

AAI ATC Jr Executive

**Previous Year Paper
27 Dec, 2023 Shift 1**



भारतीय विमानपत्तन प्राधिकरण

AIRPORTS AUTHORITY OF INDIA

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

राजीव गांधी भवन, सफदरजंग हवाई अड्डा, नई दिल्ली- 110003

RAJIV GANDHI BHAWAN, SAFDARJUNG AIRPORT, NEW DELHI-110003

Participant ID	
Participant Name	
Test Center Name	
Test Date	27/12/2023
Test Time	8:30 AM - 10:30 AM
Subject	JUNIOR EXECUTIVE AIR TRAFFIC CONTROL

Section : General Knowledge

Q.1 Where specifically was the copper chariot from the Harappan period discovered?

- Ans
- ☒

1. Sindh
- ☒
2. Jhelum

☒☒

Question ID : 630680529900

Option 1 ID : 6306802071526

Option 2 ID : 6306802071525

Option 3 ID : 6306802071527

Option 4 ID : 6306802071524

Status : Answered

Chosen Option : 4

Q.2 Pattachitra is associated with which state?

- Ans
- ☒
1. Telangana

☒☒☒

Question ID : 630680529895

Option 1 ID : 6306802071506

Option 2 ID : 6306802071505

Option 3 ID : 6306802071504

Option 4 ID : 6306802071507

Status : Answered

Chosen Option : 2

Q.3 Which of the options below is a type of cruise missile?

- Ans
- ☒ 1. Sagarika (K-15)
 - ☒ 2. Shaurya
 - ☒ 3. BrahMos
 - ☒ 4. Amogha

Question ID : 630680529892
Option 1 ID : 6306802071493
Option 2 ID : 6306802071495
Option 3 ID : 6306802071494
Option 4 ID : 6306802071492
Status : Answered
Chosen Option : 3

Q.4 Which of the following earth observation satellites was launched in 2020 by India's Polar Satellite Launch Vehicle?

- Ans
- ☒ 1. POS-01
 - ☒ 2. EOS-01
 - ☒ 3. SOS-01
 - ☒ 4. TOS-01

Question ID : 630680529902
Option 1 ID : 6306802071532
Option 2 ID : 6306802071533
Option 3 ID : 6306802071535
Option 4 ID : 6306802071534
Status : Answered
Chosen Option : 2

Q.5 What additional option does the 2019 Constitution (103rd Amendment) Act provide?

- Ans
- ☒ 1. It gave constitutional status to backward classes
 - ☒ 2. It extended the seats for Schedule Class and Schedule Tribe
 - ☒ 3. It provided a maximum of 10% reservation for the economically weaker sections
 - ☒ 4. It introduced the goods and services tax in the country

Question ID : 630680529913
Option 1 ID : 6306802071577
Option 2 ID : 6306802071576
Option 3 ID : 6306802071579
Option 4 ID : 6306802071578
Status : Answered
Chosen Option : 3

Q.6 Which state is associated with the Yakshagana?

- Ans
1. Rajasthan

2. Karnataka

3. Gujarat

4. Andhra Pradesh

Question ID : 630680529901

Option 1 ID : 6306802071529

Option 2 ID : 6306802071531

Option 3 ID : 6306802071528

Option 4 ID : 6306802071530

Status : Answered

Chosen Option : 2

Q.7 In 2010 the design of which Indian single-engine multirole light aircraft was one by the Aeronautical Development Agency (ADA)?

- Ans
1. Aswini

2. Sukhoi

3. HAL Tejas

4. Dassault

Question ID : 630680529908

Option 1 ID : 6306802071556

Option 2 ID : 6306802071559

Option 3 ID : 6306802071558

Option 4 ID : 6306802071557

Status : Marked For Review

Chosen Option : 3

Q.8 Where can a "Constitutional Amendment Bill" be introduced?

- Ans
1. Either Rajya Sabha or Lok Sabha

2. Rajya Sabha

3. Lok Sabha

4. Supreme Court of India

Question ID : 630680529916

Option 1 ID : 6306802071591

Option 2 ID : 6306802071588

Option 3 ID : 6306802071589

Option 4 ID : 6306802071590

Status : Answered

Chosen Option : 1

Q.9 According to the Minimum Wages Act of 2021, what proportion of tea plantation employees in Assam are considered permanent?

- Ans ☒ 1. 39
- ☒ 2. 40
- ☒ 3. 38
- ☒ 4. 20

Question ID : 630680529905

Option 1 ID : 6306802071546

Option 2 ID : 6306802071544

Option 3 ID : 6306802071547

Option 4 ID : 6306802071545

Status : Marked For Review

Chosen Option : 2

Q.10 Which of the following is not an alternative name for the Bangar Plains of Rajasthan?

- Ans ☒ 1. Banas Basin
- ☒ 2. Ghaggar Basin
- ☒ 3. Shekhawati
- ☒ 4. Godwar Basin

Question ID : 630680529921

Option 1 ID : 6306802071611

Option 2 ID : 6306802071610

Option 3 ID : 6306802071609

Option 4 ID : 6306802071608

Status : Marked For Review

Chosen Option : 3

Section : General Intelligence

Q.1 A is the father of B. B is the father of C. C is the brother of D. D is the husband of E. How is E related to B?

- Ans ☒ 1. Daughter
- ☒ 2. Brother's wife
- ☒ 3. Sister
- ☒ 4. Daughter in law

Question ID : 630680529932

Option 1 ID : 6306802071652

Option 2 ID : 6306802071655

Option 3 ID : 6306802071653

Option 4 ID : 6306802071654

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. MJSQ – RQKK
-  2. MTYJ – KVWK
-  3. WTCA – BAUU
-  4. GDMK – LKEE

Question ID : 630680529948

Option 1 ID : 6306802071716

Option 2 ID : 6306802071717

Option 3 ID : 6306802071718

Option 4 ID : 6306802071719

Status : Answered

Chosen Option : 2

Q.3 If ‘p’ means ‘×’, ‘q’ means ‘-’, ‘r’ means ‘+’ and ‘s’ means ‘÷’, then which of the following equation is NOT correct?
I. 44 s 51 r 17 q 20 p 4 = -31
II. 57 r 19 s 5 p 10 q 18 = 35

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

Question ID : 630680529963

Option 1 ID : 6306802071775

Option 2 ID : 6306802071773

Option 3 ID : 6306802071774

Option 4 ID : 6306802071772

Status : Answered

Chosen Option : 4

Q.4 In the following question, select the missing number from the given series.
211, 206, ?, 200, 223, 194, 229

- Ans  1. 217
-  2. 220
-  3. 219
-  4. 215

Question ID : 630680529933

Option 1 ID : 6306802071656

Option 2 ID : 6306802071659

Option 3 ID : 6306802071657

Option 4 ID : 6306802071658

Status : Answered

Chosen Option : 1

Q.5 In the word 'REYNOLS' all the letters are replaced by the letter which 4 places before it as per the English alphabetical order. What will be the 5th alphabet in the newly formed word from the right end?

- Ans
1.

H

2.

J

3.

A

4.

U

Question ID : 630680529929

Option 1 ID : 6306802071641

Option 2 ID : 6306802071642

Option 3 ID : 6306802071640

Option 4 ID : 6306802071643

Status : Answered

Chosen Option : 4

Q.6 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. Some red are black.
II. No blue is red.
Conclusion:
I. No blue is black.
II. No red is blue.

- Ans
1.

Only conclusion II follows.

2.

Only conclusion I follows.

3.

Both conclusions I and II follows.

4.

Neither conclusion follows.

Question ID : 630680529926

Option 1 ID : 6306802071629

Option 2 ID : 6306802071628

Option 3 ID : 6306802071630

Option 4 ID : 6306802071631

Status : Answered

Chosen Option : 1

Q.7 Eight friends – S, T, U, V, W, X, Y and Z are sitting around a square table facing the centre. They sit in such a way that four of them sit at four corners of the square while four sit in the middle of each of the four sides. Only Z sits between S and X. S sits in the middle of one of the sides. V sits third to the right of X. Both Y and Z are immediate neighbours of S. T sits second to left of U. Who sits third to the left of X?

- Ans
1.

T

2.

W

3.

Y

4.

U

Question ID : 630680529939

Option 1 ID : 6306802071682

Option 2 ID : 6306802071683

Option 3 ID : 6306802071680

Option 4 ID : 6306802071681

Status : Answered

Chosen Option : 3

Q.8 What approximate value will come in place of (x)?
 $\sqrt{628.08} \times (2.75 \times 3.01) = x$

- Ans ☒ 1. 225
☐ 2. 218
☐ 3. 220
☐ 4. 236

Question ID : 630680529934
Option 1 ID : 6306802071661
Option 2 ID : 6306802071662
Option 3 ID : 6306802071663
Option 4 ID : 6306802071660
Status : Marked For Review
Chosen Option : 1

Q.9 What approximate value will come in place of (?)?
 $16.02 \times \{(16.03)^2\}^{\frac{1}{4}} + 31.96 \times 8.08 = ? \times 7.43$

- Ans ☐ 1. 35
☐ 2. 60
☒ 3. 40
☐ 4. 80

Question ID : 630680529936
Option 1 ID : 6306802071671
Option 2 ID : 6306802071669
Option 3 ID : 6306802071670
Option 4 ID : 6306802071668
Status : Answered
Chosen Option : 3

Q.10 In the following question, select the related letter pair from the given alternatives.
BZWY : AXTU :: ?

- Ans ☐ 1. MOPR : PQRT
☒ 2. IPVZ : HNSV
☐ 3. RUVH : LMOC
☐ 4. NDAT : MBYQ

Question ID : 630680529960
Option 1 ID : 6306802071761
Option 2 ID : 6306802071763
Option 3 ID : 6306802071760
Option 4 ID : 6306802071762
Status : Answered
Chosen Option : 2

Q.11 In a certain code language, 'BOTTOM' is written as 'OBTTMO' and 'PROMPT' is written as 'RPMOTP'. What is the code for 'APPEAR' in that code language?

- Ans
1.

PAEQRA

2.

PAPERA

3.

PAEPAR

4.

PAEPRA

Question ID : 630680529946

Option 1 ID : 6306802071711

Option 2 ID : 6306802071708

Option 3 ID : 6306802071709

Option 4 ID : 6306802071710

Status : Answered

Chosen Option : 4

Q.12 A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.
RQR, XZE, DIR, JRE, ?

- Ans
1.

PAR

2.

RAR

3.

PRM

4.

RQT

Question ID : 630680529928

Option 1 ID : 6306802071638

Option 2 ID : 6306802071637

Option 3 ID : 6306802071639

Option 4 ID : 6306802071636

Status : Answered

Chosen Option : 1

Q.13 Weight of five bats B1, B2, B3, B4 and B5 is compared. Weight of B4 is more than B1 and less than B2. Weight of B5 is more than B3. Weight of B2 is less than B3. Whose weight is more than B4 but less than B3?
I. B2
II. B1

- Ans
1.

Only I

2.

Only II

3.

Both I and II

4.

Neither I nor II

Question ID : 630680529927

Option 1 ID : 6306802071632

Option 2 ID : 6306802071633

Option 3 ID : 6306802071634

Option 4 ID : 6306802071635

Status : Answered

Chosen Option : 1

Q.14 Consider the five three digit numbers given below and then answer the questions based on it.
(Left) 386 483 428 653 549 (Right)
Hundreds place digit of the left most number and the tens digit of right most number are added. What will be the value of the square of the resultant sum?

- Ans
- ☒ 1. 25
 - ☒ 2. 49
 - ☒ 3. 36
 - ☒ 4. 64

Question ID : 630680529930
Option 1 ID : 6306802071645
Option 2 ID : 6306802071646
Option 3 ID : 6306802071647
Option 4 ID : 6306802071644
Status : Answered
Chosen Option : 2

Q.15 7 persons M, N, O, P, Q, R and S are sitting in a row facing towards south (not necessarily in the same order). R is not at the extreme end of the row. P sits at 5th position to the right of M. Two person is sitting between M and R. P and R is not an immediate neighbour of each other. S is sitting at second position from the left of R. N sits at 4th position to the right of O. Who is at the 3rd position from left end and right end respectively?

- Ans
- ☒ 1. Q, R
 - ☒ 2. O, P
 - ☒ 3. O, Q
 - ☒ 4. S, P

Question ID : 630680529924
Option 1 ID : 6306802071622
Option 2 ID : 6306802071621
Option 3 ID : 6306802071620
Option 4 ID : 6306802071623
Status : Marked For Review
Chosen Option : 2

Section : General Aptitude

Q.1 Shreyas can complete 4/5 part of a work in 20 days. Ruchi is 2.5 times as efficient as Shreyas. In how many days will Ruchi alone complete the same work?

- Ans
- ☒ 1. 12 days
 - ☒ 2. 10 days
 - ☒ 3. 9 days
 - ☒ 4. 11 days

Question ID : 630680530000
Option 1 ID : 6306802071927
Option 2 ID : 6306802071926
Option 3 ID : 6306802071925
Option 4 ID : 6306802071924
Status : Answered
Chosen Option : 2

Q.2 What is the average of 180, 230, 244, 180 and 596?

- Ans

✓

1. 288

✗

2. 266

✗

3. 296

✗

4. 230
- Question ID : 630680529976

Option 1 ID : 6306802071830

Option 2 ID : 6306802071831

Option 3 ID : 6306802071828

Option 4 ID : 6306802071829

Status : Marked For Review

Chosen Option : 1
- Q.3 A truck left 1 hour early than the scheduled time and in order to reach its destination 840 km away on time, it had to decrease its usual speed by 4 km/hr. What is the usual speed of the truck?
- Ans

✗

1. 80 km/hr

✗

2. 50 km/hr

✓

3. 60 km/hr

✗

4. 75 km/hr

Question ID : 630680529998

Option 1 ID : 6306802071919

Option 2 ID : 6306802071916

Option 3 ID : 6306802071917

Option 4 ID : 6306802071918

Status : Answered

Chosen Option : 3

Q.4 What is the value of $\frac{2}{3} \div \frac{4}{27} - \frac{1}{2} \times \frac{4}{5} + \frac{2}{7} \div \frac{10}{21}$?

Ans

✓

1. 4.7

✗

2. 4.5

✗

3. 5.2

✗

4. 2.7

Question ID : 630680529985

Option 1 ID : 6306802071864

Option 2 ID : 6306802071866

Option 3 ID : 6306802071867

Option 4 ID : 6306802071865

Status : Answered

Chosen Option : 1

https://cdn.digialm.com//per/g01/pub/1258/touchstone/AssessmentQPHTMLMode1/1258O23670/1258O23670S1D2838/17037627782078689/163...

10/44

Q.5 The difference between circumference and the diameter of a circle is 21.4 cm. What is the area of the circle?

- Ans
- ✖

1.

27π cm²

✔

2.

25 π cm²

✖

3.

35π cm²

✖

4.

40π cm²

Question ID : 630680529982

Option 1 ID : 6306802071855

Option 2 ID : 6306802071852

Option 3 ID : 6306802071853

Option 4 ID : 6306802071854

Status : Answered

Chosen Option : 2

Q.6 The difference between cost price and selling price is Rs. 231. If profit percentage is 21 percent, then what is the selling price?

- Ans
- ✖

1.

Rs. 1428

✖

2.

Rs. 1111

✖

3.

Rs. 1560

✔

4.

Rs. 1331

Question ID : 630680529980

Option 1 ID : 6306802071845

Option 2 ID : 6306802071846

Option 3 ID : 6306802071847

Option 4 ID : 6306802071844

Status : Answered

Chosen Option : 4

Q.7 Seven friends spent Rs. 24 each on a project and the eighth friend spent Rs. 35 more than the average expenditure of all eight of them. What is the total money spent by them?

- Ans
- ✔

1.

Rs. 232

✖

2.

Rs. 192

✖

3.

Rs. 216

✖

4.

Rs. 280

Question ID : 630680529977

Option 1 ID : 6306802071833

Option 2 ID : 6306802071832

Option 3 ID : 6306802071834

Option 4 ID : 6306802071835

Status : Answered

Chosen Option : 1

Q.8 The average weight of two players X and Y of a football team is 39 kg. The average weight of X, Y and their coach Z is 49 kg. What is the weight of coach?

- Ans
- ☒ 1. 58 kg
 - ☒ 2. 64 kg
 - ☒ 3. 69 kg
 - ☒ 4. 72 kg

Question ID : 630680530025
Option 1 ID : 6306802072024
Option 2 ID : 6306802072025
Option 3 ID : 6306802072026
Option 4 ID : 6306802072027
Status : Answered
Chosen Option : 3

Q.9 A sum of Rs. 500 becomes Rs. 580 at simple interest in 2 years. In how many years will the sum of Rs. 660 amounts to Rs. 924 at the same rate of simple interest?

- Ans
- ☒ 1. 7 years
 - ☒ 2. 5 years
 - ☒ 3. 9 years
 - ☒ 4. 3 years

Question ID : 630680529996
Option 1 ID : 6306802071909
Option 2 ID : 6306802071908
Option 3 ID : 6306802071911
Option 4 ID : 6306802071910
Status : Answered
Chosen Option : 2

Q.10 A train starts from a place S at 10:00 a.m. and arrives at another place T at 1:30 p.m. on the same day. If the speed of the train is 35 m/s, then what will be the distance covered by the train?

- Ans
- ☒ 1. 450 km
 - ☒ 2. 484 km
 - ☒ 3. 576 km
 - ☒ 4. 441 km

Question ID : 630680529999
Option 1 ID : 6306802071923
Option 2 ID : 6306802071920
Option 3 ID : 6306802071922
Option 4 ID : 6306802071921
Status : Answered
Chosen Option : 4

Q.11 40 percent of the cost price of an article is equal to the 25 percent of its selling price. What is the profit percentage?

- Ans
- ✓ 1. 60 percent
 - ✗ 2. 100 percent
 - ✗ 3. 50 percent
 - ✗ 4. 160 percent

Question ID : 630680529979
Option 1 ID : 6306802071842
Option 2 ID : 6306802071841
Option 3 ID : 6306802071840
Option 4 ID : 6306802071843
Status : Answered
Chosen Option : 1

Q.12 If P is 9 times more than Q, then Q is what percentage less than P?

- Ans
- ✗ 1. 10 percent
 - ✓ 2. 90 percent
 - ✗ 3. 87.5 percent
 - ✗ 4. 11.11 percent

Question ID : 630680529978
Option 1 ID : 6306802071839
Option 2 ID : 6306802071837
Option 3 ID : 6306802071838
Option 4 ID : 6306802071836
Status : Answered
Chosen Option : 2

Q.13 The marked price of a shirt is Rs. 2000. If the shirt is being sold for Rs. 1300, then what is the discount percentage?

- Ans
- ✗ 1. 25 percent
 - ✓ 2. 35 percent
 - ✗ 3. 37 percent
 - ✗ 4. 30 percent

Question ID : 630680529992
Option 1 ID : 6306802071895
Option 2 ID : 6306802071893
Option 3 ID : 6306802071892
Option 4 ID : 6306802071894
Status : Answered
Chosen Option : 2

Q.14 Which one is the largest among the fractions $\left(\frac{4}{9}\right)$, $\left(\frac{5}{8}\right)$, $\left(\frac{2}{3}\right)$ and $\left(\frac{3}{4}\right)$?

- Ans
- ☒ 1. $\frac{2}{3}$
 - ☒ 2. $\frac{4}{9}$
 - ☒ 3. $\frac{5}{8}$
 - ☒ 4. $\frac{3}{4}$

Question ID : 630680529986
Option 1 ID : 6306802071870
Option 2 ID : 6306802071868
Option 3 ID : 6306802071869
Option 4 ID : 6306802071871
Status : Answered
Chosen Option : 4

Q.15 If P : Q = 3 : 4, Q : R = 5 : 2 and R : S = 3 : 2, then what is the value of P : R : S?

- Ans
- ☒ 1. 45 : 24 : 16
 - ☒ 2. 24 : 45 : 16
 - ☒ 3. 20 : 13 : 15
 - ☒ 4. 15 : 8 : 24

Question ID : 630680529981
Option 1 ID : 6306802071849
Option 2 ID : 6306802071850
Option 3 ID : 6306802071851
Option 4 ID : 6306802071848
Status : Answered
Chosen Option : 1

Section : General English

Q.1 Select the most appropriate abstract noun to fill in the blank.
She looked at him with great _____.

- Ans
- ☒ 1. adoration
 - ☒ 2. generation
 - ☒ 3. dedication
 - ☒ 4. arbitration

Question ID : 630680530041
Option 1 ID : 6306802072090
Option 2 ID : 6306802072092
Option 3 ID : 6306802072091
Option 4 ID : 6306802072089
Status : Answered
Chosen Option : 1

Q.2 Select the grammatically correct sentence.

- Ans

1. The police will have to cancel the driving license if you break the rules again.

2. The police will have to cancel the driving license if you will break the rules again.

3. The police will cancel your driving license if you will break the rules again.

4. The police will cancel your driving license if you are breaking the rules again.

Question ID : 630680530043

Option 1 ID : 6306802072100

Option 2 ID : 6306802072099

Option 3 ID : 6306802072097

Option 4 ID : 6306802072098

Status : Answered

Chosen Option : 1

Q.3 Select the grammatically correct sentence.

- Ans

1. I was having a headache.

2. I have a headache.

3. I am having a headache.

4. I has a headache.

Question ID : 630680530045

Option 1 ID : 6306802072108

Option 2 ID : 6306802072106

Option 3 ID : 6306802072105

Option 4 ID : 6306802072107

Status : Answered

Chosen Option : 2

Q.4 Identify the adjective that can be placed alongside the underlined word to complete the given sentence.
The child sang for about five minutes and there was a _____ applause after that.

- Ans

1. rare

2. tremendous

3. trembling

4. wild

Question ID : 630680530037

Option 1 ID : 6306802072076

Option 2 ID : 6306802072074

Option 3 ID : 6306802072073

Option 4 ID : 6306802072075

Status : Answered

Chosen Option : 2

Q.5 Select the correctly spelt word.

- Ans  1. Rondenvos
-  2. Rendezvous
-  3. Rendenvus
-  4. Rondenvous

Question ID : 630680530076
Option 1 ID : 6306802072232
Option 2 ID : 6306802072231
Option 3 ID : 6306802072229
Option 4 ID : 6306802072230
Status : Answered
Chosen Option : 2

Q.6 Select the most appropriate synonym of the underlined word.
The sunrise at Kanyakumari is gorgeous.

- Ans  1. Deterring
-  2. Enticing
-  3. Beguiling
-  4. Lovely

Question ID : 630680530071
Option 1 ID : 6306802072212
Option 2 ID : 6306802072210
Option 3 ID : 6306802072209
Option 4 ID : 6306802072211
Status : Answered
Chosen Option : 4

Q.7 Identify the option in which the idiom correctly fits the context of the given sentence.

- Ans  1. In mystery tales, the readers pay through the nose.
-  2. In mystery tales, the readers take a leaf out of someone's book.
-  3. In mystery tales, the readers are often led up the garden path.
-  4. In mystery tales, the readers often hold the fort.

Question ID : 630680530059
Option 1 ID : 6306802072161
Option 2 ID : 6306802072164
Option 3 ID : 6306802072162
Option 4 ID : 6306802072163
Status : Answered
Chosen Option : 3

Q.8 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. Surveys and online polls indicate that the prevalence of veganism has risen worldwide in the last few years. According to these sources, 6% of the US population follows a strict plant-based. i.e., vegan diet, compared to up to 4% in Europe and 13% in Asia.

B. Replacing animal sources, namely red meat and milk, with plant-based sources has the potential to have an impact on cutting greenhouse gas emissions.

C. And though the motivations for following a vegan diet are diverse, including animal welfare, religious aspects, and environmental sustainability, one important reason is health benefits.

D. A transition toward healthy and environmentally sustainable food is among major global challenges.

E. That is a reason for the growing popularity of diets eliminating or reducing meat, milk, dairy and eggs, especially in wealthy developed countries. A vegan diet, strictly excluding all kinds of animal-derived foods, has gained popularity and is of immense public health interest.

- Ans
1. DAECB

2. ADBEC

3. DBEAC

4. ACEBD

Question ID : 630680530052

Option 1 ID : 6306802072135

Option 2 ID : 6306802072134

Option 3 ID : 6306802072133

Option 4 ID : 6306802072136

Status : Answered

Chosen Option : 3

Q.9 Select the most appropriate synonym of the underlined word.
The handmade chocolates were heavenly.

- Ans
1. Dull

2. Mundane

3. Dazzling

4. Delectable

Question ID : 630680530072

Option 1 ID : 6306802072216

Option 2 ID : 6306802072215

Option 3 ID : 6306802072213

Option 4 ID : 6306802072214

Status : Answered

Chosen Option : 3

Q.10 Select the most appropriate option to fill in the blank.
There are many large shops in _____.

- Ans ☒ 1. Oxford Street
- ☒ 2. the Oxford Street
- ☒ 3. an Oxford Street
- ☒ 4. a Oxford Street

Question ID : 630680530031
Option 1 ID : 6306802072052
Option 2 ID : 6306802072050
Option 3 ID : 6306802072051
Option 4 ID : 6306802072049
Status : Answered
Chosen Option : 2

Q.11 Identify the option in which the idiom correctly fits the context of the given sentence.

- Ans ☒ 1. Jack has been here for years – he'll show you the ropes.
- ☒ 2. Jack has been here for years – he'll turn over a new leaf.
- ☒ 3. Jack has been here for years – he 'll see red.
- ☒ 4. Jack has been here for years – he'll get something off.

Question ID : 630680530055
Option 1 ID : 6306802072146
Option 2 ID : 6306802072148
Option 3 ID : 6306802072145
Option 4 ID : 6306802072147
Status : Answered
Chosen Option : 1

Q.12 Select the most appropriate option to fill in the blank.
_____ is a series of passenger train services in India, operated by Indian Railways, connecting New Delhi to the capitals of various states.

- Ans ☒ 1. Rajdhani
- ☒ 2. An Rajdhani Express
- ☒ 3. A Rajdhani Express
- ☒ 4. The Rajdhani Express

Question ID : 630680530033
Option 1 ID : 6306802072059
Option 2 ID : 6306802072060
Option 3 ID : 6306802072057
Option 4 ID : 6306802072058
Status : Answered
Chosen Option : 4

Q.13 Select the most appropriate ANTONYM of the underlined word.
I thanked the editor for carefully reading the paper and pointing out several oversights.

- Ans  1. Precision
-  2. Anticipation
-  3. Negligence
-  4. Errors

Question ID : 630680530065

Option 1 ID : 6306802072187

Option 2 ID : 6306802072188

Option 3 ID : 6306802072186

Option 4 ID : 6306802072185

Status : Answered

Chosen Option : 2

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. And we don't just want to talk about it, but make sure it is real.
B. This is false and has to stop. For the record, feminism is: "The belief that men and women should have equal rights and opportunities."
C. This is the first campaign of its kind at the UN: we want to try and galvanise as many men and boys as possible to be advocates for gender equality.
D. I have been a Goodwill ambassador for six months and the more I have spoken about feminism the more I have realised that many people believe that fighting for women's rights is equal to hating men.
E. I want to talk to you because I need your help. We want to end gender inequality-and to do that we need everyone to be involved.

- Ans  1. ECADB
-  2. EACBD
-  3. CBADE
-  4. DEBAC

Question ID : 630680530049

Option 1 ID : 6306802072122

Option 2 ID : 6306802072123

Option 3 ID : 6306802072121

Option 4 ID : 6306802072124

Status : Answered

Chosen Option : 1

Comprehension:

Read the given passage and answer the questions that follow.

The word ‘sport’ stands for five elements - sincerity, punctuality, obedience, regularity and tenacity. These are also the essential qualities of a person to prosper in life. So, sport is a way to physical fitness, and so it has an important role in men's life.

The proverb runs "All work and no play make Jack a dull boy." It tells upon our nerves and we lose our enthusiasm. Sports can refresh us and supply fresh vigour. It makes someone physically fit and mentally alert. It must be remembered that wealth or education is of little use to a person who suffers from ill-health. So physical exercise is a must. But it varies according to age and sex of an individual. Everybody can select a sport of his own choice and take part in it. But over exercise and wrong choice of exercise may be harmful. In this respect, the advice of an expert in physical education is quite useful. Walking and deep breathing are also good exercises. A few minutes and a small open space are enough for it. The importance of sports and games have been acclaimed by medical science. Sports and exercise help us to remain fit and live longer. They shape and tone our body muscles and as a result the possibilities of muscular sprains are minimised. Besides, sport is an excellent source of recreation. It freshens our mind and enlivens our spirit. There are different kinds of sports like football, cricket, athletics, swimming, tennis, etc. Different people may have different choices regarding them. Even some indoor sports like table tennis or badminton keep body fit while playing chess increases one's intelligence and concentration.

SubQuestion No : 15

Q.15 What does the proverb ‘All work and no play make Jack a dull boy’ mean?

- Ans
1. Sportsmen are physically and mentally alert.
2. Life without any physical activity tells upon our nerves and we lose our enthusiasm.
3. The life of a sportsman is different from the dull life of an ordinary individual.
4. Lifelong slogging can lead to ill health.

Question ID : 630680530083

Option 1 ID : 6306802072255

Option 2 ID : 6306802072254

Option 3 ID : 6306802072253

Option 4 ID : 6306802072256

Status : Answered

Chosen Option : 2

Comprehension:

Read the given passage and answer the questions that follow.

The word ‘sport’ stands for five elements - sincerity, punctuality, obedience, regularity and tenacity. These are also the essential qualities of a person to prosper in life. So, sport is a way to physical fitness, and so it has an important role in men's life.

The proverb runs "All work and no play make Jack a dull boy." It tells upon our nerves and we lose our enthusiasm. Sports can refresh us and supply fresh vigour. It makes someone physically fit and mentally alert. It must be remembered that wealth or education is of little use to a person who suffers from ill-health. So physical exercise is a must. But it varies according to age and sex of an individual. Everybody can select a sport of his own choice and take part in it. But over exercise and wrong choice of exercise may be harmful. In this respect, the advice of an expert in physical education is quite useful. Walking and deep breathing are also good exercises. A few minutes and a small open space are enough for it. The importance of sports and games have been acclaimed by medical science. Sports and exercise help us to remain fit and live longer. They shape and tone our body muscles and as a result the possibilities of muscular sprains are minimised. Besides, sport is an excellent source of recreation. It freshens our mind and enlivens our spirit. There are different kinds of sports like football, cricket, athletics, swimming, tennis, etc. Different people may have different choices regarding them. Even some indoor sports like table tennis or badminton keep body fit while playing chess increases one's intelligence and concentration.

SubQuestion No : 16

Q.16 Which of the following words from the passage means ‘determination’?

- Ans  1. Enthusiasm
-  2. Tenacity
-  3. Punctuality
-  4. Sincerity

Question ID : 630680530082

Option 1 ID : 6306802072252

Option 2 ID : 6306802072251

Option 3 ID : 6306802072250

Option 4 ID : 6306802072249

Status : Answered

Chosen Option : 4

Comprehension:

Read the given passage and answer the questions that follow.

The word ‘sport’ stands for five elements - sincerity, punctuality, obedience, regularity and tenacity. These are also the essential qualities of a person to prosper in life. So, sport is a way to physical fitness, and so it has an important role in men's life.

The proverb runs "All work and no play make Jack a dull boy." It tells upon our nerves and we lose our enthusiasm. Sports can refresh us and supply fresh vigour. It makes someone physically fit and mentally alert. It must be remembered that wealth or education is of little use to a person who suffers from ill-health. So physical exercise is a must. But it varies according to age and sex of an individual. Everybody can select a sport of his own choice and take part in it. But over exercise and wrong choice of exercise may be harmful. In this respect, the advice of an expert in physical education is quite useful. Walking and deep breathing are also good exercises. A few minutes and a small open space are enough for it. The importance of sports and games have been acclaimed by medical science. Sports and exercise help us to remain fit and live longer. They shape and tone our body muscles and as a result the possibilities of muscular sprains are minimised. Besides, sport is an excellent source of recreation. It freshens our mind and enlivens our spirit. There are different kinds of sports like football, cricket, athletics, swimming, tennis, etc. Different people may have different choices regarding them. Even some indoor sports like table tennis or badminton keep body fit while playing chess increases one's intelligence and concentration.

SubQuestion No : 17

Q.17 According to the author, which of the following life goals CANNOT be achieved by sports?

- Ans
1. Mental health

2. Dullness of spirit

3. Physical fitness

4. Healthy body

Question ID : 630680530081

Option 1 ID : 6306802072247

Option 2 ID : 6306802072248

Option 3 ID : 6306802072245

Option 4 ID : 6306802072246

Status : Answered

Chosen Option : 2

Q.18 Select the most appropriate ANTONYM of the underlined word.

The governor faced hostile crowds when he visited the town yesterday.

- Ans
1. Intimidating

2. Adverse

3. Hospitable

4. Welcoming

Question ID : 630680530068

Option 1 ID : 6306802072198

Option 2 ID : 6306802072199

Option 3 ID : 6306802072197

Option 4 ID : 6306802072200

Status : Answered

Chosen Option : 4

Q.19 Identify the option in which the proverb correctly fits the context of the given sentence.

- Ans ☒ 1. He believes the average consumer is being led down the garden path by the promises in advertisements.
- ☐ 2. He believes the average consumer takes something to heart by the promises in advertisements.
- ☐ 3. He believes the average consumer sees red by the promises in advertisements.
- ☐ 4. He believes the average consumer is made to pay through their nose by the promises in advertisements.

Question ID : 630680530062

Option 1 ID : 6306802072174

Option 2 ID : 6306802072175

Option 3 ID : 6306802072176

Option 4 ID : 6306802072173

Status : Answered

Chosen Option : 4

Q.20 Select the most appropriate synonym of the underlined word.
The design on the hand-woven shawl was beautiful.

- Ans ☐ 1. Affable
- ☐ 2. Agreeable
- ☒ 3. Exquisite
- ☐ 4. Amiable

Question ID : 630680530075

Option 1 ID : 6306802072227

Option 2 ID : 6306802072225

Option 3 ID : 6306802072226

Option 4 ID : 6306802072228

Status : Answered

Chosen Option : 3

Section : Domain Knowledge

Q.1 The dimensions of 'thermal conductivity' is:

- Ans ☐ 1. $[ML^2 T^{-2} K^{-1}]$
- ☐ 2. $[ML T^{-3} K]$
- ☒ 3. $[ML T^{-3} K^{-1}]$
- ☐ 4. $[ML T^{-2} K]$

Question ID : 630680530152

Option 1 ID : 6306802072524

Option 2 ID : 6306802072521

Option 3 ID : 6306802072522

Option 4 ID : 6306802072523

Status : Answered

Chosen Option : 1

Q.2 Which of the following matrices is a symmetric matrix?

Ans

 1. $\begin{bmatrix} 2 & -3 & 4 \\ 3 & -3 & 4 \\ 4 & -4 & 4 \end{bmatrix}$

 2. $\begin{bmatrix} 2 & 3 & 4 \\ 3 & -3 & 4 \\ 4 & 4 & 4 \end{bmatrix}$

 3. $\begin{bmatrix} 2 & 3 & 4 \\ -2 & -3 & -4 \\ 2 & 3 & 4 \end{bmatrix}$

 4. $\begin{bmatrix} 2 & 3 & 4 \\ 3 & 3 & -4 \\ 4 & 4 & 4 \end{bmatrix}$

Question ID : 630680530114
Option 1 ID : 6306802072371
Option 2 ID : 6306802072370
Option 3 ID : 6306802072369
Option 4 ID : 6306802072372
Status : Answered
Chosen Option : 2

Q.3 A circuit consisting of an inductor (L) and a capacitor (C) oscillates at a frequency of 1.0 kHz. If L= 50 mH, then C is close to (consider $\pi^2 \sim 10$):

Ans

 1. 50 m F

 2. 1.0 μ F

 3. 25 μ F

 4. 0.5 μ F

Question ID : 630680530129
Option 1 ID : 6306802072431
Option 2 ID : 6306802072430
Option 3 ID : 6306802072432
Option 4 ID : 6306802072429
Status : Answered
Chosen Option : 4

Q.4 Three blocks A (5.0 kg), B (3.0 kg) and C (2.0 kg) lie on a horizontal smooth surface. They are connected by light strings parallel to the surface. Block C is pulled horizontally with a force of 50 N. Let T_1 and T_2 be the tensions in string connecting A to B and B to C, respectively. Then (T_2/T_1) is:

- Ans
- ✖

1.

$\frac{5}{8}$

✖

2.

$\frac{4}{3}$

✔

3.

$\frac{8}{5}$

✖

4.

$\frac{3}{4}$

Question ID : 630680530141

Option 1 ID : 6306802072477

Option 2 ID : 6306802072479

Option 3 ID : 6306802072480

Option 4 ID : 6306802072478

Status : Marked For Review

Chosen Option : 1

Q.5 What is the area of the region bounded by the curve $y = \sqrt{32 - x^2}$ and x – axis in the first quadrant?

- Ans
- ✖

1.

32π sq units
- ✖

2.

4π sq units
- ✔

3.

8π sq units
- ✖

4.

$4\sqrt{2}\pi$ sq units

Question ID : 630680530096

Option 1 ID : 6306802072300

Option 2 ID : 6306802072297

Option 3 ID : 6306802072298

Option 4 ID : 6306802072299

Status : Answered

Chosen Option : 3

Q.6 A diatomic molecule, treated as a rigid rotator has _____ degree of freedom.

- Ans
- ✖

1.

4
- ✔

2.

5
- ✖

3.

3
- ✖

4.

7

Question ID : 630680530149

Option 1 ID : 6306802072510

Option 2 ID : 6306802072511

Option 3 ID : 6306802072509

Option 4 ID : 6306802072512

Status : Answered

Chosen Option : 4

Q.7 If $|A| = 4$ and $|B| = 5$, then what is the value of $|AB|$?

- Ans
- ✖

1.

9

✖

2.

16

✔

3.

20

✖

4.

25

Question ID : 630680530113

Option 1 ID : 6306802072366

Option 2 ID : 6306802072367

Option 3 ID : 6306802072365

Option 4 ID : 6306802072368

Status : Answered

Chosen Option : 3

Q.8 When sunlight passes through the earth’s atmosphere, it gets scattered by atmospheric particles. For a light of wavelength λ , the amount of scattering is proportional to:

- Ans
- ✔

1.

$\frac{1}{\lambda^4}$

✖

2.

λ^4

✖

3.

$\frac{1}{\lambda^2}$

✖

4.

λ^2

Question ID : 630680530144

Option 1 ID : 6306802072490

Option 2 ID : 6306802072492

Option 3 ID : 6306802072489

Option 4 ID : 6306802072491

Status : Answered

Chosen Option : 2

Q.9 The pressure P, of an ideal gas (RMS speed v_{rms}) is reduced to $(P/2)$ in an isothermal process. The root mean square speed of molecules becomes $n v_{rms}$, where n is:

- Ans
- ✖

1.

$\sqrt{2}$

✖

2.

$\frac{1}{\sqrt{2}}$

✖

3.

2

✔

4.

1

Question ID : 630680530150

Option 1 ID : 6306802072513

Option 2 ID : 6306802072514

Option 3 ID : 6306802072516

Option 4 ID : 6306802072515

Status : Answered

Chosen Option : 2

Q.10 An AC voltage is applied to a pure capacitor. The current in the capacitor _____ the voltage by _____.

- Ans
- ✓ 1. leads, $\frac{\pi}{2}$
 - ✗ 2. lags, π
 - ✗ 3. lags, $\frac{\pi}{2}$
 - ✗ 4. leads, π

Question ID : 630680530127
Option 1 ID : 6306802072424
Option 2 ID : 6306802072421
Option 3 ID : 6306802072423
Option 4 ID : 6306802072422
Status : Answered
Chosen Option : 1

Q.11 A ball is projected from point (0, 0) at t = 0 s. At a height of 15 m, it has a velocity (in m/s) $v = 8.0\mathbf{i} + 10\mathbf{j}$. $\mathbf{i}$ and $\mathbf{j}$ are unit vectors along x-axis and y-axis. The maximum height the ball rises is (neglect air resistance and take $g = 10\text{ m/s}^2$):

- Ans
- ✓ 1. 20 m
 - ✗ 2. 40 m
 - ✗ 3. 25 m
 - ✗ 4. 30 m

Question ID : 630680530137
Option 1 ID : 6306802072461
Option 2 ID : 6306802072464
Option 3 ID : 6306802072462
Option 4 ID : 6306802072463
Status : Answered
Chosen Option : 1

Q.12 What are the coordinates of the image of the point (2, 3) in the line (where line acts like a mirror) $x + 3y = 5$?

- Ans
- ✗ 1. $(\frac{4}{5}, \frac{3}{5})$
 - ✓ 2. $(\frac{4}{5}, -\frac{3}{5})$
 - ✗ 3. (-2, -3)
 - ✗ 4. $(\frac{1}{2}, \frac{1}{3})$

Question ID : 630680530106
Option 1 ID : 6306802072339
Option 2 ID : 6306802072338
Option 3 ID : 6306802072337
Option 4 ID : 6306802072340
Status : Answered
Chosen Option : 2

Q.13 If a particle moves in a straight line such that the distance travelled in time t is given by the equation $S = 5t^2 + 16t + 9$, what is the initial velocity of the particle (in units/time)?

- Ans
- ✓

1.

16

✗

2.

35

✗

3.

25

✗

4.

9

Question ID : 630680530095

Option 1 ID : 6306802072293

Option 2 ID : 6306802072295

Option 3 ID : 6306802072296

Option 4 ID : 6306802072294

Status : Answered

Chosen Option : 1

Q.14 Evaluate the given expression.

$$\int \frac{\sqrt{81 - (\log x)^2}}{x} dx$$

- Ans
- ✗

1.

$\frac{x}{2}\sqrt{81 - (\log x)^2} + \frac{81}{2}\sin^{-1}\left(\frac{x}{9}\right) + C$

✗

2.

$\frac{x}{2}\sqrt{81 - (x)^2} + \frac{81}{2}\sin^{-1}\left(\frac{x}{9}\right) + C$

✓

3.

$\frac{\log x}{2}\sqrt{81 - (\log x)^2} + \frac{81}{2}\sin^{-1}\left(\frac{\log x}{9}\right) + C$

✗

4.

$\frac{\log x}{2}\sqrt{81 - (x)^2} + \frac{9}{2}\sin^{-1}\left(\frac{\log x}{9}\right) + C$

Question ID : 630680530099

Option 1 ID : 6306802072310

Option 2 ID : 6306802072311

Option 3 ID : 6306802072309

Option 4 ID : 6306802072312

Status : Answered

Chosen Option : 4

Q.15 At which of the points is the function $f(x) = [x]$, where $[x]$ is the greatest integer function continuous?

- Ans ☒ 1. 3.6
☐ 2. -4
☐ 3. 3
☐ 4. 0

Question ID : 630680530097
Option 1 ID : 6306802072301
Option 2 ID : 6306802072304
Option 3 ID : 6306802072303
Option 4 ID : 6306802072302

Status : Answered

Chosen Option : 1

Q.16 A telescope has objective of diameter 2.44 m. For light of wavelength $0.5\mu\text{m}$, its resolving power is:

- Ans ☐ 1. 2×10^4
☐ 2. 4×10^4
☐ 3. 2×10^5
☒ 4. 4×10^6

Question ID : 630680530145
Option 1 ID : 6306802072493
Option 2 ID : 6306802072495
Option 3 ID : 6306802072494
Option 4 ID : 6306802072496

Status : Not Attempted and Marked For Review

Chosen Option : --

Q.17 What is the sum to infinity of the given geometric progression?

2, 0.2, 0.02, 0.002,

- Ans ☒ 1. 2.22222...
☐ 2. 3.00
☐ 3. $\frac{99}{200}$
☐ 4. $\frac{200}{99}$

Question ID : 630680530122
Option 1 ID : 6306802072404
Option 2 ID : 6306802072403
Option 3 ID : 6306802072401
Option 4 ID : 6306802072402

Status : Answered

Chosen Option : 1

Q.18 Which of the following represents an empty set?

- Ans
- ✓

1.

Set of Vowels in the word SYNCH

✗

2.

Set of Prime numbers lesser than 10

✗

3.

Set of Consonants in the word GIRLS

✗

4.

Set of Months of a year starting with the letter A

Question ID : 630680530124

Option 1 ID : 6306802072410

Option 2 ID : 6306802072412

Option 3 ID : 6306802072409

Option 4 ID : 6306802072411

Status : Answered

Chosen Option : 1

Q.19 A physical quantity X is given by $X = a^2 b^3 c^{-1/2} d^{1/2}$. If the percentage errors in measurement of a, b, c and d are 1%, 3%, 4% and 2%, respectively, then the percentage error in result of X will be:

- Ans
- ✗

1.

11%

✗

2.

12%

✓

3.

14%

✗

4.

13%

Question ID : 630680530154

Option 1 ID : 6306802072529

Option 2 ID : 6306802072530

Option 3 ID : 6306802072532

Option 4 ID : 6306802072531

Status : Answered

Chosen Option : 2

Q.20 A ball is projected horizontally with a speed of 20 m/s from a point (0 m, 10 m) in x-y plane. The ball strikes the ground at point (x m, 0 m), where x is (take $g = 10 \text{ m/s}^2$):

- Ans
- ✓

1.

40 m

✗

2.

20 m

✗

3.

10m

✗

4.

60 m

Question ID : 630680530134

Option 1 ID : 6306802072451

Option 2 ID : 6306802072450

Option 3 ID : 6306802072449

Option 4 ID : 6306802072452

Status : Marked For Review

Chosen Option : 2

Q.21 A ball is thrown upward at a place where the acceleration due to gravity is 9.8 m/s^2 . The acceleration of the ball during its motion upward and at its highest point, respectively, are:

- Ans
- ☒ 1. -9.8 m/s^2 and -9.8 m/s^2
 - ☐ 2. -9.8 m/s^2 and 0
 - ☐ 3. -9.8 m/s^2 and 9.8 m/s^2
 - ☐ 4. 9.8 m/s^2 and 0

Question ID : 630680530135
Option 1 ID : 6306802072456
Option 2 ID : 6306802072454
Option 3 ID : 6306802072455
Option 4 ID : 6306802072453
Status : Answered
Chosen Option : 1

Q.22 Two coils are arranged close to each other. When the current in one coil changes from 0 A to 10 A in 0.5 s, the flux linked with the other coil changes by 40 Wb, during the same period. The mutual inductance of the coils is:

- Ans
- ☒ 1. 4.0 H
 - ☐ 2. 2.0 H
 - ☐ 3. 6.0 H
 - ☐ 4. 8.0 H

Question ID : 630680530130
Option 1 ID : 6306802072434
Option 2 ID : 6306802072433
Option 3 ID : 6306802072435
Option 4 ID : 6306802072436
Status : Marked For Review
Chosen Option : 2

Q.23 Which of the following is NOT an element of the set numbers belonging to Fibonacci sequence?

- Ans
- ☐ 1. 34
 - ☐ 2. 13
 - ☒ 3. 7
 - ☐ 4. 89

Question ID : 630680530108
Option 1 ID : 6306802072347
Option 2 ID : 6306802072346
Option 3 ID : 6306802072345
Option 4 ID : 6306802072348
Status : Answered
Chosen Option : 3

Q.24 An AC source (220V, 50 Hz) is applied to a series LCR circuit ($R = 12\Omega$, $X_L = 32\Omega$ and $X_C = 16\Omega$). Symbols have their usual meanings. The power dissipated and the power factor, respectively, are:

- Ans
- ☒ 1. 1.452 kW, 0.4
 - ☒ 2. 726 W, 0.6
 - ☒ 3. 726 W, 0.4
 - ☒ 4. 1.452 kW, 0.6

Question ID : 630680530131
Option 1 ID : 6306802072439
Option 2 ID : 6306802072438
Option 3 ID : 6306802072437
Option 4 ID : 6306802072440
Status : Answered
Chosen Option : 4

Q.25 Rahul (mass 60 kg) is standing on a frictionless plane surface. He kicks a box of 2.0 kg lying near his feet, giving it a velocity of (3.0 m/s)i. The velocity of Rahul after the kick is:

- Ans
- ☒ 1. $-(3.0 \text{ m/s}) \text{ i}$
 - ☒ 2. 0
 - ☒ 3. $-(0.1 \text{ m/s}) \text{ i}$
 - ☒ 4. $(0.1 \text{ m/s}) \text{ i}$

Question ID : 630680530140
Option 1 ID : 6306802072476
Option 2 ID : 6306802072473
Option 3 ID : 6306802072475
Option 4 ID : 6306802072474
Status : Answered
Chosen Option : 3

Q.26 $A = \{24, 36, 48\}$ and $B = \{12, 18, 24\}$, $f: A \rightarrow B$. Which of the following functions is neither one-one nor onto where $f: N \rightarrow N$?

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

Question ID : 630680530120
Option 1 ID : 6306802072393
Option 2 ID : 6306802072396
Option 3 ID : 6306802072394
Option 4 ID : 6306802072395
Status : Answered
Chosen Option : 4

Q.27 What is the value of $-16 \bmod 5$?

- Ans
- ☐ 1. 2
 - ☐ 2. 1
 - ☒ 3. 4
 - ☐ 4. 11

Question ID : 630680530107
Option 1 ID : 6306802072344
Option 2 ID : 6306802072343
Option 3 ID : 6306802072341
Option 4 ID : 6306802072342
Status : Answered
Chosen Option : 2

Q.28 Which of the following is the solution of the given inequality,

$8x + 2 \geq 2x + 14$, where x is a real number?

- Ans
- ☐ 1. $(-\infty, \infty)$
 - ☐ 2. $[-2, 2]$
 - ☒ 3. $[2, \infty)$
 - ☐ 4. $(2, \infty)$

Question ID : 630680530110
Option 1 ID : 6306802072356
Option 2 ID : 6306802072355
Option 3 ID : 6306802072353
Option 4 ID : 6306802072354
Status : Answered
Chosen Option : 3

Q.29 What is the equation of an ellipse whose focus is at (3, 0) and length of its major axis is 10?

Ans

✗ 1. $\frac{x^2}{25} - \frac{y^2}{16} = 1$

✓ 2. $\frac{x^2}{25} + \frac{y^2}{16} = 1$

✗ 3. $\frac{x^2}{9} + \frac{y^2}{10} = 1$

✗ 4. $\frac{x^2}{16} + \frac{y^2}{25} = 1$

Question ID : 630680530105

Option 1 ID : 6306802072334

Option 2 ID : 6306802072335

Option 3 ID : 6306802072336

Option 4 ID : 6306802072333

Status : Marked For Review

Chosen Option : 2

Q.30 $5^n - 5$ is divisible by which of the following numbers?

Ans ✗ 1. 11

✓ 2. 4

✗ 3. 9

✗ 4. 7

Question ID : 630680530117

Option 1 ID : 6306802072384

Option 2 ID : 6306802072381

Option 3 ID : 6306802072383

Option 4 ID : 6306802072382

Status : Answered

Chosen Option : 2

Q.31 Meena is driving a car of mass m along a circular path of radius R . The coefficient of static friction between the tyres of the car and the road is μ . The maximum speed with which she can drive the car without slipping is (g = acceleration due to gravity):

Ans ✗ 1. $\sqrt{(Rg)/\mu}$

✗ 2. $\sqrt{2\mu Rg}$

✗ 3. $2\sqrt{\mu Rg}$

✓ 4. $\sqrt{\mu Rg}$

Question ID : 630680530138

Option 1 ID : 6306802072468

Option 2 ID : 6306802072466

Option 3 ID : 6306802072467

Option 4 ID : 6306802072465

Status : Not Answered

Chosen Option : --

Q.32 A ball is projected from origin in x y plane, with velocity u making an angle θ_0 with the x-axis. The horizontal range of the ball is:

- Ans
1.

$\left(\frac{u^2}{g}\right) \sin \theta_0$

2.

$\left(\frac{u^2}{2g}\right) \sin 2\theta_0$

3.

$\left(\frac{u^2}{2g}\right) \sin \theta_0$

4.

$\left(\frac{u^2}{g}\right) \sin 2\theta_0$

Question ID : 630680530133

Option 1 ID : 6306802072447

Option 2 ID : 6306802072446

Option 3 ID : 6306802072445

Option 4 ID : 6306802072448

Status : Marked For Review

Chosen Option : 3

Q.33 If $f(x) = \sin x$, $g(x) = 3x$ and $h(x) = x + 4$, then what is $ho(gof)$?

- Ans
1.

$\sin 3x + 4$

2.

$\sin x + 4x + 4$

3.

$\sin(3x + 4)$

4.

$3\sin x + 4$

Question ID : 630680530121

Option 1 ID : 6306802072397

Option 2 ID : 6306802072400

Option 3 ID : 6306802072398

Option 4 ID : 6306802072399

Status : Answered

Chosen Option : 4

Q.34 The length of a simple pendulum is increased by 10%. Its time period increases by about:

- Ans
1.

7.5%

2.

5%

3.

2.5%

4.

10%

Question ID : 630680530148

Option 1 ID : 6306802072507

Option 2 ID : 6306802072506

Option 3 ID : 6306802072505

Option 4 ID : 6306802072508

Status : Marked For Review

Chosen Option : 2

Q.35 A particle is moving in simple harmonic motion according to $x(t) = 2.0 \sin(40t)$, where x is in metres and t is in seconds. Its maximum velocity (in m/s) is:

- Ans
- ☒ 1. 160
 - ☒ 2. $80 \sin(40t)$
 - ☒ 3. 80
 - ☒ 4. $80 \cos(40t)$

Question ID : 630680530147
Option 1 ID : 6306802072504
Option 2 ID : 6306802072501
Option 3 ID : 6306802072503
Option 4 ID : 6306802072502
Status : Answered
Chosen Option : 3

Q.36 Which of the following is the solution of the given inequality $6x + 7 \leq x - 28$, where x is a natural number?

- Ans
- ☒ 1. No solution
 - ☒ 2. $x \geq 5$
 - ☒ 3. $x \geq 3$
 - ☒ 4. $x \leq -5$

Question ID : 630680530109
Option 1 ID : 6306802072351
Option 2 ID : 6306802072349
Option 3 ID : 6306802072352
Option 4 ID : 6306802072350
Status : Answered
Chosen Option : 1

Q.37 A company manufactures educational toys and its cost equation for a week is $C = 300 + 1.5x$ and its revenue equation is $R = 2x$, where x is the number of toys sold in a week. How many toys must be sold per week so that the company realises a profit?

- Ans
- ☒ 1. More than 750
 - ☒ 2. More than 900
 - ☒ 3. More than 600
 - ☒ 4. More than 825

Question ID : 630680530111
Option 1 ID : 6306802072359
Option 2 ID : 6306802072357
Option 3 ID : 6306802072360
Option 4 ID : 6306802072358
Status : Answered
Chosen Option : 3

Q.38 A speaks the truth in 70% cases and B speaks the truth in 84% cases. What is the probability that they contradict each other on a statement?

- Ans
1.

0.154

2.

0.636

3.

0.140

4.

0.364

Question ID : 630680530118

Option 1 ID : 6306802072386

Option 2 ID : 6306802072388

Option 3 ID : 6306802072385

Option 4 ID : 6306802072387

Status : Answered

Chosen Option : 4

Q.39 If the function

$f(x) = \begin{cases} \frac{\sin x}{x} + \sec x, & x \neq 0 \\ a & x = 0 \end{cases}$ is continuous at $x = 0$, what is the value of a ?

- Ans
1.

0

2.

$\frac{1}{2}$

3.

1

4.

2

Question ID : 630680530098

Option 1 ID : 6306802072306

Option 2 ID : 6306802072307

Option 3 ID : 6306802072305

Option 4 ID : 6306802072308

Status : Answered

Chosen Option : 4

Q.40 A constant current I is maintained in a coil of pure inductance L . The energy stored in the coil is:

- Ans
1.

$\left(\frac{1}{2}\right) L I^2$

2.

$\left(\frac{1}{4}\right) L I^2$

3.

$L I^2$

4.

$L I$

Question ID : 630680530128

Option 1 ID : 6306802072426

Option 2 ID : 6306802072425

Option 3 ID : 6306802072428

Option 4 ID : 6306802072427

Status : Answered

Chosen Option : 1

Q.41 An electron in a hydrogen atom (Bohr model) makes a transition from $n = 2$ state to $n = 1$ state. The frequency of the emitted photon is (take $R = 1.0 \times 10^7 \text{ m}^{-1}$):

- Ans
- ☒ 1. $2.25 \times 10^{15} \text{ Hz}$
 - ☐ 2. $3.26 \times 10^{14} \text{ Hz}$
 - ☐ 3. $2.45 \times 10^{14} \text{ Hz}$
 - ☐ 4. $1.24 \times 10^{13} \text{ Hz}$

Question ID : 630680530143
Option 1 ID : 6306802072488
Option 2 ID : 6306802072487
Option 3 ID : 6306802072486
Option 4 ID : 6306802072485
Status : Answered
Chosen Option : 1

Q.42 A block of 20 kg is lying on a rough horizontal surface. A force of 50 N is applied to the block horizontally, but the block does not move at all. The force of friction acting on the block is (given $g = 10 \text{ m/s}^2$):

- Ans
- ☐ 1. 1000 N
 - ☐ 2. 200 N
 - ☒ 3. 50 N
 - ☐ 4. 0 N

Question ID : 630680530139
Option 1 ID : 6306802072472
Option 2 ID : 6306802072471
Option 3 ID : 6306802072470
Option 4 ID : 6306802072469
Status : Marked For Review
Chosen Option : 2

Q.43 What is the number of words formed using the letters of the word COMPUTER, so that all the vowels are always together?

- Ans
- ☐ 1. 720
 - ☐ 2. 2460
 - ☐ 3. 540
 - ☒ 4. 4320

Question ID : 630680530116
Option 1 ID : 6306802072377
Option 2 ID : 6306802072380
Option 3 ID : 6306802072378
Option 4 ID : 6306802072379
Status : Answered
Chosen Option : 4

Q.44 In a Linear programming problem, what are the inequations $x \geq 0$ and $y \geq 0$ called?

- Ans
1.

Optimum values

2.

Corner points

3.

Non-negative constraints

4.

Positive constraints

Question ID : 630680530112

Option 1 ID : 6306802072363

Option 2 ID : 6306802072364

Option 3 ID : 6306802072361

Option 4 ID : 6306802072362

Status : Marked For Review

Chosen Option : 4

Q.45 What is the conjugate of the given complex number?

$z = 3i + 7$

- Ans
1.

$\bar{z} = 3 + 7i$

2.

$\bar{z} = -3i + 7$

3.

$\bar{z} = 3i - 7$

4.

$\bar{z} = -3i - 7$

Question ID : 630680530101

Option 1 ID : 6306802072320

Option 2 ID : 6306802072319

Option 3 ID : 6306802072317

Option 4 ID : 6306802072318

Status : Answered

Chosen Option : 2

Q.46 Which of the following functions is symmetric, but neither reflexive nor transitive?

- Ans
1.

$R = \{(T1, T2) : T1 \text{ is congruent to } T2, \text{ where } T \text{ is the set of triangles in a plane}\}$

2.

$R = \{(T1, T2) : T1 \text{ is similar to } T2, \text{ where } T \text{ is the set of triangles in a plane}\}$

3.

$R = \{(L1, L2) : L1 \text{ is parallel to } L2, \text{ where } L \text{ is the set of lines in a plane}\}$

4.

$R = \{(L1, L2) : L1 \text{ is perpendicular to } L2, \text{ where } L \text{ is the set of lines in a plane}\}$

Question ID : 630680530119

Option 1 ID : 6306802072389

Option 2 ID : 6306802072390

Option 3 ID : 6306802072391

Option 4 ID : 6306802072392

Status : Answered

Chosen Option : 4

Q.47 What is the value of $\lim_{x \rightarrow 12} \frac{x^3 - 1728}{x - 12}$?

- Ans
- ☐ 1. 0
 - ☐ 2. 3
 - ☐ 3. 144
 - ☒ 4. 432

Question ID : 630680530100
Option 1 ID : 6306802072313
Option 2 ID : 6306802072314
Option 3 ID : 6306802072315
Option 4 ID : 6306802072316
Status : Answered
Chosen Option : 4

Q.48 Mohan (mass 60 kg) runs up a flight of stairs having a rise of 5 m in 6 s. The average power supplied by him during run up is (take $g = 10 \text{ m/s}^2$):

- Ans
- ☐ 1. 0.72 kW
 - ☒ 2. 0.5 kW
 - ☐ 3. 3.0 kW
 - ☐ 4. 0.05 kW

Question ID : 630680530155
Option 1 ID : 6306802072535
Option 2 ID : 6306802072534
Option 3 ID : 6306802072536
Option 4 ID : 6306802072533
Status : Marked For Review
Chosen Option : 2

Q.49 Let $\lambda_1, \lambda_2, \lambda_3$ and λ_4 be wavelengths of Microwaves, Gamma rays, Ultraviolet rays and Infrared rays. Then:

- Ans
- ☐ 1. $\lambda_3 > \lambda_2 > \lambda_4 > \lambda_1$
 - ☐ 2. $\lambda_3 > \lambda_2 > \lambda_1 > \lambda_4$
 - ☒ 3. $\lambda_1 > \lambda_4 > \lambda_3 > \lambda_2$
 - ☐ 4. $\lambda_1 > \lambda_2 > \lambda_3 > \lambda_4$

Question ID : 630680530132
Option 1 ID : 6306802072443
Option 2 ID : 6306802072442
Option 3 ID : 6306802072444
Option 4 ID : 6306802072441
Status : Answered
Chosen Option : 3

Q.50 Which of the following spectral series lies in the visible region of hydrogen spectrum?

- Ans
- ☒ 1. Paschen series
 - ☒ 2. Brackett series
 - ☒ 3. Balmer series
 - ☒ 4. Lyman series

Question ID : 630680530142

Option 1 ID : 6306802072483

Option 2 ID : 6306802072484

Option 3 ID : 6306802072482

Option 4 ID : 6306802072481

Status : Answered

Chosen Option : 3

Q.51 Find three consecutive terms in an AP, whose sum and product are 48 and 3840, respectively.

- Ans
- ☒ 1. 12, 14, 16
 - ☒ 2. 14, 16, 18
 - ☒ 3. 16, 20, 24
 - ☒ 4. 12, 16, 20

Question ID : 630680530123

Option 1 ID : 6306802072405

Option 2 ID : 6306802072407

Option 3 ID : 6306802072406

Option 4 ID : 6306802072408

Status : Answered

Chosen Option : 4

Q.52 What is the centre and radius, respectively, of the circle represented by the equation $x^2 - 10x + y^2 + 8y = 77$?

- Ans
- ☒ 1. (5, -4); 6
 - ☒ 2. (5, 4); 6
 - ☒ 3. (-5, 4); 36
 - ☒ 4. (10, 8); 77

Question ID : 630680530104

Option 1 ID : 6306802072332

Option 2 ID : 6306802072329

Option 3 ID : 6306802072331

Option 4 ID : 6306802072330

Status : Answered

Chosen Option : 1

Q.53 If $(3i - 2)^2 + (5i + 6)^2 = a + ib$, what is the value of $a + b$?

- Ans
- ☒ 1. 144
 - ☒ 2. 102
 - ☒ 3. 54
 - ☒ 4. 48

Question ID : 630680530102

Option 1 ID : 6306802072324

Option 2 ID : 6306802072322

Option 3 ID : 6306802072321

Option 4 ID : 6306802072323

Status : Answered

Chosen Option : 3

Q.54 Which of the following are dimensionless quantities?

(i) Refractive index, (ii) Moment of inertia, (iii) Strain, (iv) Surface tension

- Ans
- ☒ 1. (ii) and (iii)
 - ☒ 2. (i) and (ii)
 - ☒ 3. (i) and (iii)
 - ☒ 4. (ii) and (iv)

Question ID : 630680530153

Option 1 ID : 6306802072528

Option 2 ID : 6306802072525

Option 3 ID : 6306802072526

Option 4 ID : 6306802072527

Status : Answered

Chosen Option : 3

Q.55 What is the square root of $z = 7 - 24i$?

- Ans
- ☒ 1. $\pm(4 + 3i)$
 - ☒ 2. $\pm(4i + 3)$
 - ☒ 3. $\pm(4i - 3)$
 - ☒ 4. $\pm(4 - 3i)$

Question ID : 630680530103

Option 1 ID : 6306802072326

Option 2 ID : 6306802072328

Option 3 ID : 6306802072327

Option 4 ID : 6306802072325

Status : Answered

Chosen Option : 4

Q.56 Which of the following is NOT an SI unit?

- Ans
- ☒ 1. Kilogram
 - ☒ 2. Ampere
 - ☒ 3. Litre
 - ☒ 4. Kelvin

Question ID : 630680530151
Option 1 ID : 6306802072517
Option 2 ID : 6306802072518
Option 3 ID : 6306802072519
Option 4 ID : 6306802072520
Status : Answered
Chosen Option : 3

Q.57 The position(x) –time(t) graph of a ball is a straight line inclined at an angle of 30° to the x-axis. The ball is moving with:

- Ans
- ☒ 1. increasing acceleration
 - ☒ 2. increasing velocity
 - ☒ 3. constant velocity
 - ☒ 4. decreasing acceleration

Question ID : 630680530136
Option 1 ID : 6306802072457
Option 2 ID : 6306802072460
Option 3 ID : 6306802072459
Option 4 ID : 6306802072458
Status : Answered
Chosen Option : 3

Q.58 A point mass has a velocity $\mathbf{v} = (1.0 \text{ m/s}) \mathbf{i} + (3.0 \text{ m/s}) \mathbf{j}$, at a certain instant. At the same instant, it experiences a force $\mathbf{F} = - (2.0 \text{ N}) \mathbf{i} + (4.0 \text{ N}) \mathbf{j} + (5.0 \text{ N}) \mathbf{k}$. $\mathbf{i}$, $\mathbf{j}$ and $\mathbf{k}$ are unit vectors along x-, y-, and z- axis, respectively. The power delivered by the force, at that instant is:

- Ans
- ☒ 1. 20 W
 - ☒ 2. 10 W
 - ☒ 3. 14 W
 - ☒ 4. 12 W

Question ID : 630680530156
Option 1 ID : 6306802072540
Option 2 ID : 6306802072537
Option 3 ID : 6306802072539
Option 4 ID : 6306802072538
Status : Marked For Review
Chosen Option : 2

Q.59 Which of the following represents the solution of the given system of linear equations?

$3x + y + 5z = 30$

$2x + 2y + 3z = 40$

$x + y + 2z = 20$

- Ans**
- ☒ 1. $x = 0, y = 10, z = 5$
 - ☒ 2. $x = 5, y = 15, z = 0$
 - ☒ 3. $x = 5, y = 0, z = 15$
 - ☒ 4. $x = 10, y = 5, z = 5$

Question ID : 630680530115

Option 1 ID : 6306802072375

Option 2 ID : 6306802072373

Option 3 ID : 6306802072376

Option 4 ID : 6306802072374

Status : Answered

Chosen Option : 2

Q.60 Consider a prism made of glass ($\mu = 3/2$) of refracting angle 60° . It is completely immersed in water ($\mu = 4/3$). The angle of minimum deviation for the prism is:

- Ans**
- ☒ 1. $\sin^{-1}\left(\frac{9}{16}\right) - \frac{\pi}{6}$
 - ☒ 2. $\sin^{-1}\left(\frac{9}{16}\right) - \frac{\pi}{3}$
 - ☒ 3. $2\sin^{-1}\left(\frac{9}{16}\right) - \frac{\pi}{3}$
 - ☒ 4. $2\sin^{-1}\left(\frac{9}{16}\right) - \frac{\pi}{6}$

Question ID : 630680530146

Option 1 ID : 6306802072498

Option 2 ID : 6306802072497

Option 3 ID : 6306802072499

Option 4 ID : 6306802072500

Status : Answered

Chosen Option : 2