Question Paper Preview

Notations :

1.Options shown in green color and with ✔ icon are correct.

2.Options shown in red color and with ✖ icon are incorrect.

Question Paper Name:	PGT MATHS FEMALE 4th July 2018
Subject Name:	PGT MATHS FEMALE
Creation Date:	2018-07-04 13:32:27
Duration:	180
Total Marks:	300
Display Marks:	Yes
Share Answer Key With Delivery Engine:	Yes
Actual Answer Key:	Yes
Calculator:	None
Magnifying Glass Required?:	No
Ruler Required?:	No
Eraser Required?:	No
Scratch Pad Required?:	No
Rough Sketch/Notepad Required?:	No
Protractor Required?:	No

Mental Ability

Group Number :	1
Group Id :	72305376
Group Maximum Duration :	0
Group Minimum Duration :	0
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	20

Mental Ability

Section Id :	72305376
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	20
Number of Questions to be attempted:	20
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1

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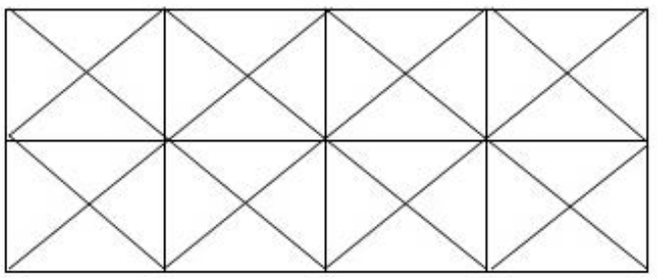
Sub-Section Id:	723053107
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 7230531538 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Find the number of squares in the following figure.



Options :

✖ 16

✔ 24

✖ 32

✖ 48

Question Number : 2 Question Id : 7230531539 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Read the following information carefully and answer the question that give below.

Five girls – Tincy, Swathi, Neena, Anjali and Pranavi and five boys – Ajith, Karthi, Pradeep, Sunil and Deepak sat on the two long sides of a rectangular table. The girls sat alternating with and opposite to the boys. Sunil sat in a centre position. Anjali sat opposite Ajith. Swathi sat next to Sunil and three places from Ajith. Pranavi sat four places to the left of Anjali. Neena sat two places from Swathi and Pradeep sat opposite Swathi. Karthi sat three places from Pranavi. Who sat opposite Tincy?

Options :

✖ Deepak

✖ Karthi

✔ Sunil

✖ Pranavi

Question Number : 3 Question Id : 7230531540 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In the question given below, there are two statements labelled as Assertion and Reason. Mark your answer as per the codes provided below.

Assertion (A):
Sprouting should be done before consuming the grains.

Reason (R):
Sprouting kills many vital vitamins.

Options :

✔ A is true but R is false

✖ A is false but R is true

✖ Both A and R are true and R is the correct explanation of A

✖ Both A and R are true but R is not the correct explanation of A

Question Number : 4 Question Id : 7230531541 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Choose the correct alternative for the following.

Substitute : Replace : : Vacant : _____

Options :

✔ Empty

✖ Queue

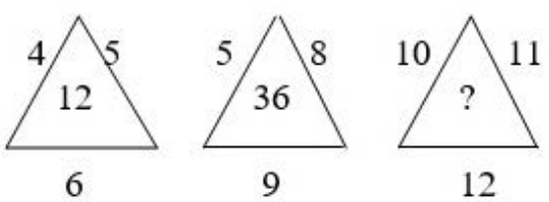
✖ Line

✖ Full

Question Number : 5 Question Id : 7230531542 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Replace the question mark by choosing the correct response from amongst the alternatives given.



Options :

✖ 120

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✖ 123

✔ 132

✖ 134

Question Number : 6 Question Id : 7230531543 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Read the following information carefully and answer the question given below.

'U α V' means 'U is not greater then V';
'U β V' means 'U is greater than or equal to V';
'U γ V' means 'U is less than V';
'U δ V' means 'U is neither greater than nor equal to V';
'U $\emptyset$ V' means 'U is neither less than nor equal to V';

Statements:
A δ B, B $\emptyset$ C, D α C

Conclusions:
I. A $\emptyset$ D
II. D γ B
III. A β C

Options :

✖ Only I is true

✔ Only II is true

✖ Only II and III are true

✖ All are true

Question Number : 7 Question Id : 7230531544 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Standing on the playground, Mala told Smitha that Anitha was more than 20 m but less than 25 m from there. Smitha knew that it was more than 21 m but less than 23 m from there. If both of them were correct, which of the following could be the distance of Anitha from the playground?

Options :

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✖ 21 m

✔ 22 m

✖ 23 m

✖ 24 m

Question Number : 8 Question Id : 7230531545 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The age of a mother is twice that of the elder daughter. Ten years hence, the age of the mother will be three-times that of the younger daughter. If the difference of ages of the two daughters is 15 years, the age of the mother is:

Options :

✖ 40 years

✖ 48 years

✔ 50 years

✖ 52 years

Question Number : 9 Question Id : 7230531546 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Find the odd one from the following.

Options :

✔ Explosion

✖ Earthquake

✖ Flood

✖ Tsunami

Question Number : 10 Question Id : 7230531547 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Anitha is standing to the west of Benita and north of Reshmi, and Seema is to the west of Reshmi and south of Saru. Seema is in which direction from Benita?

Options :

✖ North

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✖ South

✔ South-west

✖ North-west

Question Number : 11 Question Id : 7230531548 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If A = 2, D = 8, Z = 52, then STUDENT =?

Options :

✖ 204

✔ 206

✖ 212

✖ 216

Question Number : 12 Question Id : 7230531549 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

You are given two statements and four conclusions. Choose the comment about conclusions from the given options below.

Statements:
Some papers are pens.
No pen is eraser.

Conclusions:
I. Some pens are papers.
II. Some erasers are papers.
III. Some papers are not erasers.
IV. All erasers are papers.

Options :

✖ Only conclusion I follows

✔ Only conclusion I and III follow

✖ Only conclusion II and III follow

✖ Only conclusion IV follows

Question Number : 13 Question Id : 7230531550 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

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Correct : 1 Wrong : 0.25

Choose the similar pair for the following.

8 : 448 : : _____ : _____

Options :

✖ 6 : 216

✖ 9 : 100

✖ 7 : 293

✔ 10 : 900

Question Number : 14 Question Id : 7230531551 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Read the following information carefully and answer the question given below.

Rajiv is the son of Shiva's father's sister. Shyam is the son of Deepa who is the mother of Ganesh and grandmother of Shiva. Kumar is the father of Dhanya and grandfather of Rajiv. Deepa is Kumar's wife.

How is Deepa related to Rajiv?

Options :

✔ Grandmother

✖ Mother

✖ Sister

✖ Aunt

Question Number : 15 Question Id : 7230531552 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

You and your friend have been exchanging gifts quite regularly. But she has not sent you any gift for the last eight months. You would:

(Instruction: Choose most appropriate option)

Options :

✖ stop sending gifts to your friend.

✖ ask your friend the reason for not sending any gifts now.

✖ understand it as a termination of your relationship.

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send your friend the gift as before.

Question Number : 16 Question Id : 7230531553 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In a village, 65% people drink tea, 40% people drink coffee and 25% drink both tea and coffee. What percentage of people drink neither tea nor coffee?

Options :

✗ 15

✗ 18

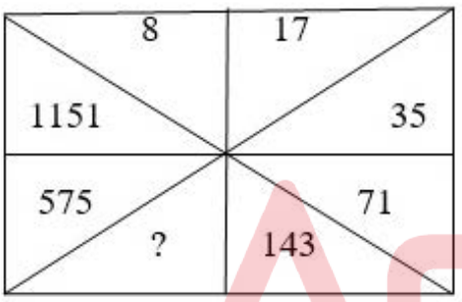
✓ 20

✗ 25

Question Number : 17 Question Id : 7230531554 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Replace the question mark by choosing the correct response from amongst the alternatives given.



Options :

✗ 285

✓ 287

✗ 289

✗ 297

Question Number : 18 Question Id : 7230531555 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Number of letters skipped in between adjacent letters in the series is two. Which of the following series observes the given rule?

Options :

✖ YBGKMPR

✖ SVYZCFH

✔ MPSVYBE

✖ TVZCGJN

Question Number : 19 Question Id : 7230531556 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Sindhu walks 1 km towards east and then she turns to south and walks 5 km. Again she turns to east and walks 2 km, after this she turns to north and walks 9 km. Now, how far is she from her starting point?

Options :

✖ 2 km

✖ 2.5 km

✖ 3 km

✔ 5 km

Question Number : 20 Question Id : 7230531557 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Select the option that is related to the third letter cluster in the same way as the second one is related to the first letter cluster.

BDqrSH : HSrqDB : : UWpqME: _____

Options :

✔ EMqpWU

✖ EMpqWU

✖ WUpqEM

✖ WUqpEM

General Awareness

Group Number : 2

Group Id : 72305377

Group Maximum Duration : 0

Group Minimum Duration :	0
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	20

General Awareness

Section Id :	72305377
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	20
Number of Questions to be attempted:	20
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	723053108
Question Shuffling Allowed :	Yes

Question Number : 21 Question Id : 7230531558 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

When was the Gandhi-Irwin pact signed between Mahatma Gandhi and Lord Irwin?

Options :

✖ 1941

✔ 1931

✖ 1932

✖ 1942

Question Number : 22 Question Id : 7230531559 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The first Anglo-Mysore war was fought between:

Options :

✖ Saadat Ali Khan and British

✖ Tipu Sultan and British

✔ Hyder Ali and British

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✖ Farrukhsiyar and British

Question Number : 23 Question Id : 7230531560 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The Harappan site Rangpur is situated in the present Indian state of:

Options :

✔ Gujarat

✖ Haryana

✖ Punjab

✖ Jammu & Kashmir

Question Number : 24 Question Id : 7230531561 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Panna in Madhya Pradesh is famous for which of the following mines?

Options :

✖ Gold

✔ Diamond

✖ Coal

✖ Iron ore

Question Number : 25 Question Id : 7230531562 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In which state is the Bhagwan Mahavir Wildlife Sanctuary situated?

Options :

✖ Gujarat

✖ Bihar

✔ Goa

✖ Rajasthan

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Question Number : 26 Question Id : 7230531563 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Who among the following administers the oath of office to the Home Minister of India?

Options :

✖ The Prime Minister of India

✔ The President of India

✖ The Vice-President of India

✖ The Attorney-General of India

Question Number : 27 Question Id : 7230531564 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

To who does the judge of Supreme Court submit his resignation?

Options :

✔ President of India

✖ Prime Minister of India

✖ Attorney-General of India

✖ A Vice-President of India

Question Number : 28 Question Id : 7230531565 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The Advocate-General of a State holds office during the pleasure of:

Options :

✔ The Governor of the concerned State

✖ The Attorney-General of India

✖ The Chief Minister of the concerned State

✖ The Prime Minister of India

Question Number : 29 Question Id : 7230531566 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

What was GDP of India at market price for 2016-17? (In Rupees)

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Options :

✗ 252 trillion

✗ 202 trillion

✗ 102 trillion

✓ 152 trillion

Question Number : 30 Question Id : 7230531567 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which among the following was India's highest produced cereal in 2016-17?

Options :

✓ Rice

✗ Wheat

✗ Jowar

✗ Bajra

Question Number : 31 Question Id : 7230531568 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Pattachitra style of painting is a popular art form of which of the following states?

Options :

✗ Uttar Pradesh

✗ Bihar

✓ Odisha

✗ Rajasthan

Question Number : 32 Question Id : 7230531569 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

With which folk art form is the painter Jai Prakash Lekhiwal associated?

Options :

✗ Madhubani painting

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✔ Miniature painting

✖ Warli painting

✖ Kalamkari painting

Question Number : 33 Question Id : 7230531570 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

With which form of folk songs is the Uttarakhand folk singer Basanti Devi Bisht associated?

Options :

✖ Bajuband

✖ Chhura

✔ Jagar

✖ Chhopati

Question Number : 34 Question Id : 7230531571 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

India's first gold medal at Commonwealth Games 2018 was won by:

Options :

✖ Deepak Lather

✖ Vikas Gowda

✖ Sini Jose

✔ Mirabai Chanu

Question Number : 35 Question Id : 7230531572 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

2020 edition of ICC T20 cricket world cup for men would be held in:

Options :

✖ South Africa

✖ Bangladesh

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✖ Sri Lanka

✔ Australia

Question Number : 36 Question Id : 7230531573 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which of the following will show the Tyndall effect?

Options :

✖ Salt solution

✔ Milk

✖ Copper solution

✖ Sugar Solution

Question Number : 37 Question Id : 7230531574 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

What is the motto of ASEAN?

Options :

✔ One Vision, One Identity, One Community

✖ One Vision, One Purpose, One Community

✖ One Boundary, One Identity, One Community

✖ One Vision, One Identity, One Purpose

Question Number : 38 Question Id : 7230531575 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Where was Asia Pacific Regional Workshop of United Nations Convention to Combat Desertification (UNCCD) held?

Options :

✖ Mumbai

✖ Chennai

✔ New Delhi

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✖ Chandigarh

Question Number : 39 Question Id : 7230531576 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

What is the number of self-help groups of tribal gatherers constituted under Van Dhan Yojana?

Options :

✔ 10

✖ 20

✖ 150

✖ 221

Question Number : 40 Question Id : 7230531577 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

What is the total number of members in National Committee for commemoration of 150th birth anniversary of Mahatma Gandhi in 2019?

Options :

✖ 203

✖ 85

✖ 127

✔ 125

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Arithmetic Ability

Group Number :	3
Group Id :	72305378
Group Maximum Duration :	0
Group Minimum Duration :	0
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	20

Arithmetic Ability

Section Id :	72305378
Section Number :	1

Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	17
Number of Questions to be attempted:	17
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	723053109
Question Shuffling Allowed :	Yes

Question Number : 41 Question Id : 7230531578 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The sum of four consecutive odd numbers and four consecutive even numbers is 396. The smallest odd number is 39 less than the smallest even number. What is the sum of the largest odd number and the largest even number?

Options :

✖ 97

✖ 101

✔ 105

✖ 109

Question Number : 42 Question Id : 7230531579 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

A student was asked to simplify the following:

$$\frac{0.00016 \times 0.25}{0.4 \times 0.0325 \times 0.5} \div \frac{0.01216 \times 0.105 \times 0.02}{0.8512 \times 0.0625 \times 0.39}$$

His answer was 0.25. What is the difference between the correct answer and his answer?

Options :

✖ 3.25

✖ 3.75

✖ 4.65

✔ 4.75

Question Number : 43 Question Id : 7230531580 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $\frac{\frac{2}{3} \div 0.75 \text{ of } \frac{5}{6}}{\frac{2}{3} \div 0.75 \times \frac{5}{6}} - \frac{2}{3} \times 1.24 \div 2.4 \text{ of } \left(\frac{1}{2} + \frac{1}{3}\right) = 1+k$, then the value of k is:

Options :

✗ $\frac{1}{75}$

✓ $\frac{2}{75}$

✗ $\frac{1}{25}$

✗ $\frac{2}{25}$

Question Number : 44 Question Id : 7230531581 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The value of $\frac{\frac{2}{3} \text{ of } \frac{4}{9} \div (3 \times \frac{3}{5} \text{ of } \frac{4}{9}) + 3 \times \frac{9}{25} \text{ of } \frac{2}{3} \div \frac{3}{5} \text{ of } \frac{9}{25}}{\frac{4}{9} \div 2 \text{ of } \left(\frac{3}{5} \times \frac{2}{3}\right) \times \frac{9}{25}}$ is:

Options :

✓ $18\frac{14}{27}$

✗ $10\frac{11}{27}$

✗ $4\frac{14}{27}$

✗ $3\frac{11}{27}$

Question Number : 45 Question Id : 7230531582 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In a class, $\frac{1}{4}$ of the number of boys and $\frac{3}{8}$ of the number of girls participated in annual sports. If the number of boys who participated is equal to $\frac{2}{5}$ of the number of girls who participated in sports, then what fractional part of the total number of students participated?

Options :

✗ $\frac{21}{32}$

✔ $\frac{21}{64}$

✖ $\frac{15}{32}$

✖ $\frac{15}{64}$

Question Number : 46 Question Id : 7230531583 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

A's income is 60% of that of B and A's expenditure is 70% of that of B. If A's income is 75% of B's expenditure, then the ratio of A's saving to that of B is:

Options :

✖ 2 : 5

✖ 3 : 8

✖ 1 : 4

✔ 1 : 5

Question Number : 47 Question Id : 7230531584 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In a class, the ratio of boys to girls is 3 : 1. If 16 boys leave and 6 more girls join the class, the ratio of boys to girls becomes 10 : 9. What was the total number of students in the class initially?

Options :

✖ 40

✔ 48

✖ 52

✖ 56

Question Number : 48 Question Id : 7230531585 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

A person bought an article after getting a 20% discount on its marked price. He sold the article at an 8% profit on the marked price. What was his profit percent on the price he bought?

Options :

✖ 28

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✖ 32

✔ 35

✖ 36

Question Number : 49 Question Id : 7230531586 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The compound interest on a certain sum for 2 years at a rate of 10% per annum is ₹ 1,260. What will the same sum be at the same rate of interest after $3\frac{2}{5}$ years (nearest to an integer)?

Options :

✖ ₹ 8,408

✖ ₹ 8,385

✖ ₹ 8,358

✔ ₹ 8,305

Question Number : 50 Question Id : 7230531587 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

A circle is inscribed in an equilateral triangle of side 'a' cm. What will be the area (in unit) of a square inscribed in the circle?

Options :

✖ $\frac{a^2}{4}$

✔ $\frac{a^2}{6}$

✖ $\frac{a^2}{8}$

✖ $\frac{a^2}{3}$

Question Number : 51 Question Id : 7230531588 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The LCM of two numbers is 667 times their HCF. The sum of the LCM and the HCF is 44756. If one of the numbers is 1943, then the sum of the digits of the other number is:

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Options :

✖ 9

✔ 11

✖ 14

✖ 16

Question Number : 52 Question Id : 7230531589 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

When 11280, 8988 and 7651 are divided by the greatest number x, the remainder in each case is y. What is the value of $(x-y)$?

Options :

✔ 180

✖ 182

✖ 188

✖ 192

Question Number : 53 Question Id : 7230531590 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

After travelling 60 km, a train experiences some technical difficulty, after which it proceeds at $66\frac{2}{3}$ % of its former speed to arrive at its destination 40 minutes late. If the technical glitch had occurred 30 km further, the train would have reached the destination only 20 minutes late. The original speed (in km/h) of the train is:

Options :

✖ 60

✖ 50

✖ 48

✔ 45

Question Number : 54 Question Id : 7230531591 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

A can complete a task in 30 days. He started the task and then B joined him after 4 days. The task was completed in a total of 20 days. Had A and B worked together from the beginning, they would have finished the same task in:

Options :

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✖ $18\frac{3}{13}$ days

✔ $18\frac{6}{13}$ days

✖ 20 days

✖ 15 days

Sub-Section Number: 2
Sub-Section Id: 723053110
Question Shuffling Allowed : Yes

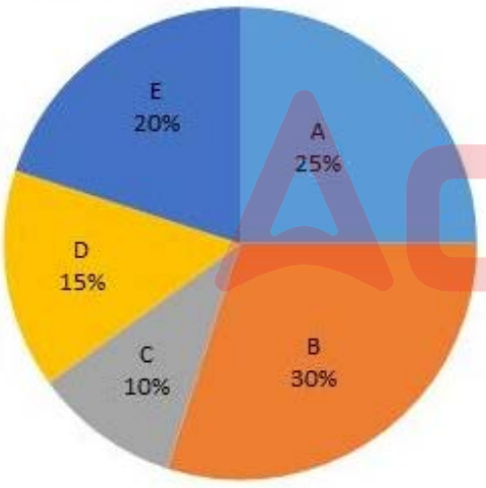
Question Id : 7230531592 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No

Question Numbers : (55 to 56)

Question Label : Comprehension

Study the following pie-chart and table and answer the following questions that follows:

percentage break up of students in the different schools



Ratio between Boys and Girls

School	Boys : Girls
A	14 : 11
B	7 : 8
C	9 : 11
D	3 : 2
E	7 : 9

Sub questions

Question Number : 55 Question Id : 7230531593 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

What is the ratio of the total number of boys in schools A and D to the total number of girls in schools B and C?

Options :

✖ 23 : 27

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✖ 23 : 22

✔ 46 : 43

✖ 46 : 33

Question Number : 56 Question Id : 7230531594 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Total number of girls in schools B, C and D is what percent of total students in five schools?

Options :

✖ 24.6

✔ 27.5

✖ 24.9

✖ 27.8

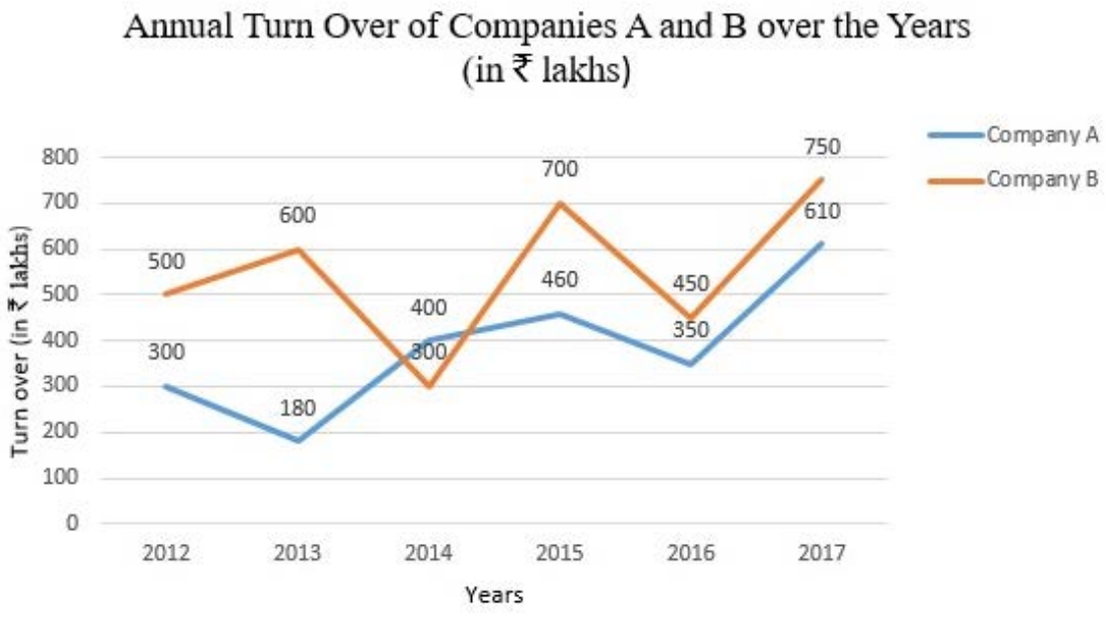
Sub-Section Number: 3
Sub-Section Id: 723053111
Question Shuffling Allowed : Yes

Question Id : 7230531595 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No

Question Numbers : (57 to 58)

Question Label : Comprehension

Study the following graph and answer the questions that follows:



Sub questions

Question Number : 57 Question Id : 7230531596 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The number of years in which turnover of company B was more than the average turnover of company A over the given years is?

Options :

✖ 2

✖ 3

✖ 4

✔ 5

Question Number : 58 Question Id : 7230531597 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Total turnover of company A in 2012, 2014 and 2017 is approximately what percent less than the total turnover of company B in 2013, 2015 and 2016?

Options :

✖ 18.8

✖ 19.6

✔ 25.1

✖ 26.6

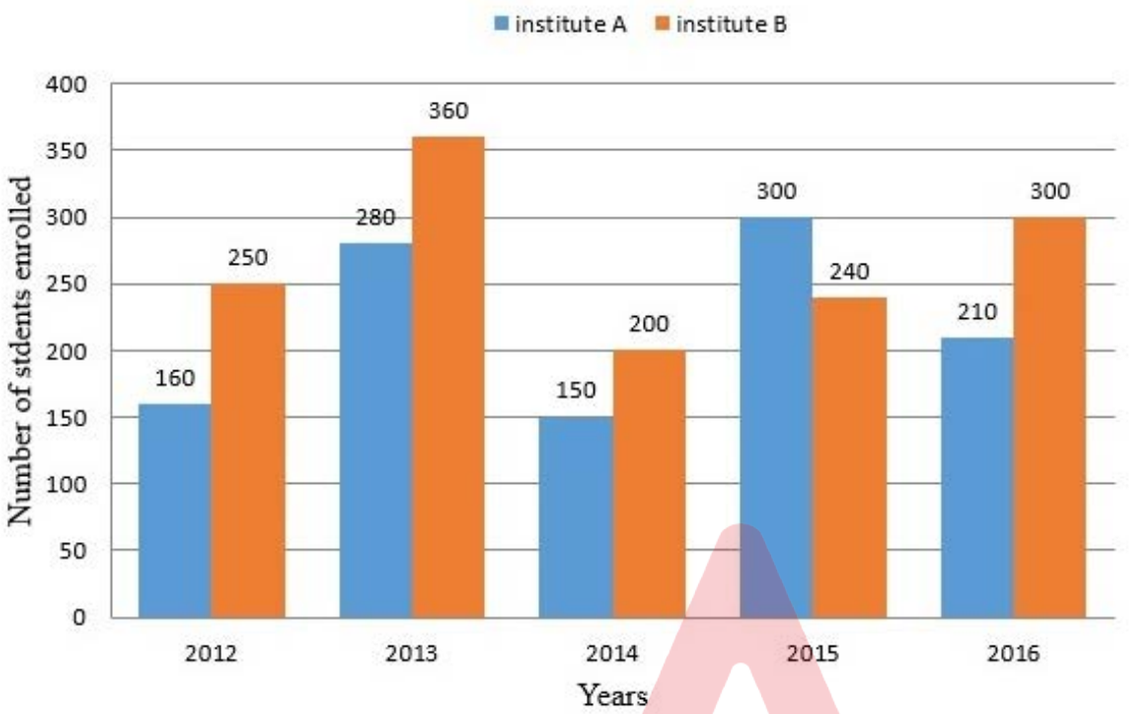
Sub-Section Number:	4
Sub-Section Id:	723053112
Question Shuffling Allowed :	Yes

Question Id : 7230531598 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No

Question Numbers : (59 to 60)

Question Label : Comprehension

Study the following Bar graph which shows the number of students enrolled for a vocational course in institutes A and B during 5 years and answer the questions that follows:



Sub questions

Question Number : 59 Question Id : 7230531599 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

What is the difference between the average number of students enrolled in institute A in 2012 and 2014 and that in institute B in 2013, 2015 and 2016?

Options :

✖ 125

✔ 145

✖ 150

✖ 155

Question Number : 60 Question Id : 7230531600 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If the number of enrolled students in institute A in 2016 is 25% less than that in 2017, the number of students enrolled in A in 2017 would be less than the number of student enrolled in B in 2016 is?

Options :

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✖ 16

✖ 18

✔ 20

✖ 24

General English

Group Number :	4
Group Id :	72305379
Group Maximum Duration :	0
Group Minimum Duration :	0
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	20

General English

Section Id :	72305379
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	16
Number of Questions to be attempted:	16
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	723053113
Question Shuffling Allowed :	Yes

Question Number : 61 Question Id : 7230531601 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Choose the correct synonym of:

phony

Options :

✖ similar

✔ fake

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✖ covered

✖ heavy

Question Number : 62 Question Id : 7230531602 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Choose the correct antonym of:

resume

Options :

✔ discontinue

✖ develop

✖ continue

✖ disturb

Question Number : 63 Question Id : 7230531603 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Choose the correct antonym of the underlined word to fill in the blank.

The colossal statue appeared very odd compared to the _____ figure of the dead king lying next to it.

Options :

✖ huge

✖ terrible

✖ gigantic

✔ tiny

Question Number : 64 Question Id : 7230531604 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Fill in the blank with the correct word.

I love _____ vibrant colours of the flowers in your garden.

Options :

✖ any

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✔ the

✖ a

✖ none

Question Number : 65 Question Id : 7230531605 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Fill in the blank with the appropriate word.

_____ they sell beetroots in this shop?

Options :

✖ Were

✖ Was

✔ Do

✖ Does

Question Number : 66 Question Id : 7230531606 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Fill in the blank with the appropriate word.

Your plan is great. It is _____ going to benefit all of us.

Options :

✖ hardly

✖ fully

✔ certainly

✖ nearly

Question Number : 67 Question Id : 7230531607 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In the following sentence four words or phrases have been underlined. One of them is incorrect. Choose the incorrect word or phrase from the given options.

When you present a talk or have a conversation on a controversial topic, you must remember to choice your approach carefully, otherwise you may land yourself in hostile reactions.

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Options :

✗ present a talk

✗ on a

✓ to choice

✗ may land yourself

Question Number : 68 Question Id : 7230531608 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In the following sentence four words or phrases have been underlined. One of them is incorrect. Choose the incorrect word or phrase from the given options.

The most important thing for you is to remember that all player must play according to his full potential.

Options :

✗ The most important

✗ to remember

✓ all player

✗ his full potential

Question Number : 69 Question Id : 7230531609 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Choose the passive voice form of the given sentence.

During the school audit the auditors observed that some of the teachers had great teaching skills.

Options :

✗ It was is observed by the auditors during the school audit that some of the teachers had great teaching skills.

✗ It was being observed by the auditors during the school audit that some of the teachers were having great teaching skills.

✓ It was observed by the auditors during the school audit that some of the teachers had great teaching skills.

✗ The school auditors had observed during the school audit that some of the teachers had great teaching skills.

Question Number : 70 Question Id : 7230531610 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Choose the most appropriate indirect speech form for the following sentence.

Monika said to me, "What a pity you missed my sister's wedding!"

Options :

✗ Monika asked why it was a great pity that I had missed her sister's wedding.

✗ Monika asked her friend that it was a great pity that I had missed her sister's wedding.

✗ Monika said to me that it was a great pity that I have missed her sister's wedding.

✓ Monika exclaimed that it was a great pity that I had missed her sister's wedding.

Question Number : 71 Question Id : 7230531611 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Choose the option that best combines the two given sentences.

You may have already received a copy of the notice. In that case, please ignore this one.

Options :

✗ Unless you have already received a copy of the notice, please ignore this one.

✓ If you have already received a copy of the notice, please ignore this one.

✗ As you have already received a copy of the notice, you may ignore this one.

✗ Although you have received a copy of the notice, in that case please ignore this one.

Question Number : 72 Question Id : 7230531612 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Choose the passage that is correctly punctuated.

Options :

✗ "All our crops have run dry," Wailed rampal And Suraj. "We have nothing to eat."

✗ All our crops have run dry," wailed rampal and suraj. " We have nothing to eat."

✓ "All our crops have run dry," wailed Rampal and Suraj. "We have nothing to eat."

✗ "All our crops have run dry, wailed Rampal and Suraj." "We have nothing to eat."

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Question Number : 73 Question Id : 7230531613 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Choose the word that is correctly spelt.

Options :

✗ coleague

✗ comission

✓ palatial

✗ embarrasment

Question Number : 74 Question Id : 7230531614 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Fill in the blank with the appropriate word.

You are putting on weight. You must _____ on your consumption of fat.

Options :

✗ cut out

✓ cut down

✗ cut off

✗ drop down

Question Number : 75 Question Id : 7230531615 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Fill in the blank with the appropriate idiom/phrase.
Though one person made the mistake, the entire staff had to _____ for the blunder.

Options :

✗ cry over spilt milk

✓ face the music

✗ fall short of

✗ lose heart

Sub-Section Number:	2
Sub-Section Id:	723053114
Question Shuffling Allowed :	Yes

Question Id : 7230531616 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No

Question Numbers : (76 to 80)

Question Label : Comprehension

Read the following passage and answer the questions that follow on the basis of your reading.

The obsessive search for complete happiness has its utopian value. But in life, it is that little sorrow in your heart, which is so much your own that it actually makes you who you are. People tell us how a sorrowful experience made them see the larger picture. It made them realise that sorrow is but a creation of the mind and that the wise are those who face joy and sorrow with equanimity. There are others who believe that if happiness is a gift of God, so is sorrow. In the Mahabharata, Kunti is believed to have said to Krishna that the only boon she desired was everlasting sorrow and misery so that the name of God could always be on her lips. We fear sorrow and find it in many experiences — the inconvenient idea of a power cut in the scorching heat of summer or the loss of a loved one or a dreaded disease — the gamut is large. Sorrow is not easy to bear, but bear it we must. It lies in a corner of your storeroom and does not come with options. Not located in the best part of the house, not dusted so often, the storeroom, however, has that piece of rope when you are searching for it; the duffle bag, when you have to travel — that long forgotten pan which is coming in handy now.

Empathy and compassion are the first manifestations of universal love for all living beings. These essential trait of humaneness find their source in that little bundle of sorrow you have, hidden within your heart. It tones down aggressiveness, making you gentler. Treasure it as the lesson for living a compassionate and humane life. The storeroom in your heart needs to be without self-pity, hatred and revenge, only then your finer sentiments are able to find expression.

Sub questions

Question Number : 76 Question Id : 7230531617 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Choose the option that completes the meaning of the sentence.

Sorrow, though a dreadful experience, is valuable as it:

Options :

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✗ brings happiness.

✓ teaches us important lessons of life.

✗ is a utopian idea.

✗ is a universal goal of life.

Question Number : 77 Question Id : 7230531618 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which of these experiences is NOT a manifestation of sorrow?

Options :

✗ Someone cheating or deceiving you

✗ Death of a loved one

✓ A dark store room

✗ Poor health

Question Number : 78 Question Id : 7230531619 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Sorrow is compared with a long forgotten pan in the store room because:

Options :

✗ both are covered with dust.

✗ you don't care for both of them.

✗ they are useful in an emergency.

✓ they have a sentimental value.

Question Number : 79 Question Id : 7230531620 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

How does sorrow make you a better person?

Options :

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- ✔ It teaches you compassion and gentleness
- ✖ It makes you aggressive
- ✖ It fills you with self-pity
- ✖ It enables you to give expression to your innermost feelings

Question Number : 80 Question Id : 7230531621 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The passage highlights:

Options :

- ✔ that sad experiences are invaluable.
- ✖ the elusiveness of happiness.
- ✖ the importance of being loving and kind-hearted.
- ✖ that misery and sadness are everlasting.

General Hindi

Group Number :	5
Group Id :	72305380
Group Maximum Duration :	0
Group Minimum Duration :	0
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	20

General Hindi

Section Id :	72305380
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	16
Number of Questions to be attempted:	16
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	723053115
Question Shuffling Allowed :	Yes

Question Id : 7230531622 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No

Question Numbers : (81 to 85)

Question Label : Comprehension

निम्नलिखित गद्यांशको पढ़कर पूछे गए प्रश्नों के उत्तर लिखिए।

घपलों और घोटालों की भेंट बढ़ी सरकारी योजनाओं ने.....
सनसनी फ़ैलाने के अतिरिक्त कुछ नहीं किया! सरकार बच्चों के हमदर्द होने का चाहे कितना ही ढोल पीटले, मगर सच्चाई यही है कि सरकार की संवेदनशीलता और लापरवाही की सबसे बड़ी कीमत देश का भविष्य माने जाने वाले नौनिहाल ही अपनी जान देकर चुकाते आ रहे हैं।

सन् 1995 में हरियाणा के डबवाली के एक स्कूल में लगी आग में 400 से अधिक बच्चों के जलकर भस्म होने में आखिर कौन ज़िम्मेदार था? सैकड़ों अभिभावकों की सूनी बगिया को उजाड़ उनकी आँखों में असहनीय तड़प के आँसू भरने के बावजूद भी सरकार द्वारा उचित कदम उठाना तो दूर, बल्कि और अधिक लापरवाही बढ़ती गई। जिस कारण अनेक छोटी-मोटी घटनाओं के अतिरिक्त कई भयानक हादसों में मासूमों की बलिदी जाती रही। 16 जुलाई, 05 को तमिलनाडु केतंजावुर जिले के कुंभकोणमशहर के एक प्राइमरी स्कूल में आग की प्रलयंकारीलपटों द्वारा 90 से अधिक बच्चों को भस्म कर दिया जाना इसका प्रत्यक्ष उदाहरण है। जून 2004 में दिल्ली के ही एक अस्पताल में भर्ती 1175 बच्चों में से 142 बच्चों की हैरतअंगेज़ मौत क्या स्वास्थ्य अधिकारीयों की कार्यशैली पर प्रशन चिह्न नहीं था?

Sub questions

Question Number : 81 Question Id : 7230531623 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

सरकारी योजनाएँ फेल हो गई:

Options :

✖ जनता द्वारा उपेक्षा से

✖ अफसरशाही के कारण

✖ राजनेताओं के कारण

✔ घोटालों-घपलों के कारण

Question Number : 82 Question Id : 7230531624 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

डबवाली आदि के हादसे प्रमाण हैं, सरकार की

Options :

✔ संवेदनहीनता के

✖ संवेदनशीलता के

✖ दायित्वा बोध के

✖ सरकार की कार्य निष्ठा के

Question Number : 83 Question Id : 7230531625 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

90 से अधिक बच्चों का जलना, इस बात का प्रमाण है कि:

Options :

✔ सरकार ने कोई कदम नहीं उठाया।

✖ सरकार ने संरक्षण की कोशिश की थी।

✖ सरकार और अफसरों की मिली भगत रही है।

✖ बच्चे ही सावधान नहीं थे।

Question Number : 84 Question Id : 7230531626 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

बच्चों के जलने की ज़िम्मेदार है:

Options :

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✔ सरकार

✖ माता-पिता

✖ स्वयंबच्चे

✖ पूरा समाज

Question Number : 85 Question Id : 7230531627 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

142 बच्चों की मौत की ज़िम्मेदारी है:

Options :

✖ पुलिस पर

✖ फायर ब्रिगेड पर

✔ स्वास्थ्य अधिकारीयों पर

✖ माता-पिता पर

Sub-Section Number: 2
Sub-Section Id: 723053116
Question Shuffling Allowed : Yes

Question Number : 86 Question Id : 7230531628 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

निम्नलिखित में से तत्सम शब्द छाँटिए।

Options :

✔ शिक्षा

✖ पंख

✖ मोर

✖ नीय

Question Number : 87 Question Id : 7230531629 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

निम्नलिखित में से तद्भव शब्द चुनिए।

Options :

✗ पालन

✗ पोषण

✗ वचन

✓ भाफ

Question Number : 88 Question Id : 7230531630 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

'भलमानस' शब्द में समास हैं:

Options :

✗ तत्पुरूष

✗ बहुब्रीहि

✗ अव्ययीभाव

✓ कर्मधारय

Question Number : 89 Question Id : 7230531631 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

'प्रत्यारोप' शब्द में संधि है:

Options :

✗ व्यंजनसंधि

✓ यण् संधि

✗ दीर्घ संधि

✗ अयादि संधि

Question Number : 90 Question Id : 7230531632 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

'कवि' शब्द का बहुवचन (अविभक्तिक) होता है:

Options :

✗ कवियों

✗ कवियो

✓ कवि

✗ कविएँ

Question Number : 91 Question Id : 7230531633 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

कौन सा शब्द सदा बहुवचन में ही प्रयुक्त होता है?

Options :

✗ संगहन

✗ सभा

✓ हस्ताक्षर

✗ समूह

Question Number : 92 Question Id : 7230531634 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

भाववाचक संज्ञा शब्द छाँटिए।

Options :

✓ भूख

✗ क्षुब्ध

✗ बुद्धिमान

✗ चतुर

Question Number : 93 Question Id : 7230531635 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

'पक्षी' शब्द का पर्यायवाची नहीं है:

Options :

✗ खग

✗ शकुन्त

✗ विहग

✓ पन्नग

Question Number : 94 Question Id : 7230531636 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

'उल्लास' शब्द का विलोम होगा:

Options :

✗ हर्ष

✗ तास्य

✓ विषाद

✗ प्रभाव

Question Number : 95 Question Id : 7230531637 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

'कम बोलने वाला' वाक्यांश के लिए एक शब्द है:

Options :

✗ न्यून वक्ता

✗ प्रवक्ता

✓ मितभाषी

✗ अमितभाषी

Question Number : 96 Question Id : 7230531638 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

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Correct : 1 Wrong : 0.25

निम्नलिखितमें से कौन सा शब्द पुल्लिंग है?

Options :

✗ जलन

✗ बात

✓ पर्वत

✗ चीख

Question Number : 97 Question Id : 7230531639 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

अशुद्ध वाक्य कौन सा है?

Options :

✓ मुझे उसका दर्शन हो गया है।

✗ हमारे शिक्षक प्रश्न करते हैं।

✗ यहसब आप पर निर्भर है।

✗ मेरा नाम आनन्द है।

Question Number : 98 Question Id : 7230531640 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

सकर्मक क्रिया वाला वाक्य छाँटिए।

Options :

✗ शीला घर जाती है।

✗ वह सुबह छह बजे उठती है।

✓ विद्या प्रतिदिन एक घंटा पढ़ती है।

✗ सभी छात्र दौड़े चले गए।

Question Number : 99 Question Id : 7230531641 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

'बहाना करना' इस अर्थ को व्यक्त करनेवाला मुहावरा:

Options :

✗ बात जा धनी

✓ बात बनाना

✗ बात तक न पूछना

✗ बात बढ़ाना

Question Number : 100 Question Id : 7230531642 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

'काम न जानना और बहाना बनाना' अर्थ के लिए _____ है:

Options :

✗ न रहेगा बाँस न बजेगी बाँसुरी

✓ नाच न जाने आँगन टेढ़ा

✗ अधजल गगरी छलकत जाय

✗ आगलगने झोपड़ा जो निकले सो लाभ

Subject Related

Group Number :	6
Group Id :	72305381
Group Maximum Duration :	0
Group Minimum Duration :	0
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	20

Subject Related

Section Id :	72305381
Section Number :	1
Section type :	Online

Mandatory or Optional:	Mandatory
Number of Questions:	20
Number of Questions to be attempted:	20
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	723053117
Question Shuffling Allowed :	Yes

Question Number : 101 Question Id : 7230531643 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

280 students travel either by train or bus or both to get to school. 140 students travel by train and 50 travel by both train and bus. Find the number of students who travel by bus.

Options :

✖ 140

✖ 170

✖ 180

✔ 190

Question Number : 102 Question Id : 7230531644 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

280 students travel either by train or bus or both to get to school. 140 students travel by train and 50 travel by both train and bus. Find the number of students who travel by just one these transport.

Options :

✖ 200

✖ 220

✔ 230

✖ 240

Question Number : 103 Question Id : 7230531645 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

For the given set $A = \{0, \{1\}, 1, \emptyset\}$, identify the statement which is INCORRECT.

Options :

✖ $\emptyset \in A$

✖ $\emptyset \subset A$

✖ $\{1\} \in A$

✔ $0 \subset A$

Question Number : 104 Question Id : 7230531646 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

How many number of proper subset can be formed of set $A = \{1, 5, 7, 9\}$?

Options :

✔ 12

✖ 16

✖ 24

✖ 32

Note: For this question, discrepancy is found in question/answer. So,this question is ignored for all candidates.

Question Number : 105 Question Id : 7230531647 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Let $A = \{x \in \mathbb{R}: x^2 = 9 \; and \; 2x = 4\}$. Then which of the following is true?

Options :

✔ $A = \emptyset$

✖ $A = \{0\}$

✖ $A = \{1\}$

✖ $A = \mathbb{R}$

Question Number : 106 Question Id : 7230531648 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $A = \{n \in \mathbb{N}: n \; divides \; 12\}$, then find the number of elements of $\wp(A)$.

Options :

✖ 8

✖ 16

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✖ 32

✔ 64

Question Number : 107 Question Id : 7230531649 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Let X be a universal set, $A \subset X$, $B \subset X$. Then which of following is INCORRECT?

Options :

✖ $A = (A \backslash B) \cup (A \cap B)$

✖ $A \cap B = X \backslash [(A \backslash B) \cup (B \backslash A)]$

✖ $A \backslash B = (X \backslash B) \cap X$

✔ $A \cup B = (A \backslash B) \cup (B \backslash A)$

Question Number : 108 Question Id : 7230531650 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Let X be a universal set, $A \subset X$, $B \subset X$ and $n(X) = 20$, $n(A) = 12$, $n(B) = 9$ and $n(A \cap B) = 4$. Then $n(A \backslash B)$ is:

Options :

✔ 8

✖ 9

✖ 10

✖ 11

Question Number : 109 Question Id : 7230531651 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Let X be a universal set, $A \subset X$, $B \subset X$ and $n(X) = 70$, $n(A) = 30$, $n(B) = 45$ and $n(A \cap B) = 10$. Then $n(A^c \cap B^c)$ is:

Options :

✔ 5

✖ 10

✖ 15

✖ 20

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Question Number : 110 Question Id : 7230531652 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If A has 5 elements and B has 7 elements, then the minimum number of elements that $A \cup B$ can have is:

Options :

✖ 2

✖ 5

✔ 7

✖ 12

Question Number : 111 Question Id : 7230531653 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $S = \{1,2\}$ and $T = \{2,3,4\}$, then $(S \cup T) \times (S \cap T)$ is:

Options :

✔ $\{(1,2),(2,2),(3,2),(4,2)\}$

✖ $\{(1,2),(2,2),(1,3),(2,3),(1,4),(2,4)\}$

✖ $\{(2,1),(3,1),(4,1),(2,3),(1,4),(2,4)\}$

✖ $\{(2,1),(3,1),(4,1)\}$

Question Number : 112 Question Id : 7230531654 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The domain of the relation

$\{(x,y): y = |x-1|,\ x \in \mathbb{Z}, |x| \leq 2\}$ is:

Options :

✖ $\{3,2,1,0\}$

✖ $\{0, 1, 2\}$

✖ $\{-3,-2,-1,0,1,2,3\}$

✔ $\{-2,-1,0,1,2\}$

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Question Number : 113 Question Id : 7230531655 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Let : $\mathbb{R} \to \mathbb{R}$ be a function defined as $f(x) = \frac{x^2+2}{x+1}$. Then:

Options :

✗ one-one function

✓ not well-defined

✗ both one-one and onto

✗ not onto

Question Number : 114 Question Id : 7230531656 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $f: \mathbb{Z} \to \mathbb{Z}$ be a function defined as $f(x) = 5x + 2$ for all $x \in \mathbb{Z}$, then f is:

Options :

✗ onto

✓ one-one

✗ both one-one and onto

✗ neither one-one nor onto

Question Number : 115 Question Id : 7230531657 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The domain of the function $g(x) = \sqrt{(x^2 - 3x + 2)}$ is:

Options :

✗ $(-\infty, \infty)$

✗ $(-\infty, -2]$

✗ $[-1, \infty)$

✓ $(-\infty, 1] \cup [2, \infty)$

Question Number : 116 Question Id : 7230531658 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

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Correct : 1 Wrong : 0.25

If $f(x)=\frac{|x|}{x}$, then value of $|f(2)-f(-2)|$ is equal to:

Options :

✖ 0

✖ 1

✔ 2

✖ 3

Question Number : 117 Question Id : 7230531659 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Let $f:\mathbb{N}\to\mathbb{R}$ be defined as $f(x)=(3x-1)$, $g:\mathbb{R}\to\mathbb{R}$ be defined as $g(x)=\frac{x^2}{2}$. Then $(g\circ f)(0)=$

Options :

✖ 1

✔ $\frac{1}{2}$

✖ 0

✖ $-\frac{1}{2}$

Question Number : 118 Question Id : 7230531660 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $f(x)=x^n, n\in\mathbb{N}$ and $(g\circ f)(x)=ng(x)$, then $g(x)$ can be:

Options :

✖ $n|x|$

✔ $\log|x|$

✖ e^x

✖ $x^{\frac{1}{3}}$

Question Number : 119 Question Id : 7230531661 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

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Correct : 1 Wrong : 0.25

If the domain of the function $f(x)$ is $[0,2]$, the domain of the function $f(2x+1)$ is:

Options :

✔ $\left[-\frac{1}{2},\frac{1}{2}\right]$

✖ $\left[0,\frac{1}{2}\right]$

✖ $\left[-\frac{1}{2},0\right]$

✖ $[0,2]$

Question Number : 120 Question Id : 7230531662 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Find the range of the function $f(x)=|x-1|+|x-2|. x \in \mathbb{R}$

Options :

✖ $(-\infty,\infty)$

✖ $(-\infty,1]$

✔ $[1,\infty)$

✖ $[1,2]$

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Subject Related

Group Number :	7
Group Id :	72305382
Group Maximum Duration :	0
Group Minimum Duration :	0
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	20

Subject Related

Section Id :	72305382
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory

Number of Questions:	20
Number of Questions to be attempted:	20
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	723053118
Question Shuffling Allowed :	Yes

Question Number : 121 Question Id : 7230531663 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The graph of $3(x-1)^2+3$, then $f:\mathbb{R}\to\mathbb{R}$ is symmetric about the line:

Options :

✔ $x=1$

✖ $x=0$

✖ $y=1$

✖ $y=0$

Question Number : 122 Question Id : 7230531664 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $f(x)=x^3$ and $g(x)=3^x$ are two real-valued functions, then the number of solutions of $(g\circ f)(x)=(f\circ g)(x)$ is:

Options :

✖ 0

✖ 1

✔ 2

✖ 3

Question Number : 123 Question Id : 7230531665 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $f(x)=2^x$, then:

Options :

✖ $f(x+y)=f(x)(1+f(y))$

✗ $f(2x) = 2f(x)$

✗ $f(xy) = f(x)f(y)$

✓ $f(x) + f(y) = f(x) + f(x)f(y - x)$

Question Number : 124 Question Id : 7230531666 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

For a set of circles in a plane, the relation 'concentric' is a/an:

Options :

✓ equivalence relation

✗ reflexive only

✗ symmetric only

✗ not transitive

Question Number : 125 Question Id : 7230531667 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $\{x\}$ and $[x]$ represent fractional and integral part of x, then the value of $[x] + \sum_{k=1}^{1000} \frac{\{x+k\}}{1000}$ is:

Options :

✗ $1000x$

✗ 0

✓ x

✗ 1

Question Number : 126 Question Id : 7230531668 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $[x]$ represent the integral part of x, then the range of the function $y = [x^2] - [x]^2, x \in [0,2]$ is:

Options :

✗ $\{0\}$

✗ $\{0,1\}$

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✔ $\{0, 1, 2\}$

✖ $\{1, 2\}$

Question Number : 127 Question Id : 7230531669 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Let $P(n): n(n+1)(n+2)$ is divisible by 12. Then which of the following is true?

Options :

✖ $P(1)$

✔ $P(4)$

✖ $P(5)$

✖ $P(9)$

Question Number : 128 Question Id : 7230531670 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $P(n): 4n+3$ is a prime number, then which of the following is INCORRECT?

Options :

✖ $P(1)$

✖ $P(2)$

✔ $P(3)$

✖ $P(4)$

Question Number : 129 Question Id : 7230531671 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

A student tried to prove a statement by induction. She proved that $P(2)$ is true, $P(n)$ is true $\Rightarrow$ $P(n+1)$ is true for $n \in \mathbb{N}$. Then $P(n)$ is true for all

Options :

✖ $n \in \mathbb{N}$.

✔ $n \geq 2$.

✖ $n > 2$.

✖ $n > 3$.

Question Number : 130 Question Id : 7230531672 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Find the values of $n \in \mathbb{N}$ for which $P(n): 2^n > n^3$

Options :

✖ $n \geq 2$

✖ $n \geq 3$

✖ $n \geq 5$

✔ $n \geq 10$

Question Number : 131 Question Id : 7230531673 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Let $P(n): n^2 - n + 41$ is a prime number. Then which of the following is INCORRECT?

Options :

✖ $P(4)$

✖ $P(5)$

✖ $P(9)$

✔ $P(41)$

Question Number : 132 Question Id : 7230531674 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $nC_{n-2} = 28$, the value of n is:

Options :

✖ 6

✖ 7

✔ 8

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✖ 9

Question Number : 133 Question Id : 7230531675 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $(n+1)P_5 = 18 \times (n-1)P_4$, then the value of n is:

Options :

✖ 4 or 5

✖ 6 or 7

✔ 8 or 9

✖ 10 or 11

Question Number : 134 Question Id : 7230531676 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

How many diagonals are there in a polygon of 15 sides?

Options :

✔ 90

✖ 105

✖ 120

✖ 135

Question Number : 135 Question Id : 7230531677 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In how many ways can 5 ladies and 5 gentlemen be seated at a round table so that no two ladies are next two each other?

Options :

✖ 24

✖ 120

✖ 720

✔ 2880

Question Number : 136 Question Id : 7230531678 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

5 balls of different colors are to be placed in 3 boxes of different sizes. Each box can hold 5 balls. In how many different ways can we place the balls so that no box remains empty?

Options :

✗ 60

✗ 90

✓ 150

✗ 210

Question Number : 137 Question Id : 7230531679 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

How many different words can be formed using all the letters of the word ORDINATE so that the vowels occupy odd places?

Options :

✗ 400

✗ 441

✗ 484

✓ 576

Question Number : 138 Question Id : 7230531680 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The number of terms in $(5x + 7y - 8z)^{20}$ is:

Options :

✗ 210

✓ 231

✗ 253

✗ 276

Question Number : 139 Question Id : 7230531681 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The number of arrangements of the letters of the word BANANAS in which two N's do not appear adjacently is?

Options :

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✔ 300

✖ 400

✖ 500

✖ 600

Question Number : 140 Question Id : 7230531682 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

For any complex number z, the minimum value of $|z| + |z - 2i|$ is:

Options :

✖ 0

✖ 1

✔ 2

✖ 3

Subject Related

Group Number :	8
Group Id :	72305383
Group Maximum Duration :	0
Group Minimum Duration :	0
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	20

Subject Related

Section Id :	72305383
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	20
Number of Questions to be attempted:	20
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

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Sub-Section Number: 1
Sub-Section Id: 723053119
Question Shuffling Allowed : Yes

Question Number : 141 Question Id : 7230531683 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

If z_1, z_2, z_3 are complex number such that

$|z_1| = |z_2| = |z_3| = \left|\frac{1}{z_1} + \frac{1}{z_2} + \frac{1}{z_3}\right| = 1$, then $|z_1 + z_2 + z_3|$ is:

Options :

✔ equal to 1

✖ less than 1

✖ greater than 3

✖ equal to 3

Question Number : 142 Question Id : 7230531684 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

If a, b, c are distinct non-negative integers and $\omega \neq 1$ is a cube root of unity, then minimum value of $x = |a + b\omega + c\omega^2| + |a + b\omega^2 + c\omega|$ is:

Options :

✔ $6\sqrt{2}$

✖ 3

✖ $4\sqrt{2}$

✖ 2

Question Number : 143 Question Id : 7230531685 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

The locus represented by $|z - 1| = |z + i|$ is:

Options :

✖ a circle of radius 1

✖ an ellipse with foci at (1,0) and (0,-1)

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✔ a straight line through the origin

✖ a circle on the line joining (1,0), (1,0) as diameter

Question Number : 144 Question Id : 7230531686 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The triangle formed by the points 1, $\frac{(1+i)}{\sqrt{2}}$, i as vertices in the Argand diagram is:

Options :

✖ scalene

✖ equilateral

✔ isosceles

✖ right-angled

Question Number : 145 Question Id : 7230531687 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $\omega^3 = 1$ and $\omega \neq 1$, then $(1+\omega)(1+\omega^2)(1+\omega^4)(1+\omega^8) = ?$

Options :

✖ 3

✖ -3

✖ 9

✔ 1

Question Number : 146 Question Id : 7230531688 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Consider a quadratic equation $az^2 + bz + c = 0$, where a, b, c are complex numbers. The condition in which the equation has both real roots is:

Options :

✖ $\frac{a}{\bar{a}} = -\frac{b}{\bar{b}} = \frac{c}{\bar{c}}$

✔ $\frac{a}{\bar{a}} = \frac{b}{\bar{b}} = \frac{c}{\bar{c}}$

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✖ $\frac{a}{\bar{a}} = \frac{b}{\bar{b}} = -\frac{c}{\bar{c}}$

✖ $-\frac{a}{\bar{a}} = \frac{b}{\bar{b}} = \frac{c}{\bar{c}}$

Question Number : 147 Question Id : 7230531689 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The square roots of the complex number $7 + 24i$ are:

Options :

✖ $4 - 3i, 4 + 3i$

✔ $-4 - 3i, 4 + 3i$

✖ $-4 + 3i, 4 - 3i$

✖ $-4 - 3i, -4 + 3i$

Question Number : 148 Question Id : 7230531690 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The sum of the first 20 terms of the series $\frac{1}{i} + \frac{2}{i^2} + \frac{3}{i^3} + \cdots$ is:

Options :

✔ $10(i + 1)$

✖ $20i$

✖ $20(1 - i)$

✖ $10i$

Question Number : 149 Question Id : 7230531691 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Solve for x.

$4x + 7 < 2x + 1$

Options :

✖ $x < 1$

✖ $x < -1$

✔ $x < -3$

✖ $x < 3$

Question Number : 150 Question Id : 7230531692 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If a and b are positive, $a > b$, then which of the following is true?

Options :

✖ $\frac{b}{a+b} > \frac{1}{2}$

✔ $\frac{b}{a+b} < \frac{1}{2}$

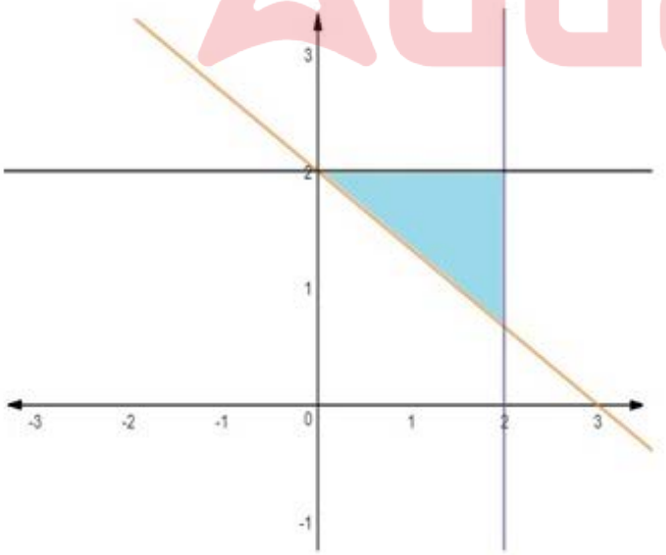
✖ $\frac{b}{a+b} = \frac{1}{2}$

✖ $\frac{a}{a+b} = \frac{1}{2}$

Question Number : 151 Question Id : 7230531693 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The area indicated by the shaded portion in the following figure is represented by:



Options :

✔ $x \leq 2,\ y \leq 2,\ 2x + 3y \geq 6,\ x, y \geq 0$

✖ $x \leq 2,\ y \geq 2,\ 2x+3y \geq 6,\ x,y \geq 0$

✖ $x \leq 2,\ y \geq 2,\ 2x+3y \leq 6,\ x,y \geq 0$

✖ $x \geq 2,\ y \geq 2,\ 2x+3y \geq 6,\ x,y \geq 0$

Question Number : 152 Question Id : 7230531694 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The maximum of the function

$f(x,y,z) = 5x - 6y + 7z$ on an ellipsoid
$2x^2 + 3y^2 + 4z^2 = 1$ is

Options :

✖ $\sqrt{147}$

✖ $\frac{\sqrt{147}}{2}$

✖ $\frac{\sqrt{147}}{3}$

✔ $\frac{\sqrt{147}}{4}$

Question Number : 153 Question Id : 7230531695 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Solve $|4x+2| \leq 6$

Options :

✖ $-1 \leq x \leq 2$

✖ $-1 \leq x \leq 1$

✖ $-2 \leq x \leq 2$

✔ $-2 \leq x \leq 1$

Question Number : 154 Question Id : 7230531696 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Solve: $2|x| - 3 \geq |x - 1|$

Options :

✖ $[2, \infty)$

✖ $(-\infty, -2] \cup [4, \infty)$

✔ $(-\infty, -4] \cup [2, \infty)$

✖ $(-\infty, -4]$

Question Number : 155 Question Id : 7230531697 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The sum of the coefficients of the polynomial

$(1 + x - 3x^2)^{2163}$ is:

Options :

✖ -2

✔ -1

✖ 0

✖ 1

Question Number : 156 Question Id : 7230531698 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The coefficient of x^{99} in the polynomial

$(x - 1)(x - 2) \ldots (x - 100)$ is:

Options :

✖ 4050

✖ -4050

✖ 5050

✔ -5050

Question Number : 157 Question Id : 7230531699 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

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Correct : 1 Wrong : 0.25

If $(1+\alpha x)^n = 1+8x+24x^2+\cdots$, then a is:

Options :

✖ 1

✔ 2

✖ 3

✖ 4

Question Number : 158 Question Id : 7230531700 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Let n be a positive integer. If the coefficients of 2nd ,3rd, and 4th terms in the expansion of $(1+x)^n$ are in arithmetic progression, then the value of n is:

Options :

✖ 3

✖ 5

✖ 6

✔ 7

Question Number : 159 Question Id : 7230531701 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In the binomial expansion of $(a-b)^n$, $n \geq 5$, the sum of the 5^{th} and 6^{th} terms is zero. Then $\frac{a}{b}$ is:

Options :

✖ $\frac{n-5}{6}$

✔ $\frac{n-4}{5}$

✖ $\frac{n-5}{4}$

✖ $\frac{(n-6)}{5}$

Question Number : 160 Question Id : 7230531702 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Coefficient of t^{24} in $(1+t^2)^{12}(1+t^{12})(1+t^{24})$ is:

Options :

✗ $12C_6$

✗ $12C_6+1$

✓ $12C_6+2$

✗ $12C_6+3$

Subject Related

Group Number :	9
Group Id :	72305384
Group Maximum Duration :	0
Group Minimum Duration :	0
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	20

Subject Related

Section Id :	72305384
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	20
Number of Questions to be attempted:	20
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	723053120
Question Shuffling Allowed :	Yes

Question Number : 161 Question Id : 7230531703 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If three positive real numbers a, b, c are in arithmetic progression such that $abc = 4$, then the minimum possible value of b is:

Options :

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✗ $2^{\frac{3}{2}}$

✓ $2^{\frac{2}{3}}$

✗ $2^{\frac{1}{3}}$

✗ $2^{\frac{5}{2}}$

Question Number : 162 Question Id : 7230531704 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The value of $y = (0.64)^{\left(\log_{0.25}\left(\frac{1}{3}+\frac{1}{3^2}+\frac{1}{3^3}+\cdots\right)\right)}$ is:

Options :

✗ 0.9

✓ 0.8

✗ 0.6

✗ 0.25

Question Number : 163 Question Id : 7230531705 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $H_1, H_2, \ldots H_n$ are n harmonic means between a and $b(\neq a)$, then the value of $\frac{H_1+a}{H_1-a}+\frac{H_n+b}{H_n-b}$ is equal to:

Options :

✗ $n+1$

✗ $n-1$

✓ $2n$

✗ $2n+3$

Question Number : 164 Question Id : 7230531706 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If three positive real numbers a, b, c $(c > a)$ are in harmonic progression, then $\log(a+c)+\log(a-2b+c)$ is equal to:

Options :

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✗ $2\log(c-b)$

✗ $2\log(a+c)$

✓ $2\log(c-a)$

✗ $\log a+\log b+\log c$

Question Number : 165 Question Id : 7230531707 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Suppose a, b, c are in arithmetic progression and a^2, b^2, c^2 are in geometric progression. If $a < b < c$ and $a+b+c=\frac{3}{2}$, then the value of a is:

Options :

✗ $\frac{1}{2\sqrt{2}}$

✗ $\frac{1}{2\sqrt{3}}$

✗ $\frac{1}{2}-\frac{1}{\sqrt{3}}$

✓ $\frac{1}{2}-\frac{1}{\sqrt{2}}$

Question Number : 166 Question Id : 7230531708 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Find the coefficient of x^2 in the expansion of e^{2x+3}

Options :

✗ $3e^3$

✓ $2e^3$

✗ e^3

✗ $3e^2$

Question Number : 167 Question Id : 7230531709 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The number of solutions of $\log_4(x-1) = \log_2(x-3)$ is:

Options :

✖ 3

✔ 1

✖ 2

✖ 0

Question Number : 168 Question Id : 7230531710 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

What is the remainder when $1! + 2! + \cdots 100!$ is divided by 15?

Options :

✖ 1

✖ 2

✔ 3

✖ 4

Question Number : 169 Question Id : 7230531711 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

What is the remainder when 16^{53} is divided by 7?

Options :

✖ 1

✖ 2

✖ 3

✔ 4

Question Number : 170 Question Id : 7230531712 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Consider the following:

$P(n): 1 + 3 + 5 + \cdots + (2n-1) = (n-2)^2$. Then $P(n)$ is true for:

Options :

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✖ all $n \geq 1$

✖ all $n \geq 2$

✔ $n = 1$ only

✖ $n = 2$ only

Question Number : 171 Question Id : 7230531713 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The number of positive integers $n \leq 2076$ and divisible by neither 4 nor 5 is:

Options :

✔ 1034

✖ 831

✖ 103

✖ 519

Note: For this question, discrepancy is found in question/answer. So,this question is ignored for all candidates.

Question Number : 172 Question Id : 7230531714 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which one of the following is NOT correct?

Options :

✖ $\gcd(42,12) = (3)42 + (-10)12$

✔ $\gcd(42,12) = (-1)42 + (3)12$

✖ $\gcd(42,12) = (-3)42 + (11)12$

✖ $\gcd(42,12) = (-5)42 + (18)12$

Question Number : 173 Question Id : 7230531715 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which of the following is true?

Options :

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✗ $\gcd(p, p+2) = 1$, where p is a prime number

✗ $\gcd(a,b) = \gcd(a, a-2b)$

✗ $\gcd(a,b) = 1 = \gcd(b,c)$, then $\gcd(a,c) = 1$

✓ $\gcd(a,b) = \gcd(a, a-b)$

Question Number : 174 Question Id : 7230531716 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The number of positive integers that are less than 18 and are relatively prime to 18 is:

Options :

✗ 3

✗ 4

✓ 6

✗ 7

Question Number : 175 Question Id : 7230531717 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $a, b, c \in \mathbb{R}$ and $a+b+c=0$, then the quadratic equation $3ax^2 + 2bx + c = 0$ has:

Options :

✓ at least one root in $[0.1]$

✗ at least one root in $[1.2]$

✗ at least one root in $\left[\frac{3}{2}, 2\right]$

✗ no real roots

Question Number : 176 Question Id : 7230531718 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If the product of the roots of the equation

$x^2 - 3kx + 2e^{2\ln k} - 1 = 0$ is 7, then the roots are real for $k =$

Options :

✖ 1

✔ 2

✖ 3

✖ 4

Question Number : 177 Question Id : 7230531719 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If the quadratic equations $x^2 + ax + b = 0$ and $x^2 + bx + a = 0$, $a \neq b$, have a common root, then the numerical value of $a + b$ is:

Options :

✔ -1

✖ 0

✖ 1

✖ -2

Question Number : 178 Question Id : 7230531720 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Let $a > 0, b > 0$ and $c > 0$. Then both the roots of the equation $ax^2 + bx + c = 0$:

Options :

✖ are real and negative

✔ have negative real parts

✖ have positive real parts

✖ are purely imaginary

Question Number : 179 Question Id : 7230531721 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $a + b + c = 0$, then the quadratic equation

$3ax^2 - 2bx + c = 0$ has:

Options :

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✖ at least one root in $(0,1)$

✖ one root in $(2,3)$ and the other in $(-2,-1)$

✖ imaginary roots

✔ at least one root in $(-1,0)$

Question Number : 180 Question Id : 7230531722 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Let α, β be the roots of the equation $(x-a)(x-b)=c, c\neq 0$, then the roots of the equation $(x-\alpha)(x-\beta)+c=0$ are:

Options :

✖ a, c

✖ b, c

✔ a, b

✖ $a+c, b+c$

Subject Related

Group Number :	10
Group Id :	72305385
Group Maximum Duration :	0
Group Minimum Duration :	0
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	20

Subject Related

Section Id :	72305385
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	20
Number of Questions to be attempted:	20
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

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Sub-Section Number: 1
Sub-Section Id: 723053121
Question Shuffling Allowed : Yes

Question Number : 181 Question Id : 7230531723 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

If the roots of the equation $x^2 - 2ax + a^2 + a - 3 = 0$ are real and less than 3, then:

Options :

✔ $a < 2$

✖ $2 \leq a \leq 3$

✖ $3 < a \leq 4$

✖ $a > 4$

Question Number : 182 Question Id : 7230531724 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

The set of all real numbers x for which $x^2 - |x+2| + x > 0$ is:

Options :

✖ $(-\infty, -2) \cup (2, \infty)$

✔ $(-\infty, -\sqrt{2}) \cup (\sqrt{2}, \infty)$

✖ $(-\infty, -1) \cup (1, \infty)$

✖ $(\sqrt{2}, \infty)$

Question Number : 183 Question Id : 7230531725 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0.25

If $A = \begin{bmatrix} \beta & 0 \\ 1 & 1 \end{bmatrix}$ and $B = \begin{bmatrix} 1 & 0 \\ 5 & 1 \end{bmatrix}$, then value of β for which $A^2 = B$ is:

Options :

✖ 1

✖ -1

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✖ 4

✔ no real values

Question Number : 184 Question Id : 7230531726 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $A = \begin{bmatrix} \beta & 2 \\ 2 & \beta \end{bmatrix}$ and $|A^3| = 125$, then the value of β is:

Options :

✖ ± 1

✖ ± 2

✔ ± 3

✖ ± 5

Question Number : 185 Question Id : 7230531727 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The system of equations

$$ax + by + cz = q - r$$
$$bx + cy + az = r - p$$
$$cx + ay + bz = p - q$$

Is:

Options :

✔ consistent if $p = q = r$

✖ inconsistent if $a = b = c$ and p, q, r are distinct

✖ consistent if a, b, c are distinct and $a + b + c = 0$

✖ inconsistent if $p \neq q \neq r$

Question Number : 186 Question Id : 7230531728 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If ω is a complex cube root of unity, and $A = \begin{bmatrix} \omega & 0 \\ 0 & \omega \end{bmatrix}$, then A^{100} is equal to:

Options :

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✔ A

✖ $-A$

✖ O

✖ I

Question Number : 187 Question Id : 7230531729 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $P = \begin{bmatrix} 3 & 2 \\ 0 & 1 \end{bmatrix}$, then P^{-3} is:

Options :

✖ $\frac{1}{27}\begin{bmatrix} 1 & -26 \\ 0 & -27 \end{bmatrix}$

✖ $\frac{1}{27}\begin{bmatrix} -1 & -26 \\ 0 & -27 \end{bmatrix}$

✔ $\frac{1}{27}\begin{bmatrix} 1 & -26 \\ 0 & 27 \end{bmatrix}$

✖ $\frac{1}{27}\begin{bmatrix} -1 & 26 \\ 0 & -27 \end{bmatrix}$

Question Number : 188 Question Id : 7230531730 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The points $A(2,3), B(3,5), C(7,7)$ and $D(4,5)$ are such that:

Options :

✖ $ABCD$ is a parallelogram

✖ A, B, C and D are collinear

✔ D lies inside the triangle ABC

✖ D lies on the boundary of the triangle ABC

Question Number : 189 Question Id : 7230531731 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If the cirumcentre of a triangle lies at the origin and the centroid is the middle point of the line joining the points (a^2+1, a^2+1) and $(2a, -2a)$, then the orthocenter lies on the line

Options :

✗ $y = (a^2+1)x$

✗ $y = 2ax$

✗ $x + y = 0$

✓ $(a-1)^2x - (a+1)^2y = 0$

Question Number : 190 Question Id : 7230531732 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The points $(a, 2, -2a), (-a+1, 2a)$ and $(-4-a, 6-2a)$ are collinear for:

Options :

✗ all values of a

✓ $a = -1$

✗ $a = 1$

✗ no value of a

Question Number : 191 Question Id : 7230531733 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The points $(p, q+r), (q, r+p)$ and $(r, p+q)$ are:

Options :

✗ vertices of an equilateral triangle

✗ concyclic

✗ vertices of a right angled triangle

✓ collinear

Question Number : 192 Question Id : 7230531734 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If P and Q are points in the plane such that $\frac{SP}{SQ} = k$ (constant) for all S on a given circle, the value of k is:

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Options :

✔ 1

✖ -1

✖ 2

✖ -2

Question Number : 193 Question Id : 7230531735 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The equation of the line passing through the points of intersection of the circles $3x^2 + 3y^2 - 2x + 12y - 9 = 0$ and $x^2 + y^2 + 6x + 2y - 15 = 0$ is:

Options :

✖ $10x - 3y + 18 = 0$

✖ $10x + 3y - 18 = 0$

✔ $10x - 3y - 18 = 0$

✖ $10x + 3y + 18 = 0$

Question Number : 194 Question Id : 7230531736 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $x + y = k$ is normal to $y^2 = 12x$, then k is:

Options :

✖ 3

✔ 9

✖ -9

✖ -3

Question Number : 195 Question Id : 7230531737 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Let M be a variable point on the ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ with foci F_1 and F_2. If A is the area of the triangle MF_1F_2, then the maximum value of A is:

Options :

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✔ $b\sqrt{(a^2-b^2)}$

✖ $a\sqrt{(a^2-b^2)}$

✖ $b\sqrt{(b^2-a^2)}$

✖ $a\sqrt{(b^2-a^2)}$

Question Number : 196 Question Id : 7230531738 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The equation $\frac{x^2}{1-r}-\frac{y^2}{1+r}=1, |r|<1$ represents:

Options :

✖ an ellipse

✔ a hyperbola

✖ a circle

✖ a pair of straight lines

Question Number : 197 Question Id : 7230531739 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

$y=10^x$ is the reflection of $y=\log_{10}x$ in the line whose equation is:

Options :

✖ $y=10x$

✔ $y=x$

✖ $y=x+10$

✖ $y=\frac{x}{10}$

Question Number : 198 Question Id : 7230531740 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The equation of the common tangent to the curves $y^2=8x$ and $xy=-1$ is:

Options :

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✖ $3y = 9x + 2$

✖ $y = 2x + 1$

✖ $2y = x + 8$

✔ $y = x + 2$

Question Number : 199 Question Id : 7230531741 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

A hyperbola, having the transverse axis of length $2\sin\theta$, is confocal with the ellipse $3x^2 + 4y^2 = 12$. Then its equation is:

Options :

✔ $x^2\,\text{cosec}^2\,\theta - y^2\sec^2\theta = 1$

✖ $x^2\sec^2\theta - y^2\,\text{cosec}^2\,\theta = 1$

✖ $x^2\sin^2\theta - y^2\cos^2\theta = 1$

✖ $x^2\cos^2\theta - y^2\sin^2\theta = 1$

Question Number : 200 Question Id : 7230531742 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The value of $\cos(60° - \theta)\cos\theta\cos(60° + \theta)$ is:

Options :

✖ $\tan 3\theta$

✖ $3\tan\theta$

✖ $\left(\frac{1}{4}\right)\sin 3\theta$

✔ $\left(\frac{1}{4}\right)\cos 3\theta$

Subject Related

Group Number : 11

Group Id : 72305386

Group Maximum Duration :	0
Group Minimum Duration :	0
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	20

Subject Related

Section Id :	72305386
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	20
Number of Questions to be attempted:	20
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	723053122
Question Shuffling Allowed :	Yes

Question Number : 201 Question Id : 7230531743 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $\frac{2\sin x}{1+\cos x+\sin x} = \alpha$, then $\frac{\cos x}{1+\sin x} = ?$

Options :

✗ $\frac{1}{\alpha}$

✓ $1-\alpha$

✗ $1+\alpha$

✗ $\alpha-1$

Question Number : 202 Question Id : 7230531744 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $\alpha = \sin x + \cos y \; and \; \beta = \cos x + \sin y$, then $\tan\left(\frac{x-y}{2}\right) = ?$

Options :

✗ $\alpha-\beta$

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✖ $\alpha + \beta$

✔ $\frac{(\alpha-\beta)}{(\alpha+\beta)}$

✖ $\frac{(\alpha+\beta)}{(\alpha-\beta)}$

Question Number : 203 Question Id : 7230531745 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

When $x + y = z$, then $\cos^2 x + \cos^2 y + \cos^2 z - 2\cos x \cos y \cos z = ?$

Options :

✖ 0

✔ 1

✖ $\sin^2 z$

✖ $\cos^2 z$

Question Number : 204 Question Id : 7230531746 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $\alpha = \cos x + \cos y, \beta = \sin x + \sin y$ and $x - y = 2\theta$ then $\frac{\cos 3\theta}{\cos \theta} = ?$

Options :

✔ $\alpha^2 + \beta^2 - 3$

✖ $3 - \alpha^2 - \beta^2$

✖ $\alpha^2 + \beta^2 - 1$

✖ $\frac{(\alpha^2+\beta^2)}{3}$

Question Number : 205 Question Id : 7230531747 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The relation $\sin x + 2 \sin 2x = 3 + \sin 3x, 0 \le x \le 2\pi$ has:

Options :

✖ one solution in each quadrant

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✗ two solutions in the first quadrant

✓ no solution in any quadrant

✗ one solution in the second quadrant

Question Number : 206 Question Id : 7230531748 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

In a triangle ABC, if $\cos A \cos B + \sin A \sin B \sin C = 1$, then the triangle is a/an:

Options :

✗ isosceles

✗ equilateral

✗ obtuse-angled isosceles

✓ right-angled isosceles

Question Number : 207 Question Id : 7230531749 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If in a triangle ABC, sines of angles A and B satisfy the equation $4x^2 - (2\sqrt{6})x + 1 = 0$, then cos(A – B) is:

Options :

✓ $\frac{1}{2}$

✗ $\frac{1}{\sqrt{2}}$

✗ $\frac{\sqrt{3}}{2}$

✗ $\sqrt{2}$

Question Number : 208 Question Id : 7230531750 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

A ladder of length 6 m makes an angle of 45° with the floor while leaning against one wall of a room. If the foot of the ladder is kept fixed on the floor and it is made to lean against the opposite wall of the room, it makes an angle of 60° with the floor. What is the distance between these two walls of the room?

Options :

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✖ $2\sqrt{3}$ m

✔ $3(1+\sqrt{2})$ m

✖ $3\sqrt{2}$ m

✖ 3 m

Question Number : 209 Question Id : 7230531751 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The angle of elevation of a stationary cloud from a point 2500 m above a lake is 15°and the angle of depression of its reflection in the lake is 45°. The height of the cloud above the lake level is:

Options :

✖ 7500 m

✖ $\frac{2500}{\sqrt{3}}$ m

✔ $2500\sqrt{3}$ m

✖ $1250\sqrt{3}$ m

Question Number : 210 Question Id : 7230531752 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The number of positive integral pairs (a, b) satisfying the equation $\tan^{-1}(a) + \tan^{-1}(b) = \tan^{-1}(7)$ is:

Options :

✔ 2

✖ 0

✖ 4

✖ infinite

Question Number : 211 Question Id : 7230531753 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

When $x + \left(\frac{1}{x}\right) = \frac{5}{2}$, then the principal value of $\sin^{-1}(x)$ is:

Options :

✖ $\frac{\pi}{4}$

✔ $\frac{\pi}{6}$

✖ $\frac{5\pi}{6}$

✖ $\frac{\pi}{3}$

Question Number : 212 Question Id : 7230531754 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $\tan^{-1}\left(\frac{a}{x}\right)+\tan^{-1}\left(\frac{b}{x}\right)=\frac{\pi}{2}$, then the value of x is:

Options :

✖ $\frac{a}{b}$

✖ $\frac{b}{a}$

✖ ab

✔ $\sqrt{ab}$

Question Number : 213 Question Id : 7230531755 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

When $\cos^{-1}(x)+\cos^{-1}(y)=\frac{\pi}{2}$ and $\tan^{-1}(x)-\tan^{-1}(y)=0$, then x^2+y^2+xy is:

Options :

✖ $\frac{1}{8}$

✖ 0

✔ $\frac{3}{2}$

✖ $\frac{1}{2}$

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Question Number : 214 Question Id : 7230531756 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $\alpha = \sin(\cot^{-1}(x))$ and $\beta = \cot(\sin^{-1}(x))$, where $x > 0$, then $x^{-2} - x^2 = ?$

Options :

✔ $\left(\frac{\beta}{\alpha}\right)^2$

✖ $\left(\frac{\beta}{\alpha}\right)^{-2}$

✖ $\frac{\beta}{(\alpha)^2}$

✖ $\frac{(\beta)^2}{\alpha}$

Question Number : 215 Question Id : 7230531757 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $\tan^{-1}\left(\frac{\sqrt{(1+x^2)}-1}{x}\right) = 4$, then the value of x is:

Options :

✖ $\tan(2)$

✖ $\tan(4)$

✔ $\tan(8)$

✖ $\tan\left(\frac{1}{4}\right)$

Question Number : 216 Question Id : 7230531758 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $\lim_{x\to 0} \frac{a\sin x - \sin 2x}{\tan^3 x} = b$, then the values of a and b are respectively:

Options :

✖ -1 and 2

✖ 2 and 3

✔ 2 and 1

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✖ 1 and 3

Question Number : 217 Question Id : 7230531759 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Using Rolle's theorem for a function $f(x) = x(x+1)(x+2)(x+3)$, $f'(x) = 0$ has:

Options :

✔ three real roots

✖ four real roots

✖ two real roots

✖ two real roots and complex root

Question Number : 218 Question Id : 7230531760 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Applying Lagrange's Mean Value theorem to the function $f(x) = x + \left(\frac{1}{x}\right)$ in [0.5, 3], the value of c between 0.5 and 3 is:

Options :

✖ $\sqrt{0.5}$

✔ $\sqrt{1.5}$

✖ $\sqrt{1.25}$

✖ 2

Question Number : 219 Question Id : 7230531761 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If the derivative of the function y = f(x) is zero always, then y is:

Options :

✖ an increasing function

✖ a decreasing function

✔ neither an increasing function nor a decreasing function

✖ not stationary

Question Number : 220 Question Id : 7230531762 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If the normal to the curve $y^2 = 5x - 1$ at the point $(1, -2)$ is of the form $ax - 5y + b = 0$, then the values of a and b are respectively:

Options :

✗ $4, 14$

✗ $-4, 14$

✗ $-4, -14$

✓ $4, -14$

Subject Related

Group Number :	12
Group Id :	72305387
Group Maximum Duration :	0
Group Minimum Duration :	0
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	20

Subject Related

Section Id :	72305387
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	20
Number of Questions to be attempted:	20
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	723053123
Question Shuffling Allowed :	Yes

Question Number : 221 Question Id : 7230531763 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The extreme value of $f(x) = (x)^{\frac{1}{x}}$ is:

Options :

✖ 1

✔ $(e)^{\frac{1}{e}}$

✖ $\left(\frac{1}{e}\right)^{e}$

✖ e

Question Number : 222 Question Id : 7230531764 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The value of the integral $\int_{-1}^{1}(2-|x|)\,dx$ is:

Options :

✔ 3

✖ $\frac{3}{2}$

✖ $\frac{2}{3}$

✖ $\frac{1}{3}$

Question Number : 223 Question Id : 7230531765 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The average value of $f(x)=\sqrt{4-x^2}$ on $[-2, 2]$ is:

Options :

✖ $\frac{\pi}{4}$

✖ $\frac{3\pi}{2}$

✔ $\frac{\pi}{2}$

✖ $\frac{\pi}{3}$

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Question Number : 224 Question Id : 7230531766 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The area of the region enclosed by the parabola $y = 2 - x^2$ and the straight line $y = -x$ is equal to:

Options :

✖ 4

✔ 4.5

✖ 5

✖ 3.5

Question Number : 225 Question Id : 7230531767 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Using the Fundamental theorem, determine the value of the integral $\int_1^{x^2} \cos t \ dt$.

Options :

✖ $2x \cos x$

✖ $x \cos x^2$

✖ $3x \cos x^2$

✔ $2x \cos x^2$

Question Number : 226 Question Id : 7230531768 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The volume of the solid generated by revolving the region between the y-axis and the curve $x = \frac{2}{y}, 1 \leq y \leq 4$ about the y-axis is:

Options :

✖ 3

✔ 3π

✖ 2π

✖ π

Question Number : 227 Question Id : 7230531769 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The value of the integral $\int_0^{\frac{\pi}{2}} \frac{\sqrt{\sin x}}{\sqrt{\sin x}+\sqrt{\cos x}} dx$ is:

Options :

✖ $\frac{\pi}{2}$

✖ 0

✔ $\frac{\pi}{4}$

✖ 1

Question Number : 228 Question Id : 7230531770 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The order and degree of the differential equation $\left(\frac{d^2y}{dx^2}\right) = \left[1 + \left(\frac{dy}{dx}\right)^2\right]^{\frac{3}{2}}$ are respectively:

Options :

✖ 2 and 1

✖ 2 and 3

✖ 1 and 2

✔ 2 and 2

Question Number : 229 Question Id : 7230531771 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The solution of the differential equation $(y^2 - xy)dx + x^2 dy$ is:

Options :

✖ $\frac{y}{x} = 1n(x) + C$

✖ $\frac{x}{y} = 1n(y) + C$

✔ $\frac{x}{y} = 1n(x) + C$

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✖ $\frac{y}{x} = 1n(y) + C$

Question Number : 230 Question Id : 7230531772 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The solution of the equation $\cos(x + y)\,dy = dx$ is given by:

Options :

✔ $y = \tan\left(\frac{x+y}{2}\right) + C$

✖ $y = \cot\left(\frac{x+y}{2}\right) + C$

✖ $y = \tan\left(\frac{x+y}{3}\right) + C$

✖ $y = \tan\left(\frac{x+y}{4}\right) + C$

Question Number : 231 Question Id : 7230531773 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The solution of the equation $(x + 1)\left(\frac{dy}{dx}\right) - y = e^x(x + 1)^2$ is:

Options :

✖ $\frac{y}{x-1} = e^x + C$

✖ $\frac{y}{x+1} = e^{-x} + C$

✔ $\frac{y}{x+1} = e^x + C$

✖ $\frac{y}{1-x} = e^x + C$

Question Number : 232 Question Id : 7230531774 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The solution of the differential equation $(xy\sin xy + \cos xy)y\,dx + (xy\sin xy - \cos xy)x\,dy = 0$ is:

Options :

✖ $x\cos xy = Cyx$

✖ $x\cos xy = y + C$

✖ $y\cos xy = C + x$

✔ $y\cos xy = Cx$

Question Number : 233 Question Id : 7230531775 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $\left(\frac{dy}{dx}\right) + 2y\tan x = \sin x, y\left(\frac{\pi}{3}\right) = 0$ then the maximum value of y is:

Options :

✔ $\frac{1}{8}$

✖ $\frac{1}{4}$

✖ $\frac{1}{2}$

✖ $\frac{2}{9}$

Question Number : 234 Question Id : 7230531776 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The differential equation $(ay^2 + x + x^8)dx + (y^8 - y + bxy)dy = 0$ is exact if:

Options :

✖ a = 1, b = 3

✖ a = b

✖ a = 2, b = 1

✔ b = 2a

Question Number : 235 Question Id : 7230531777 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $\vec{a} = 2\hat{i} - \hat{j} - 8\hat{k}$ and $\vec{b} = \hat{i} + 3\hat{j} - 4\hat{k}$, then the direction cosines of the vector $\vec{a} - 2\vec{b}$ is given by:

Options :

✗ $\frac{3}{13}, \frac{4}{13}, -\frac{12}{13}$

✗ 1, 0, 1

✓ 0, −1, 0

✗ 0, 0, 1

Question Number : 236 Question Id : 7230531778 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The projection of the vector $\hat{i} - 2\hat{j} + \hat{k}$ on $4\hat{i} - 4\hat{j} + 7\hat{k}$ is:

Options :

✓ $\frac{19}{9}$

✗ $\frac{4}{9}$

✗ $\frac{7}{9}$

✗ $\frac{8}{9}$

Question Number : 237 Question Id : 7230531779 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The angle between the vectors $2\hat{i} + 6\hat{j} + 3\hat{k}$ and $12\hat{i} - 4\hat{j} + 3\hat{k}$ is:

Options :

✗ $\cos^{-1}\left(\frac{9}{19}\right)$

✓ $\cos^{-1}\left(\frac{9}{91}\right)$

✗ $\cos^{-1}\left(\frac{3}{19}\right)$

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✖ $\cos^{-1}\left(\frac{7}{19}\right)$

Question Number : 238 Question Id : 7230531780 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The unit vector perpendicular to both the vectors $2\hat{i}+\hat{j}-\hat{k}$ and $\hat{i}-\hat{j}+2\hat{k}$ is:

Options :

✖ $\left(\frac{1}{35}\right)(\hat{i}+5\hat{j}-3\hat{k})$

✖ $\left(\frac{1}{35}\right)(\hat{i}-5\hat{j}+3\hat{k})$

✖ $\left(\frac{1}{35}\right)(\hat{i}+5\hat{j}+3\hat{k})$

✔ $\left(\frac{1}{35}\right)(\hat{i}-5\hat{j}-3\hat{k})$

Question Number : 239 Question Id : 7230531781 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If the vectors $\vec{a}=\hat{i}+\hat{j}+\hat{k}$, $\vec{b}=2\hat{i}-4\hat{k}$ and $\vec{c}=\hat{i}+\lambda\hat{j}+3\hat{k}$ are coplanar, then the value of λ is:

Options :

✖ -4

✖ $\frac{3}{5}$

✔ $\frac{5}{3}$

✖ $\frac{5}{7}$

Question Number : 240 Question Id : 7230531782 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $|\vec{a}+\vec{b}|=60$, $|\vec{a}-\vec{b}|=40$ and $|\vec{b}|=46$, then $|\vec{a}|$ is equal to:

Options :

✔ 22

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✖ 12

✖ 21

✖ 24

Subject Related

Group Number :	13
Group Id :	72305388
Group Maximum Duration :	0
Group Minimum Duration :	0
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	20

Subject Related

Section Id :	72305388
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	20
Number of Questions to be attempted:	20
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	723053124
Question Shuffling Allowed :	Yes

Question Number : 241 Question Id : 7230531783 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If the scalar product of $\hat{i}+\hat{j}+\hat{k}$ with the unit vector parallel to the sum of $2\hat{i}+4\hat{j}-5\hat{k}$ and $\lambda\hat{i}+2\hat{j}+3\hat{k}$ is equal to unity, then the value of λ is:

Options :

✔ 1

✖ $\frac{11}{3}$

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✖ $-\frac{38}{7}$

✖ -5

Question Number : 242 Question Id : 7230531784 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If the distance between two points $(x,-8,4)$ and $(3,-5,4)$ is 5, then the positive value of x is:

Options :

✖ 3

✔ 7

✖ 4

✖ 2

Question Number : 243 Question Id : 7230531785 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

What are the co-ordinates of a point which divides the line joining the points $(2,-4,3)$ and $(-4,5,-6)$ in the ratio $1:-4$?

Options :

✖ $(3,3,5)$

✔ $(4,-7,6)$

✖ $(-2,2,-3)$

✖ $(2,4,5)$

Question Number : 244 Question Id : 7230531786 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The direction cosines of the line joining the points $(4,3,-5)$ and $(-2,1,-8)$ are:

Options :

✖ $6,2,3$

✖ $-6,-2,-3$

✖ $\frac{7}{6},\frac{7}{2},\frac{7}{3}$

✔ $\frac{6}{7}, \frac{2}{7}, \frac{3}{7}$

Question Number : 245 Question Id : 7230531787 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The distance of the point $(1, -2,3)$ from the plane $x - y + z - 5 = 0$ measured parallel to the line $\frac{x}{2} = \frac{y}{3} = \frac{z}{-6}$ is:

Options :

✖ 2

✔ 1

✖ 5

✖ 3

Question Number : 246 Question Id : 7230531788 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The perpendicular distance from the point $(1, 0,-3)$ to the straight line $\frac{x-2}{3} = \frac{y-3}{4} = \frac{z-4}{5}$ is:

Options :

✖ 2

✖ 4

✔ 3

✖ 1

Question Number : 247 Question Id : 7230531789 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The equation of the plane in terms of the intercepts of a, b, c from the axes is of the form:

Options :

✖ $(x - a)(y - b) + (z - c) = 1$

✔ $\left(\frac{x}{a}\right) + \left(\frac{y}{b}\right) + \left(\frac{z}{c}\right) = 1$

✖ $ax + by + cz = 1$

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✖ $(x-c)(y-a)(z-a)=0$

Question Number : 248 Question Id : 7230531790 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The equation straight line y = 0, z = 0 in symmetrical form is:

Options :

✖ $\frac{x}{1}=\frac{y}{1}=\frac{z}{0}$

✖ $\frac{x}{0}=\frac{y}{1}=\frac{z}{1}$

✔ $\frac{x}{1}=\frac{y}{0}=\frac{z}{0}$

✖ $\frac{x-1}{1}=\frac{y-1}{0}=\frac{z-1}{0}$

Question Number : 249 Question Id : 7230531791 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The shortest distance between the lines $\frac{x-3}{3}=\frac{y-8}{-1}=\frac{z-3}{1}$ and $\frac{x-3}{-3}=\frac{y+7}{2}=\frac{z-6}{4}$ is:

Options :

✖ $\frac{3}{5}\sqrt{20}$

✖ $\frac{2}{5}\sqrt{30}$

✔ $\frac{13}{5}\sqrt{30}$

✖ $\frac{3}{5}\sqrt{30}$

Question Number : 250 Question Id : 7230531792 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The angle between the plane $x+2y-3z+4=0$ and the line whose direction cosine are $\frac{2}{\sqrt{14}},\frac{3}{\sqrt{14}},\frac{1}{\sqrt{14}}$ is given by:

Options :

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✖ $\cos^{-1}\left(\frac{3}{14}\right)$

✖ $\sin^{-1}\left(\frac{3}{14}\right)$

✖ $\cos^{-1}\left(\frac{5}{14}\right)$

✔ $\sin^{-1}\left(\frac{5}{14}\right)$

Question Number : 251 Question Id : 7230531793 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

A plane passes through a fixed point (a, b, c) and cuts the axes at A, B, C. Then the locus of the centre of the sphere OABC is:

Options :

✖ $\left(\frac{x}{a}\right)+\left(\frac{y}{b}\right)+\left(\frac{z}{c}\right)=1$

✔ $\left(\frac{a}{x}\right)+\left(\frac{b}{y}\right)+\left(\frac{c}{z}\right)=2$

✖ $\left(\frac{x}{a}\right)+\left(\frac{y}{b}\right)+\left(\frac{z}{c}\right)=0$

✖ $\left(\frac{a}{x}\right)+\left(\frac{b}{y}\right)+\left(\frac{c}{z}\right)=1$

Question Number : 252 Question Id : 7230531794 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The equation of the sphere on the join of (1, 1, 1) and $(-1,-1,-1)$ as diameter is:

Options :

✖ $x^2+y^2+z^2=1$

✖ $x^2+y^2+z^2+1=0$

✔ $x^2+y^2+z^2=3$

✖ $x^2+y^2+z^2+3=0$

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Question Number : 253 Question Id : 7230531795 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

A man travelled 12 hours at 4 m/h, and again 10 hours at 5 m/h. What is his average speed?

Options :

✔ 4.45 m/h

✖ 4.15 m/h

✖ 4.40 m/h

✖ 4.10 m/h

Question Number : 254 Question Id : 7230531796 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The numbers 3.2, 5.8, 7.9 and 4.5 have frequencies x, $x+2$, $x-3$ and $x+6$. If the arithmetic mean is 4.876, then the value of x is:

Options :

✖ 3

✖ 4

✔ 5

✖ 7

Question Number : 255 Question Id : 7230531797 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The weight of 11 forty-year-old men is 148, 154, 158, 160, 161, 162, 166, 170, 182, 195 and 236 pounds. If the weight of the heaviest man is omitted, then the percentage change in the range is:

Options :

✔ 47%

✖ 42%

✖ 52%

✖ 44%

Question Number : 256 Question Id : 7230531798 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The mean deviation of the values 8, 15, 53, 49, 19, 62, 7, 15, 95, 77 about the median is:

Options :

✖ 26.1

✖ 25.4

✔ 27.2

✖ 21.7

Question Number : 257 Question Id : 7230531799 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The mean and standard deviation of 20 items is found to be 10 and 2, respectively. At the time of checking, it was found that one item 8 was incorrect. If the item 8 is replaced by the correct one i.e. 12, then the correct mean and standard deviation are respectively:

Options :

✖ 10.11 and 1.997

✖ 10.01 and 1.917

✖ 10.01 and 1.097

✔ 10.2 and 1.99

Question Number : 258 Question Id : 7230531800 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The mean and standard deviation calculated from 20 observations are 15 and 10, respectively. If an additional observation 5, left out through oversight, is included in the calculations, then the corrected mean and the standard deviation are respectively:

Options :

✖ 14.83 and 9.78

✔ 14.52 and 9.99

✖ 12.26 and 9.19

✖ 8.36 and 9.91

Question Number : 259 Question Id : 7230531801 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Calculate the mean deviation about the mean for the data given below.

Class:	4 –5	6 – 7	8 – 9	10 –11	12 – 13	14 – 15
Frequency:	4	10	20	15	8	3

Options :

✗ 2.48

✗ 9.23

✓ 2.90

✗ 3.30

Question Number : 260 Question Id : 7230531802 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

A lot contains 12 items, of which 4 are defective. Three items are drawn at random from the lot, one after the other. What is the probability that all three are non-defective?

Options :

✓ $\frac{14}{55}$

✗ $\frac{16}{55}$

✗ $\frac{12}{55}$

✗ $\frac{1}{5}$

Subject Related

Group Number :	14
Group Id :	72305389
Group Maximum Duration :	0
Group Minimum Duration :	0
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	20

Subject Related

Section Id :	72305389
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	20
Number of Questions to be attempted:	20
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	723053125
Question Shuffling Allowed :	Yes

Question Number : 261 Question Id : 7230531803 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Let A and B be any two events such that $P(A) = 0.6$, $P(B) = 0.3$ and $P(A \cap B) = 0.2$. Then $P(A^C | B^C) = ?$

Options :

✗ $\frac{3}{4}$

✗ $\frac{1}{2}$

✓ $\frac{3}{7}$

✗ $\frac{2}{3}$

Question Number : 262 Question Id : 7230531804 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

A box B contains 5 red marbles and 4 blue marbles, and another box C contains 3 red marbles and 2 blue marbles. A marble is drawn at random from each box. What is the probability that both marbles will be red?

Options :

✗ $\frac{5}{9}$

✓ $\frac{1}{3}$

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✖ $\frac{3}{5}$

✖ $\frac{8}{9}$

Question Number : 263 Question Id : 7230531805 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If the probability density function of a discrete random variable X is defined by

$P(X = x) = 1/2^x$ for $x = 1, 2, 3, \ldots$, then $P(X \geq 4) = ?$

Options :

✖ $\frac{7}{8}$

✖ $\frac{1}{3}$

✖ $\frac{1}{7}$

✔ $\frac{1}{8}$

Question Number : 264 Question Id : 7230531806 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Suppose 300 misprints are distributed randomly throughout a book of 500 pages. What is the probability that a given page contains 2 or more misprints?

Options :

✖ 0.329

✔ 0.122

✖ 0.549

✖ 0.1

Question Number : 265 Question Id : 7230531807 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If the probability density function f(x) of a continuous random variable X is given by $f(x) = \begin{cases} k \text{ if } a \leq x \leq b \\ 0 \text{ otherwise} \end{cases}$, then the mean X is:

Options :

✔ $\frac{(a+b)}{2}$

✖ $\frac{1}{(b-a)}$

✖ 0

✖ $\frac{(a-b)}{3}$

Question Number : 266 Question Id : 7230531808 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

A box contains 3 red marbles and 2 white marbles. A marble is drawn and replaced three times from the box. What is the probability that at least one red marble was drawn?

Options :

✖ $\frac{36}{125}$

✖ $\frac{54}{125}$

✔ $\frac{117}{125}$

✖ $\frac{113}{125}$

Question Number : 267 Question Id : 7230531809 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Under which of the following conditions does the space $\langle R, \oplus, \otimes \rangle$ fail to be vector space under the operations $\oplus$ and $\otimes$ defined by $a \oplus b = a^b$ and $k \otimes a = ka$, where R denotes the set of all real numbers?

Options :

✖ Addition is associative

✔ Addition is not commutative

✖ Additive inverse

✖ Additive identity

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Question Number : 268 Question Id : 7230531810 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which of the following subset K of a vector space R^2 is NOT a basis for R^2 ?

Options :

✗ $K = \{\begin{pmatrix}1\\1\end{pmatrix}, \begin{pmatrix}-1\\2\end{pmatrix}\}$

✗ $K = \{\begin{pmatrix}-1\\3\end{pmatrix}, \begin{pmatrix}1\\-1\end{pmatrix}\}$

✓ $K = \{\begin{pmatrix}2\\1\end{pmatrix}, \begin{pmatrix}1\\0\end{pmatrix}, \begin{pmatrix}8\\-3\end{pmatrix}\}$

✗ $K = \{\begin{pmatrix}1\\0\end{pmatrix}, \begin{pmatrix}0\\1\end{pmatrix}\}$

Question Number : 269 Question Id : 7230531811 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Identify that the function T from R^2 to R^2 defined below is NOT linear.

Options :

✓ $T\left(\begin{bmatrix}x\\y\end{bmatrix}\right) = \begin{bmatrix}x\\y^2\end{bmatrix}$

✗ $T\left(\begin{bmatrix}x\\y\end{bmatrix}\right) = \begin{bmatrix}x\\0\end{bmatrix}$

✗ $T\left(\begin{bmatrix}x\\y\end{bmatrix}\right) = \begin{bmatrix}y\\x\end{bmatrix}$

✗ $T\left(\begin{bmatrix}x\\y\end{bmatrix}\right) = \begin{bmatrix}0\\y\end{bmatrix}$

Question Number : 270 Question Id : 7230531812 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If A is a $m \times n$ matrix, then:

Options :

✗ rank(A) + nullity (A) < n

✓ rank(A) + nullity (A) = n

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✖ $\text{rank(A)} + \text{nullity (A)} = \text{m}$

✖ $\text{rank(A)} + \text{nullity (A)} < \text{m}$

Question Number : 271 Question Id : 7230531813 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If λ is an eigenvalue of an invertible matrix A, then the eigenvalue of A^{-1} is:

Options :

✖ λ

✔ λ^{-1}

✖ 1

✖ $\frac{2}{\lambda}$

Question Number : 272 Question Id : 7230531814 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Let T be linear operator on R^3 defined by $T\left(\begin{bmatrix} x \\ y \\ z \end{bmatrix}\right) = \begin{bmatrix} x \\ -y \\ z \end{bmatrix}$. Then the matrix of T relative to the standard basis for R^3 is:

Options :

✔ $\begin{bmatrix} 1 & 0 & 0 \\ 0 & -1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$

✖ $\begin{bmatrix} 1 & 0 & 1 \\ 1 & -1 & 0 \\ 0 & 1 & 1 \end{bmatrix}$

✖ $\begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$

✖ $\begin{bmatrix} -1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & -1 \end{bmatrix}$

Question Number : 273 Question Id : 7230531815 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Let $\wp_2$ denote the vector space of polynomials of degree less than or equal to 2. If $T: \wp_2 \to \wp_2$ is a linear operator and $T(1) = 1 + x, T(x) = 2 + x^2, T(x^2) = x - 3x$, then $T(-3 + x - x^2)$ is:

Options :

✔ $-3 + 4x - x^2$

✖ $1 + 4x + 4x^2$

✖ $1 - 4x - 4x^2$

✖ $-1 - 4x + 4x^2$

Note: For this question, discrepancy is found in question/answer. So,this question is ignored for all candidates.

Question Number : 274 Question Id : 7230531816 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $T: R^4 \to R^5$ and $\dim(R(T)) = 2$, then $\dim(N(T)) = ?$

Options :

✖ 3

✔ 2

✖ 1

✖ 4

Question Number : 275 Question Id : 7230531817 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The singular values of $A = \begin{bmatrix} 1 & 1 \\ 0 & 1 \\ 1 & 0 \end{bmatrix}$ is:

Options :

✔ $1, \sqrt{3}$

✖ 1,3

✖ 2, 3

✖ 1,4

Question Number : 276 Question Id : 7230531818 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

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Correct : 1 Wrong : 0.25

The range of the function $f(x)=\begin{cases}\frac{x}{2} if\ x \in [-2,0] \\ x^2\ if\ x \in [0,2]\end{cases}$ is given by:

Options :

✖ $[0, 1]$

✔ $[-1, 4]$

✖ $[-2, 2]$

✖ $(-2, 2)$

Question Number : 277 Question Id : 7230531819 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $f:[-1,1] \to R$ is a function defined by $f(x)=\begin{cases}1\ if\ x\ is\ rational \\ 0\ if\ x\ is\ irrational\end{cases}$, then $\lim\limits_{x\to 0} f(x)$:

Options :

✖ is not equal to 0 and 1

✖ is equal to 1

✖ is equal to 0

✔ does not exist

Question Number : 278 Question Id : 7230531820 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The radius of convergence of the series $1-\left(\frac{x}{2}\right)+\left(\frac{x^2}{3}\right)-\left(\frac{x^3}{4}\right)+\cdots$ is:

Options :

✖ 0

✖ -1

✔ 1

✖ -2

Question Number : 279 Question Id : 7230531821 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

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Correct : 1 Wrong : 0.25

Which of the following functions is the only analytic function?

Options :

✗ $f(z) = \mathrm{R}(iz)$

✓ $f(z) = \sin(z)$

✗ $f(z) = \mathrm{Im}(z)$

✗ $f(z) = \bar{z}$

Question Number : 280 Question Id : 7230531822 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

If $\delta\left(t-\frac{\pi}{4}\right)$ denotes the unit impulse function, then the Laplace transform of $\sin 2t\delta\left(t-\frac{\pi}{4}\right)$ is:

Options :

✓ $e^{\frac{-rs}{4}}$

✗ $e^{\frac{-rs}{2}}$

✗ $e^{\frac{rs}{4}}$

✗ $e^{\frac{rs}{2}}$

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Subject Related

Group Number :	15
Group Id :	72305390
Group Maximum Duration :	0
Group Minimum Duration :	180
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	20

Subject Related

Section Id :	72305390
Section Number :	1
Section type :	Online

Mandatory or Optional:	Mandatory
Number of Questions:	20
Number of Questions to be attempted:	20
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	723053126
Question Shuffling Allowed :	Yes

Question Number : 281 Question Id : 7230531823 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

What behaviour is exhibited when Sita takes responsibility for not being there for her friends when they are in need

Options :

✗ Social maturity

✓ Responsibility

✗ Compassion

✗ Charitable disposition

Question Number : 282 Question Id : 7230531824 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which is the scheme in 2018 has proposed in the Union Budget with a view to improving school effectiveness, at all school stages?

Options :

✓ SamagraShiksha

✗ Sarva Shiksha Abhiyan

✗ Rashtriya Madhyamik Shiksha Abhiyan

✗ Teacher Education

Question Number : 283 Question Id : 7230531825 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which of these is NOT a characteristic feature of a well-designed active learning strategy?

Options :

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✗ Every student acting on the material either individually or with others

✓ A relatively long time frame

✗ Clear, meaningful, and uncomplicated goal of activity

✗ Unambiguous description of the nature of the end product — be it a list, an answer, a choice, or a structure.

Question Number : 284 Question Id : 7230531826 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Identify the learning style from the given description:

Shyam is a 6^{th} grader, fond of learning through charts, diagrams, and visual aids. Textbooks that are dominated by words, without illustrations, bore him.

Options :

✓ Visual / Non-verbal Learning style

✗ Visual /Verbal Learning style

✗ Tactile Learning style

✗ Auditory Learning style

Question Number : 285 Question Id : 7230531827 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

What is the function of language, when it is used to communicate information, known as?

Options :

✗ Expressive function

✓ Informative function

✗ Directive function

✗ Inspiring function

Question Number : 286 Question Id : 7230531828 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which of these is NOT a characteristic of mathematics?

Options :

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✗ Logical sequence

✗ Peculiar symbolism

✗ Abstractness

✓ Inquiry approach

Question Number : 287 Question Id : 7230531829 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which one of the following approach would ensure gender equality in textbooks?

Options :

✗ Using both girls and boys names in examples

✓ Illustrating common stereotypes about boys and girls

✗ Including pictures of boys doing activities which girls usually do

✗ Using feminist writing as source material

Question Number : 288 Question Id : 7230531830 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which of these is NOT a part of social science?

Options :

✗ Law

✗ Political science

✓ Biology

✗ Philosophy

Question Number : 289 Question Id : 7230531831 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which of these is NOT an objective of teaching mathematics?

Options :

✗ Teaching and learning of numeracy skills

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✗ Teaching of abstract mathematical concepts

✗ Teaching of advanced mathematics

✓ Making students understand the importance of micro teaching

Question Number : 290 Question Id : 7230531832 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which of these options need NOT be given much importance while choosing cartoons to teach a concept?

Options :

✗ Selection of cartoons keeping the goal of the specific subject in mind

✗ Use of appropriate and relevant cartoons to drive in the concept

✗ Taking care that the cartoons don't disturb the sentiments of any group

✓ The colours used in the cartoon characters

Question Number : 291 Question Id : 7230531833 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

The content for arts education activities at primary stage should be oriented towards all the below options, EXCEPT:

Options :

✗ Towards Self

✗ Towards Family

✗ Towards Classroom

✓ Towards cultural diversity

Question Number : 292 Question Id : 7230531834 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which of these is NOT a 3D art method or technique to use while teaching a subject?

Options :

✗ Relief work

✗ Clay modelling

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✗ Hand pottery

✓ Photographs

Question Number : 293 Question Id : 7230531835 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which of these is NOT a feature of a blog?

Options :

✗ The content is published in a reverse chronological fashion

✗ Content is updated on a regular basis

✗ Readers have the possibility to leave comments

✓ They are composed of web pages in which one can makes changes thus enabling fast and easy collaboration.

Question Number : 294 Question Id : 7230531836 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

What advantage does micro teaching give student teachers?

Options :

✓ Prepares for transfer of new technique to a real classroom

✗ Allows specific methods to be evolved for teaching

✗ Collect data for research studies

✗ Helps teacher educators evaluate student teachers

Question Number : 295 Question Id : 7230531837 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

When a person knows the theory behind how to drive a car without ever having driven a car in reality, then the person is said to possess:

Options :

✓ Procedural knowledge

✗ Propositional knowledge

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✖ Personal Knowledge

✖ Inherent knowledge

Question Number : 296 Question Id : 7230531838 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which of these is NOT an assessment method?

Options :

✖ Question and answer

✖ Skill test

✖ Homework exercises

✔ Teacher suggests correction

Question Number : 297 Question Id : 7230531839 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which of these is a summative assessment?

Options :

✔ Final examination used for certification

✖ Self-assessments (identifying skills and competencies)

✖ Discussion board responses (on content-specific prompts)

✖ Interviews (brief, private, 10-minute interview of each student)

Question Number : 298 Question Id : 7230531840 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

What has been the shift in teacher evaluation techniques?

Options :

✔ Standards evaluation to Value addition

✖ Mentor evaluation to peer evaluation

✖ From assessing practice teaching to micro teaching

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✖ Peer evaluation to self-evaluation

Question Number : 299 Question Id : 7230531841 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Which of the following is a disorder that affects the development of motor skills, in which the affected have trouble planning and executing fine motor tasks, which can range from waving goodbye to getting dressed?

Options :

✖ Dyslexia

✖ Dysgraphia

✖ Dyscalculic

✔ Dyspraxia

Question Number : 300 Question Id : 7230531842 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.25

Identify the most vital reason why students with special needs to be made a part of regular schools?

Options :

✖ To take advantage of benefits in the form of educational resources and activities that are available

✖ To take opportunities in the field which will help them have a better future

✖ To create dependency on specialised services only which will give a way to prove their worth.

✔ To keep them away from their need based activities.