- ✓ 3. Guava is a fruit and rose is a flower.
- ✗ 4. Guava is a fruit or rose is a flower.

Question ID : 630680530187

Option 1 ID : 6306802072656

Option 2 ID : 6306802072655

Option 3 ID : 6306802072654

Option 4 ID : 6306802072653

Status : Answered

Chosen Option : 3



Q.33 A block of mass m is placed on a rough wooden horizontal plane. The inclination of the plane is slowly increased. When the plane makes an angle of 30° , the block just starts sliding down with a uniform speed. The maximum coefficient of static friction between the block and the plane is:

Ans

✓ 1. $\frac{1}{\sqrt{3}}$

✗ 2. $\frac{1}{2}$

✗ 3. $\frac{2}{3}$

✗ 4. $\frac{\sqrt{3}}{2}$

Question ID : 630680530215

Option 1 ID : 6306802072767

Option 2 ID : 6306802072765

Option 3 ID : 6306802072766

Option 4 ID : 6306802072768

Status : Answered

Chosen Option : 1

Q.34 A room has a volume 30 m^3 . The total number of molecules in it at a temperature of 27°C and a pressure of $1.0 \times 10^5 \text{ Pa}$ is about (take Boltzmann constant = $1.4 \times 10^{-23} \text{ J K}^{-1}$):

Ans

✗ 1. 4.2×10^{24}

✗ 2. 8.3×10^{28}

✓ 3. 7.1×10^{26}

✗ 4. 3.0×10^{23}

Question ID : 630680530224

Option 1 ID : 6306802072802

Option 2 ID : 6306802072804

Option 3 ID : 6306802072803

Option 4 ID : 6306802072801

Status : Answered

Chosen Option : 3



Q.35 If $P = \{x : x = 6n, \text{ where } n \in \mathbb{N}, n \leq 8\}$ and $Q = \{x : x = 8n, \text{ where } n \in \mathbb{N}, n \leq 10\}$. What is $P - Q$?

Ans 1. $\{6, 8, 12, 18, 24, 30, 36, 40\}$

2. $\{24, 48\}$

3. $\{6, 8, 12, 16, 18, 24, 30, 32, 36, 40, 42, 48, 56, 64, 72, 80\}$

4. $\{6, 12, 18, 30, 36, 42\}$

Question ID : 630680530200

Option 1 ID : 6306802072705

Option 2 ID : 6306802072708

Option 3 ID : 6306802072706

Option 4 ID : 6306802072707

Status : Answered

Chosen Option : 4

Q.36 A ball of 2.0 kg is acted upon by a force of 10 N towards east. The acceleration of the ball is _____ towards _____.

Ans 1. 0.2 m/s^2 , west

2. 5.0 m/s^2 , west

3. 0.2 m/s^2 , east

4. 5.0 m/s^2 , east

Question ID : 630680530213

Option 1 ID : 6306802072760

Option 2 ID : 6306802072757

Option 3 ID : 6306802072759

Option 4 ID : 6306802072758

Status : Answered

Chosen Option : 4

Q.37 If $147 \equiv 3 \pmod{k}$, what is the largest value possible value of k ?

Ans 1. 16

2. 144

3. 150

4. 48

Question ID : 630680530182

Option 1 ID : 6306802072635

Option 2 ID : 6306802072634

Option 3 ID : 6306802072636

Option 4 ID : 6306802072633

Status : Answered

Chosen Option : 2

Q.38 Two travelling sinusoidal waves, each of frequency 80 Hz, produce standing waves in a medium. If the distance between the third node to the fifth node is 30 cm, the wavelength of each travelling wave is:

Ans 1. 15 cm
 2. 60 cm
 3. 45 cm
 4. 30 cm

Question ID : 630680530222
Option 1 ID : 6306802072793
Option 2 ID : 6306802072796
Option 3 ID : 6306802072795
Option 4 ID : 6306802072794

Status : **Answered**
Chosen Option : 1

Q.39 A particle starts from origin at $t = 0$ s with a velocity (in m/s) $v = 5.0 \hat{i}$. It moves in x-y plane under the action of a force which produces a constant acceleration (in m/s^2) $a = 4.0 \hat{i} + 2.0 \hat{j}$. At what time is the particle's y coordinate 16 m?

Ans 1. 8.0 s
 2. 1.0 s
 3. 4.0 s
 4. 2.0 s

Question ID : 630680530212
Option 1 ID : 6306802072756
Option 2 ID : 6306802072753
Option 3 ID : 6306802072755
Option 4 ID : 6306802072754

Status : **Answered**
Chosen Option : 3

Q.40 Consider the relation $P = A^m B^n$. If the dimensions of P, A and B are $[L^2 T^{-1}]$, $[LT]$ and $[LT^2]$, respectively, then m and n are _____, respectively.

Ans 1. 6 and -2
 2. 2 and 2
 3. 5 and -3
 4. -2 and 4

Question ID : 630680530227
Option 1 ID : 6306802072816
Option 2 ID : 6306802072813
Option 3 ID : 6306802072815
Option 4 ID : 6306802072814

Status : **Answered**
Chosen Option : 3

Q.41 A small object makes uniform motion with frequency ν , in a circle of radius R . The magnitude of its acceleration is:

Ans

✓ 1. $4\pi^2\nu^2R$

✗ 2. $\pi^2\nu^2R$

✗ 3. $\pi^2\nu^2R^2$

✗ 4. $2\pi^2\nu^2R$

Question ID : 630680530208

Option 1 ID : 6306802072740

Option 2 ID : 6306802072738

Option 3 ID : 6306802072737

Option 4 ID : 6306802072739

Status : **Answered**

Chosen Option : 1

Q.42 The position of a particle (in m) is given by $r = (6.0 t)\mathbf{i} + (4.0 t^2)\mathbf{j}$, where t is in seconds. The magnitude of its velocity at $t = 1.0$ s is:

Ans

✗ 1. 12 m/s

✗ 2. 5 m/s

✓ 3. 10 m/s

✗ 4. 8 m/s

Question ID : 630680530209

Option 1 ID : 6306802072744

Option 2 ID : 6306802072741

Option 3 ID : 6306802072743

Option 4 ID : 6306802072742

Status : **Answered**

Chosen Option : 3

Q.43 If the general term of an arithmetic progression is defined as $a_n = 6n - 1$, what is the sum of the first 10 terms of the given AP?

Ans

✗ 1. 59

✗ 2. 165

✗ 3. 228

✓ 4. 320

Question ID : 630680530197

Option 1 ID : 6306802072693

Option 2 ID : 6306802072694

Option 3 ID : 6306802072696

Option 4 ID : 6306802072695

Status : **Answered**

Chosen Option : 4

Q.44 What is the multiplicative inverse of the given complex number?

$$z = 12 - 5i$$

Ans 1. $-12 + 5i$

2. $\frac{12}{169} + \frac{5}{169}i$

3. $\frac{12}{13} + \frac{5}{13}i$

4. $12 + 5i$

Question ID : 630680530177

Option 1 ID : 6306802072615

Option 2 ID : 6306802072614

Option 3 ID : 6306802072616

Option 4 ID : 6306802072613

Status : Answered

Chosen Option : 2

Q.45 The ionisation energy of hydrogen atom is 13.6 eV. The energy of an electron in first excited state of hydrogen atom is:

Ans 1. -3.4 eV

2. 13.6 eV

3. -13.6 eV

4. 3.4 eV

Question ID : 630680530217

Option 1 ID : 6306802072775

Option 2 ID : 6306802072774

Option 3 ID : 6306802072773

Option 4 ID : 6306802072776

Status : Answered

Chosen Option : 1

Q.46 A ray of light passes through a triangular glass prism ($\mu = 1.5$) of refracting angle 10° .

The angle of minimum deviation for the prism is:

Ans 1. 25°

2. 15°

3. 5°

4. 10°

Question ID : 630680530219

Option 1 ID : 6306802072784

Option 2 ID : 6306802072783

Option 3 ID : 6306802072781

Option 4 ID : 6306802072782

Status : Answered

Chosen Option : 3

Q.47 Consider a photon each associated with

(i) Violet light, (ii) Green light, (iii) Yellow light, (iv) Red light.

Which of the photons has the maximum energy?

Ans 1. (ii)

2. (iv)

3. (i)

4. (iii)

Question ID : 630680530204

Option 1 ID : 6306802072722

Option 2 ID : 6306802072724

Option 3 ID : 6306802072721

Option 4 ID : 6306802072723

Status : Answered

Chosen Option : 3

Q.48 A school quiz team consisting of 5 members has to be selected from 6 boys and 5 girls. In how many ways can the team be formed such that the team has at the most 2 girls?

Ans 1. 240

2. 281

3. 360

4. 321

Question ID : 630680530189

Option 1 ID : 6306802072661

Option 2 ID : 6306802072664

Option 3 ID : 6306802072662

Option 4 ID : 6306802072663

Status : Answered

Chosen Option : 2

Q.49 If α and β are the zeroes of the polynomial $p(x) = x^2 - 25x + 150 = 0$, what is the value of $\frac{1}{\alpha} + \frac{1}{\beta}$?

Ans 1. 6

2. 4

3. $\frac{1}{4}$

4. $\frac{1}{6}$

Question ID : 630680530193

Option 1 ID : 6306802072680

Option 2 ID : 6306802072679

Option 3 ID : 6306802072677

Option 4 ID : 6306802072678

Status : Answered

Chosen Option : 4

Q.50 An object of 2.0 kg has a velocity (5.0 m/s) \hat{i} at $t = 0$ s. Its velocity becomes (7.0 m/s) \hat{i} at $t = 4.0$ s. The work done on the object, during this time is:

Ans 1. -48 J
 2. 24 J
 3. -24 J
 4. 48 J

Question ID : 630680530229
Option 1 ID : 6306802072824
Option 2 ID : 6306802072821
Option 3 ID : 6306802072822
Option 4 ID : 6306802072823

Status : Answered
Chosen Option : 2

Q.51 Corner points of the feasible region determined by the system of linear constraints are (0, 3), (1, 1) and (3, 0). Let $Z = px + qy$, where $p, q > 0$.

What is the condition on p and q so that the minimum of Z occurs at (3, 0) and (1, 1)?

Ans 1. $P = 2q$
 2. $P = 3q$
 3. $P = \frac{1}{2}q$
 4. $p = q$

Question ID : 630680530186
Option 1 ID : 6306802072649
Option 2 ID : 6306802072652
Option 3 ID : 6306802072650
Option 4 ID : 6306802072651

Status : Answered
Chosen Option : 3

Q.52 What is the value of $\int \left(\frac{\cos x \sin x - 1}{\sin^2 x} \right) e^x dx$?

Ans 1. $e^x (\cosec x + \sec x) + C$
 2. $e^x \cot x + C$
 3. $e^x (\cos x + \sin x) + C$
 4. $e^x \tan x + C$

Question ID : 630680530175
Option 1 ID : 6306802072608
Option 2 ID : 6306802072606
Option 3 ID : 6306802072607
Option 4 ID : 6306802072605

Status : Answered
Chosen Option : 2

Q.53 A beam of light with energy flux 24 W/cm^2 falls normally, on a perfectly reflecting surface of area 15 cm^2 and is reflected back. The average force exerted by the beam on the surface during a span of 10 minutes is:

Ans 1. $0.12 \mu\text{N}$
 2. $0.06 \mu\text{N}$
 3. $0.24 \mu\text{N}$
 4. $0.48 \mu\text{N}$

Question ID : 630680530207

Option 1 ID : 6306802072734

Option 2 ID : 6306802072733

Option 3 ID : 6306802072735

Option 4 ID : 6306802072736

Status : Not Answered

Chosen Option : --

Q.54 An ideal transformer consists of a primary coil of N_p turns and a secondary coil of N_s turns. If, I_p , I_s and V_p , V_s are the currents and voltages in the primary and secondary coils, respectively, then which of the following relationships is true?

Ans 1. $I_s = \left(\frac{N_s}{N_p}\right) I_p$, $I_s V_s = I_p V_p$
 2. $I_s = \left(\frac{N_p}{N_s}\right) I_p$, $I_s V_s = I_p V_p$
 3. $I_s = \left(\frac{N_p}{N_s}\right) I_p$, $I_s V_s \neq I_p V_p$
 4. $I_s = \left(\frac{N_s}{N_p}\right) I_p$, $I_s V_s \neq I_p V_p$

Question ID : 630680530202

Option 1 ID : 6306802072716

Option 2 ID : 6306802072714

Option 3 ID : 6306802072713

Option 4 ID : 6306802072715

Status : Answered

Chosen Option : 2

Q.55 For a statement $P(n)$ to be true for all $n \in \mathbb{N}$, where \mathbb{N} denotes the set of natural numbers, which of the following conditions must be satisfied?

Ans 1. $P(k+1) = P(k) + 1$ for all $k \in \mathbb{Z}$
 2. $P(k+2) = 2P(k)$
 3. $P(1)$ must be true
 4. $P(k) + P(k+1) = P(k+2)$ for all $k \in \mathbb{Z}$

Question ID : 630680530190

Option 1 ID : 6306802072667

Option 2 ID : 6306802072668

Option 3 ID : 6306802072665

Option 4 ID : 6306802072666

Status : Answered

Chosen Option : 3

Q.56 What is the slope of normal to the curve $y = 2x^3 - 5x^2 + x - 2$ at the point $(1, -1)$?

Ans

1. $\frac{1}{2}$

2. $\frac{1}{3}$

3. -4

4. -3

Question ID : 630680530172

Option 1 ID : 6306802072593

Option 2 ID : 6306802072595

Option 3 ID : 6306802072594

Option 4 ID : 6306802072596

Status : **Answered**

Chosen Option : 2

Q.57 Solve the inequality $\frac{(2-x)}{5} - \frac{(2-3x)}{4} \leq \frac{(2x-1)}{3}$ (where x is a real number).

Ans

1. $[-7, 7]$

2. $(-\infty, 2]$

3. $[7, 14]$

4. $[2, \infty)$

Question ID : 630680530184

Option 1 ID : 6306802072643

Option 2 ID : 6306802072642

Option 3 ID : 6306802072641

Option 4 ID : 6306802072644

Status : **Answered**

Chosen Option : 4

Q.58 The resistance R of a wire is determined by measuring the potential difference V across it when a current I is passed through it. The percentage errors in measurements of V and I are 5% and 3%, respectively. The percentage error in result of R is:

Ans

1. 2%

2. 5%

3. 8%

4. 3%

Question ID : 630680530226

Option 1 ID : 6306802072809

Option 2 ID : 6306802072811

Option 3 ID : 6306802072812

Option 4 ID : 6306802072810

Status : **Not Answered**

Chosen Option : --

Q.59 A ray of light is incident on an equilateral prism made of a transparent material and passes through it. The angle of minimum deviation is found to be 30° . The speed of light inside the prism is close to:

Ans 1. 2.0×10^8 m/s

2. 1.8×10^8 m/s

3. 2.1×10^8 m/s

4. 2.3×10^8 m/s

Question ID : 630680530220

Option 1 ID : 6306802072786

Option 2 ID : 6306802072785

Option 3 ID : 6306802072787

Option 4 ID : 6306802072788

Status : Answered

Chosen Option : 1

Q.60 What are the roots of the quadratic equation $8x^2 - 2x - 3 = 0$?

Ans 1. 3, 8

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

3. 4, 6

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

Question ID : 630680530194

Option 1 ID : 6306802072684

Option 2 ID : 6306802072682

Option 3 ID : 6306802072681

Option 4 ID : 6306802072683

Status : Answered

Chosen Option : 4

