

Telangana State Commissioner and Director of School Education

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 :	School Assistant Mathematics English 22nd July 2024 Shift 2
Subject Name :	School Assistant Mathematics English
Duration :	150
Total Marks :	80
Display Marks:	Yes
Share Answer Key With Delivery Engine :	Yes
Actual Answer Key :	Yes
Change Font Color :	No
Change Background Color :	No
Change Theme :	No
Help Button :	No
Show Reports :	No
Show Progress Bar :	No

School Assistant Mathematics

Group Number :	1
Group Id :	69817777
Group Maximum Duration :	0
Group Minimum Duration :	150
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	80

GK and Current Affairs

Section Id :	698177312
Section Number :	1
Section type :	Online

Mandatory or Optional :	Mandatory
Number of Questions :	20
Number of Questions to be attempted :	20
Section Marks :	10
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	698177413
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 69817713052 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes
Correct Marks : 0.5 Wrong Marks : 0

Which of the following was **NOT** a leap year

Options :

1. ✘ 2000
2. ✔ 1900
3. ✘ 1960
4. ✘ 1940

Question Number : 2 Question Id : 69817713053 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes
Correct Marks : 0.5 Wrong Marks : 0

The village panchayaths were provided constitutional status through 73rd constitutional amendment in the year

Options :

1. ✘ 1972
2. ✔ 1992
3. ✘ 1982

4. ✘ 2002

Question Number : 3 Question Id : 69817713054 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

The number of cabinet ministers sworn in for the Union Government apart from the Prime Minister after the General Elections in June, 2024

Options :

1. ✘ 29

2. ✘ 28

3. ✘ 27

4. ✔ 30

Question Number : 4 Question Id : 69817713055 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Dendrites, axon and synaptic knob are all part of

Options :

1. ✘ Connective Tissue

2. ✘ Epithelial Tissue

3. ✔ Nervous Tissue

4. ✘ Muscular Tissue

Question Number : 5 Question Id : 69817713056 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

One among the following has won a medal in Boxing in the summer Olympics held in Tokyo in 2020

Options :

1. ✓ Lovlina Borgohain
2. ✗ Mary Kom
3. ✗ Puja Rani
4. ✗ Satish Kumar

Question Number : 6 Question Id : 69817713057 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Chitra Magimairaj has won the World Championship in this sport in 2014 and 2016

Options :

1. ✗ Chess
2. ✓ Snooker
3. ✗ Badminton
4. ✗ Table Tennis

Question Number : 7 Question Id : 69817713058 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

'The Ashes', a Men's Test Cricket series is played between the following Two countries

Options :

1. ✘ South Africa and West Indies
2. ✘ Australia and South Africa
3. ✔ England and Australia
4. ✘ England and West Indies

Question Number : 8 Question Id : 69817713059 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

The theme for the World Immunization Week, 2024 held in April, 2024 was

Options :

1. ✘ The Big Catch-up
2. ✘ A Long Life for All is not a promise, it's an ambition.
3. ✘ Vaccines bring us closer
4. ✔ Humanly Possible: Immunization for All

Question Number : 9 Question Id : 69817713060 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

The International Treaty, 'Montreal Protocol' that came into force in 1989 is a protocol on

Options :

1. ✘ Reduction of movement of hazardous wastes between nations
2. ✘ Conservation of bio-diversity
3. ✘ Ensuring maintenance of high level safety for land-based nuclear power plants
4. ✔ Substances that deplete the ozone layer

Question Number : 10 Question Id : 69817713061 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Correct Marks : 0.5 Wrong Marks : 0

EDUSAT is a

Options :

1. ✘ Navigational satellite
2. ✔ Communication satellite
3. ✘ Defence satellite
4. ✘ Earth observation satellite

Question Number : 11 Question Id : 69817713062 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Correct Marks : 0.5 Wrong Marks : 0

One of the following is considered the 'Father of Telugu Cinema'

Options :

1. ✓ Raghupathi Venkaiah Naidu
2. ✘ C Pullayya
3. ✘ H M Reddy
4. ✘ B N Reddy

Question Number : 12 Question Id : 69817713063 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

The temple that was destroyed by muslim invaders and rebuilt multiple times, the last time being after independence as per the orders of the then Home Minister of India, Sardar Vallabhai Patel

Options :

1. ✘ Varnasi
2. ✘ Ujjain
3. ✓ Somnath
4. ✘ Badrinath

Question Number : 13 Question Id : 69817713064 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

'Giddha' is a folk dance of women of this state

Options :

1. ✓ Punjab
2. ✗ Gujarat
3. ✗ Uttar Pradesh
4. ✗ Rajasthan

Question Number : 14 Question Id : 69817713065 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

This bank has launched 'Green Rupee Term Deposit' in January, 2024 in an effort to raise money for projects and activities that promote environment

Options :

1. ✓ SBI
2. ✗ Union Bank of India
3. ✗ Bank of Baroda
4. ✗ ICICI

Question Number : 15 Question Id : 69817713066 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Identify the institute from the following that is located in Mysore

Options :

1. ✗

2. ✘ Rashtriya Sanskrit Vidyapeetha

3. ✔ Central Institute of Indian Languages

4. ✘ Indian Institute of Science

Question Number : 16 Question Id : 69817713067 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

IVF, AI and IUI are treatments for

Options :

1. ✘ Varicose veins

2. ✔ Infertility

3. ✘ Arthritis

4. ✘ HIV

Question Number : 17 Question Id : 69817713068 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

The oldest of the Central Armed Police Force among the following is

Options :

1. ✘ Central Reserve Police Force

2. ✘ The Railway Protection Force

3. ✘ Border Security Force

4. ✔ Assam Rifles

Question Number : 18 Question Id : 69817713069 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

The state that has become the first in the country to launch 'Vidhwa Punarvivah Protsahan Yojana' that was launched in March, 2024

Options :

1. ✘ Chattisgarh

2. ✘ Uttarakhand

3. ✔ Jharkhand

4. ✘ Madhya Pradesh

Question Number : 19 Question Id : 69817713070 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

One of the following books was **NOT** written by Aacharya Aatreya

Options :

1. ✘ Bhayam

2. ✔ Neeti Chandrika

3. ✘ Viswa Shanti

4. ✘

Question Number : 20 Question Id : 69817713071 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes
Correct Marks : 0.5 Wrong Marks : 0

In pressure cookers the boiling point of water is

Options :

1. ✓ Raised
2. ✗ Lowered
3. ✗ Does not change
4. ✗ May raise or lower

Perspectives in Education

Section Id :	698177313
Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	20
Number of Questions to be attempted :	20
Section Marks :	10
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	698177414
Question Shuffling Allowed :	Yes

Question Number : 21 Question Id : 69817713072 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes
Correct Marks : 0.5 Wrong Marks : 0

Pick the correctly matched schools of ancient time and their location.

- A) Tols in Bengal
- B) pathshalas in western India
- C) chatuspadis in Bihar

Choose the correct answer:

Options :

- 1. ✘ Only A and B are correct
- 2. ✘ Only B is correct
- 3. ✘ Only B and C are correct
- 4. ✔ A, B and C are correct

Question Number : 22 Question Id : 69817713073 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Which of the following is **NOT** a recommendation of Indian Education Commission (1964-66)?

Options :

- 1. ✘ The curriculum should include social service, work experience and Arts.
- 2. ✔ Navodaya Vidyalayas to be set up to provide opportunity of education to children of rural areas.
- 3. ✘ Vocational education should form large portion of secondary education.
- 4. ✘ Mathematics and science should be made compulsory at the secondary level.

Question Number : 23 Question Id : 69817713074 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Correct Marks : 0.5 Wrong Marks : 0

Rousseau's educational philosophy is outlined in this work

Options :

1. ✘ The Social Contract
2. ✔ Emile
3. ✘ The Confessions
4. ✘ Discourse on the Arts and Sciences

Question Number : 24 Question Id : 69817713075 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Correct Marks : 0.5 Wrong Marks : 0

Which of the following performance criteria is required for an expert teacher with regard to knowledge and understanding of the subject area?

Options :

1. ✘ Contextualising and integrating new knowledge in the subject area
2. ✘ Integrating knowledge and understanding of inter- and intra-subject content
3. ✔ Keep up to date with developments in the subject area
4. ✘ Provide leadership in subject content development

Question Number : 25 Question Id : 69817713076 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Anderson & Krathwohl in their revision of Bloom's Taxonomy of Educational Objectives classified knowledge available in formal education curriculum.

Which of the following is **NOT** part of the classification?

Options :

1. ✘ Conceptual Knowledge
2. ✔ Contextual Knowledge
3. ✘ Metacognitive Knowledge
4. ✘ Procedural Knowledge

Question Number : 26 Question Id : 69817713077 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Who gives social identity to the children in family?

Options :

1. ✘ Peers
2. ✘ Mass media
3. ✘ Television
4. ✔ Parents

Question Number : 27 Question Id : 69817713078 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Equity means:

Options :

1. ✘ Balance, symmetry and evenness
2. ✘ Same in all respects
3. ✔ Principle of fairness
4. ✘ The state or quality of being equal

Question Number : 28 Question Id : 69817713079 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Which of the following Nobel Laureate was awarded for working in the area of the theory of human capital?

Options :

1. ✘ Amartya Sen
2. ✘ Theodore Schultz
3. ✔ Gary B. Becker
4. ✘ Douglass North

Question Number : 29 Question Id : 69817713080 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

In this stage of Erikson's developmental theory, the successful resolution of crisis leads to a sense of competence in work

Options :

1. ✘ Autonomy vs Shame
2. ✘ Identity vs Identity confusion
3. ✘ Initiative vs Guilt
4. ✔ Industry vs Inferiority

Question Number : 30 Question Id : 69817713081 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

One of the following features **DOES NOT** suit authoritative child rearing style

Options :

1. ✔ Low in autonomy granting
2. ✘ High acceptance and involvement
3. ✘ Adaptive control techniques
4. ✘ Sensitive to the needs

Question Number : 31 Question Id : 69817713082 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Which one of the following is **NOT** a level of Kohlberg's Theory of Moral development?

Options :

1. ✘ Pre-conventional
2. ✔ Pre-operational
3. ✘ Conventional
4. ✘ Post-conventional

Question Number : 32 Question Id : 69817713083 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Anita learns concepts of all subjects very quickly, but Mita takes longer time to learn them. It denotes this Principle of Development

Options :

1. ✔ Individual differences
2. ✘ Interrelation
3. ✘ Uniformity of pattern
4. ✘ General to specific sequence

Question Number : 33 Question Id : 69817713084 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Rita's chronological age is 10 years and mental age is also 10 years, her IQ will be:

Options :

1. ✘ 120

2. ✘ 140

3. ✔ 100

4. ✘ 80

Question Number : 34 Question Id : 69817713085 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

When children learn and practice a concept, it helps in reducing the errors committed by them. This is an application of one of the Learning Principles given by this Psychologist:

Options :

1. ✘ Lev. Vygotsky

2. ✔ E. L. Thorndike

3. ✘ Ivan Pavlov

4. ✘ Noam Chomsky

Question Number : 35 Question Id : 69817713086 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

An effective teacher will

Options :

1. ✘ prohibit questions from students.

2. ✘ concentrate only on ranks and grades of the clever students.

3. ✘ keep the classroom silent.
4. ✔ create a positive learning environment

Question Number : 36 Question Id : 69817713087 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Correct Marks : 0.5 Wrong Marks : 0

The Central Teacher Eligibility Test (CTET) is a national-level exam conducted by

Options :

1. ✔ The Central Board of Secondary Education (CBSE)
2. ✘ National Council of Educational Research and Training (NCERT)
3. ✘ National Council for Teacher Education (NCTE)
4. ✘ National Institute of Educational Planning and Administration (NIEPA)

Question Number : 37 Question Id : 69817713088 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Correct Marks : 0.5 Wrong Marks : 0

Which of the following conferences is considered to be the origin of global environmental awareness?

Options :

1. ✘ The World Wildlife Fund (WWF) Conference (1961)
2. ✔ The Stockholm Conference on the Human Environment (1972)

The World Environment Day Conference (1973)

3. ✘

The Rio Earth Summit (1992)

4. ✘

Question Number : 38 Question Id : 69817713089 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Integration of economies and societies through cross-border phenomenon is:

Options :

Privatization

1. ✘

Liberalization

2. ✘

Commercialization

3. ✘

Globalization

4. ✔

Question Number : 39 Question Id : 69817713090 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

This Section of the Right of Children to Free and Compulsory Education Act, 2009 deals with the duties of teachers and redressal of grievances.

Options :

Section 12

1. ✘

Section 18

2. ✘

Section 24

3. ✔

Section 26

4. ✘

Question Number : 40 Question Id : 69817713091 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

DIKSHA stands for:

Options :

1. ✔ Digital Infrastructure for Knowledge Sharing

2. ✘ Digital Initiative for Knowledge Sharing

3. ✘ Digital Information for Knowledge Sharing

4. ✘ Digital Instruction for Knowledge Sharing

Content

Section Id :	698177314
Section Number :	3
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	88
Number of Questions to be attempted :	88
Section Marks :	44
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	698177415
Question Shuffling Allowed :	Yes

Question Number : 41 Question Id : 69817713092 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

The HCF of 720 and 1080 is

Options :

1. ✘ $2^4 \times 3^2 \times 5^1$

2. ✘ $2^3 \times 3^3 \times 5^1$

3. ✔ $2^3 \times 3^2 \times 5^1$

4. ✘ $2^4 \times 3^3 \times 5^1$

Question Number : 42 Question Id : 69817713093 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

By using division algorithm, the polynomial $2x^2 + 3x + 1$ can be written as

Options :

1. ✘ $(2x + 1)(x - 2) - 3$

2. ✘ $(2x - 1)(x + 2) - 1$

3. ✘ $(2x + 1)(x - 2) + 1$

4. ✔ $(2x - 1)(x + 2) + 3$

Question Number : 43 Question Id : 69817713094 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Which of the following coordinates of a point represent Quadrant IV in Cartesian system?

Options :

1. ✘

$$x > 0, y > 0$$

2. ✓ $x > 0, y < 0$

3. ✗ $x < 0, y > 0$

4. ✗ $x < 0, y < 0$

Question Number : 44 Question Id : 69817713095 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Arithmetic mean of 7 observations is 32. If one more observation 48 is added to the data and an observation 34 is deleted from the data, then the mean of the new data is

Options :

1. ✓ 34

2. ✗ 32

3. ✗ 33

4. ✗ 36

Question Number : 45 Question Id : 69817713096 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Write numbers $\frac{1}{8}$, 0.04, $\frac{1}{2}$, $\frac{2}{5}$, 0.14 in ascending order

Options :

1. ✗ $\frac{1}{2}, \frac{2}{5}, 0.14, \frac{1}{8}, 0.04$

2. ✘ $0.04, \frac{1}{2}, \frac{2}{5}, \frac{1}{8}, 0.14$

3. ✔ $0.04, \frac{1}{8}, 0.14, \frac{2}{5}, \frac{1}{2}$

4. ✘ $\frac{1}{8}, 0.14, 0.04, \frac{1}{2}, \frac{2}{5}$

Question Number : 46 Question Id : 69817713097 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Correct Marks : 0.5 Wrong Marks : 0

The number of English capital alphabets with no line of symmetry is

Options :

1. ✘ 8

2. ✘ 6

3. ✔ 10

4. ✘ 12

Question Number : 47 Question Id : 69817713098 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Correct Marks : 0.5 Wrong Marks : 0

If $\tan A = 0.75$ then, $\cos A =$

Options :

1. ✘ 1.25

2. ✔ 0.80

3. ✘ 0.60

4. ✘ 1

Question Number : 48 Question Id : 69817713099 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

If volume of a cube is 3375 cubic cm., then the volume (in cubic cm.) of square pyramid with same height is

Options :

1. ✔ 1125

2. ✘ 2125

3. ✘ 1335

4. ✘ 1225

Question Number : 49 Question Id : 69817713100 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

The difference between greatest and smallest five-digit number formed by 6, 4, 3, 0 and 9 is

Options :

1. ✘ 65801

2. ✘ 75461

3. ✘ 64301

4. ✔ 65961

Question Number : 50 Question Id : 69817713101 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes
Correct Marks : 0.5 Wrong Marks : 0

The average human heart beats at 72 times per minute. Then, the number of times it beats in half an hour is

Options :

1. ✘ 360
2. ✘ 720
3. ✔ 2160
4. ✘ 1440

Question Number : 51 Question Id : 69817713102 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes
Correct Marks : 0.5 Wrong Marks : 0

If $\frac{x+6}{4} + \frac{x-3}{5} = \frac{5x-4}{8}$ then $x =$

Options :

1. ✔ 8
2. ✘ 4
3. ✘ -4
4. ✘ -8

Question Number : 52 Question Id : 69817713103 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes
Correct Marks : 0.5 Wrong Marks : 0

The angles of a triangle are in the ratio 2:1:1, then the ratio of its longest side to its perimeter is

Options :

1. ✘ $\frac{\sqrt{2}}{2-\sqrt{2}}$

2. ✘ $\frac{1}{2+\sqrt{2}}$

3. ✘ $\frac{2}{2-\sqrt{2}}$

4. ✔ $\frac{1}{1+\sqrt{2}}$

Question Number : 53 Question Id : 69817713104 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

From the top of the building of 60m high, the angle of depression of top and bottom of the tower are observed as 30° and 60° respectively. Then, the height (in meters) of the tower is

Options :

1. ✘ 80

2. ✔ 40

3. ✘ 60

4. ✘ 30

Question Number : 54 Question Id : 69817713105 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

$$11 + 12 + 13 + \dots + 98 + 99 =$$

Options :

1. ✓ 4895

2. ✗ 4855

3. ✗ 4845

4. ✗ 4885

Question Number : 55 Question Id : 69817713106 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

If $\operatorname{cosec}\theta + \cot\theta = p$ ($0^\circ < \theta \leq 90^\circ$) then $\cos\theta =$

Options :

1. ✓ $\frac{p^2-1}{p^2+1}$

2. ✗ $\frac{p^2+1}{p^2-1}$

3. ✗ $\frac{2p}{p^2+1}$

4. ✗ $\frac{2p}{p^2-1}$

Question Number : 56 Question Id : 69817713107 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

If $2m - 7$, $m + 5$ and $3m + 2$ are three consecutive terms of AP then $m =$

Options :

1. ✘ 3

2. ✔ 5

3. ✘ 4

4. ✘ 6

Question Number : 57 Question Id : 69817713108 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

The square root of $11 + 4\sqrt{6}$ is

Options :

1. ✘ $\sqrt{2} + \sqrt{3}$

2. ✘ $\sqrt{6} + 1$

3. ✔ $\sqrt{3} + \sqrt{8}$

4. ✘ $\sqrt{6} + \sqrt{2}$

Question Number : 58 Question Id : 69817713109 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

If $x = \log_a bc$, $y = \log_b ac$, $z = \log_c ba$ then $\frac{1}{x+1} + \frac{1}{y+1} + \frac{1}{z+1} =$

Options :

1. ✘ 0

2. ✘ ∞

3. ✘ 2

4. ✔ 1

Question Number : 59 Question Id : 69817713110 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Correct Marks : 0.5 Wrong Marks : 0

If $A = \{2, 4, 7, 9\}$ and $B = \{1, 3, 4, 7, 10, 11\}$ then the cardinality of $A \cup B$ is

Options :

2

1. ✘

2. ✔ 8

3. ✘ 6

4. ✘ 4

Question Number : 60 Question Id : 69817713111 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Correct Marks : 0.5 Wrong Marks : 0

A family of 8 members requires ₹10,000 per day for daily needs. If 12 more members joined that family, then the amount required per day is

Options :

₹15,000

1. ✘

₹20,000

2. ✘

₹25,000

3. ✔

4. ✘

₹30,000

Question Number : 61 Question Id : 69817713112 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

The scale of a map is given as 1:2500. Two cities are 12 *cm* apart on the map.

The actual distance (in *km*) between them is

Options :

1. ✓ 0.30

2. ✗ 0.24

3. ✗ 0.18

4. ✗ 0.36

Question Number : 62 Question Id : 69817713113 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

At what interest rate per annum will ₹12000 yield an interest of ₹2000 in

2 years?

Options :

1. ✗ $8\frac{3}{4}\%$

2. ✗ $8\frac{2}{3}\%$

3. ✓ $8\frac{1}{3}\%$

4. ✗ $8\frac{1}{2}\%$

Question Number : 63 Question Id : 69817713114 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

$$x^3 - 6x^2 + 11x - 6 =$$

Options :

1. ✘ $(x - 1)(x + 2)(x - 3)$

2. ✘ $(x - 1)(x + 6)(x - 1)$

3. ✘ $(x - 1)(x - 6)(x - 1)$

4. ✔ $(x - 1)(x - 2)(x - 3)$

Question Number : 64 Question Id : 69817713115 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

$$\text{If } x + y + z = 0 \text{ then } x^3 + y^3 + z^3 =$$

Options :

1. ✘ 1

2. ✔ $3xyz$

3. ✘ 0

4. ✘ $x^2 + y^2 + z^2$

Question Number : 65 Question Id : 69817713116 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

If a, b, c are in A.P and $b - a, c - b, a$ are in G.P, then $a : b : c =$

Options :

1. ✘ 3:4:5

2. ✔ 1:2:3

3. ✘ 2:3:4

4. ✘ 4:5:6

Question Number : 66 Question Id : 69817713117 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

If the distance between two points $(4, y)$ and $(1, 3)$ is 5 units, then the value of y is

Options :

1. ✔ 7

2. ✘ 6

3. ✘ 8

4. ✘ 5

Question Number : 67 Question Id : 69817713118 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

The coordinates of the point which divide the line segment joining the points $(4, -4)$ and $(4, 3)$ in the ratio 5:2 internally are

Options :

1. ✘

$$(4, -\frac{1}{2})$$

2. ✘ $(0, -\frac{1}{2})$

3. ✔ $(4, 1)$

4. ✘ $(0, -\frac{7}{2})$

Question Number : 68 Question Id : 69817713119 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

The area (in sq. units) of triangle whose vertices are $(2, 3)$, $(-1, 0)$, $(-2, 3)$ is

Options :

1. ✘ 5

2. ✘ 4

3. ✘ $3\sqrt{3}$

4. ✔ 6

Question Number : 69 Question Id : 69817713120 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

If three identical coins are tossed together, the probability of obtaining at least two heads is

Options :

1. ✔ 0.5

2. ✘ 0.375

3. ✘ 0.125

4. ✘ 0.25

Question Number : 70 Question Id : 69817713121 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

An event 'E' is called sure (or certain) event if $P(E) =$

Options :

1. ✘ 0

2. ✔ 1

3. ✘ 0.5

4. ✘ 0.25

Question Number : 71 Question Id : 69817713122 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

For a certain data, mean is 20 and median is 31. Then, the mode is

Options :

1. ✘ 11

2. ✘ 33

3. ✘ 22

4. ✔ 53

Question Number : 72 Question Id : 69817713123 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

If the surface area of a cube is 864cm^2 , then its volume (in cm^3) is

Options :

- 1. ✘ 1296
- 2. ✘ 1578
- 3. ✔ 1728
- 4. ✘ 1696

Question Number : 73 Question Id : 69817713124 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

The number of small spheres of radius 0.8cm can be made by melting a sphere of radius 16cm is

Options :

- 1. ✘ 5000
- 2. ✔ 8000
- 3. ✘ 4000
- 4. ✘ 12000

Question Number : 74 Question Id : 69817713125 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

The base of a right prism is an equilateral triangle whose side is 4 cm . If height of this prism is $2\sqrt{3}\text{ cm}$, then the total surface area (in sq. cm.) of the prism is

Options :

1. ✘ $24\sqrt{3}$

2. ✘ $28\sqrt{3}$

3. ✔ $32\sqrt{3}$

4. ✘ $40\sqrt{3}$

Question Number : 75 Question Id : 69817713126 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

A wire in the form of a circle of radius 49 cm is bent to form a rectangle, whose length and breadth are in the ratio of $4:3$. Then, the area (in m^2) of the rectangle so formed is (use $\pi = \frac{22}{7}$)

Options :

1. ✘ 0.6528

2. ✘ 0.7008

3. ✘ 0.4918

4. ✔ 0.5808

Question Number : 76 Question Id : 69817713127 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

If $(2x + 21)^\circ$, $(x + 15)^\circ$ are supplementary angles, then $x =$

Options :

1. ✓ 48°
2. ✗ 144°
3. ✗ 63°
4. ✗ 117°

Question Number : 77 Question Id : 69817713128 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

The sum of interior angles of a polygon is 2160° . The number of sides of the polygon is

Options :

1. ✗ 12
2. ✗ 24
3. ✓ 14
4. ✗ 18

Question Number : 78 Question Id : 69817713129 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

If the circumradius of an equilateral triangle is 12 cm , then the inradius (in cm) is

Options :

1. ✗ 10

2. ✓ 6

3. ✗ 12

4. ✗ 4

Question Number : 79 Question Id : 69817713130 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

The areas of two similar triangles are 121 cm^2 and 81 cm^2 . If the altitude of the bigger triangle is 11 cm , the length (in cm) of the corresponding altitude of the smaller triangle is

Options :

1. ✗ 3

2. ✗ 6

3. ✓ 9

4. ✗ 7

Question Number : 80 Question Id : 69817713131 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

If perimeter of base of a square pyramid is 20 cm and height is 3 cm , then its volume (in cu. cm) is

Options :

1. ✗ 20

2. ✗ 15

3. ✘ 30

4. ✔ 25

Question Number : 81 Question Id : 69817713132 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

A right circular cylinder tunnel of diameter $7m$ and length $5m$ is to be constructed from a sheet of iron. The area (in $sq.m$) of the iron sheet required is (use $\pi = \frac{22}{7}$)

Options :

1. ✔ 110

2. ✘ 55

3. ✘ 220

4. ✘ 154

Question Number : 82 Question Id : 69817713133 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

If $(x - 1)$ and $(x + 2)$ are the two factors of $(x^3 + 10x^2 + px + q)$, then the remaining factor is

Options :

1. ✘ $(x + 1)$

2. ✘ $(x - 2)$

3. ✓ $(x + 9)$

4. ✗ $(x - 9)$

Question Number : 83 Question Id : 69817713134 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

A box contains 5 red balls, 4 black balls. If a ball is selected randomly, the probability that it will not be red is

Options :

1. ✗ 1

2. ✓ $\frac{4}{9}$

3. ✗ 0

4. ✗ $\frac{5}{9}$

Question Number : 84 Question Id : 69817713135 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

If $(1, -1), (6, 4), (r, 2)$ are collinear, then $r =$

Options :

1. ✓ 4

2. ✗ 5

3. ✗ -5

4. ✗ -4

Question Number : 85 Question Id : 69817713136 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

If $\tan 53^\circ = \frac{4}{3}$ then $\tan 8^\circ =$

Options :

1. ✘ $\frac{1}{8}$

2. ✘ $\frac{1}{3}$

3. ✘ $\frac{1}{4}$

4. ✔ $\frac{1}{7}$

Question Number : 86 Question Id : 69817713137 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

A sum of ₹15,000 is shared among three persons A, B and C. In that, B gets double amount to A and C gets ₹300 more than double amount to B. Then, the amount received by C is

Options :

1. ✘ ₹4500

2. ✔ ₹8700

3. ✘ ₹2400

4. ✘ ₹6600

Question Number : 87 Question Id : 69817713138 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes
Correct Marks : 0.5 Wrong Marks : 0

A Pythagorean triplet among the following is

Options :

1. ✘ 12, 13, 15

2. ✘ 5, 11, 13

3. ✔ 10, 24, 26

4. ✘ 8, 15, 23

Question Number : 88 Question Id : 69817713139 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes
Correct Marks : 0.5 Wrong Marks : 0

$$\frac{\sqrt{6} + \sqrt{3}}{\sqrt{2} - 1} =$$

Options :

1. ✔ $3\sqrt{3} + 2\sqrt{6}$

2. ✘ $3\sqrt{6} + 2\sqrt{3}$

3. ✘ $3\sqrt{2} + 6\sqrt{3}$

4. ✘ $3\sqrt{2} + 3\sqrt{6}$

Question Number : 89 Question Id : 69817713140 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

A shop keeper buys a mobile phone for ₹ 8500 and gains a profit of 9% on selling it. The selling price of the mobile phone is

Options :

1. ✘ ₹8965
2. ✘ ₹9165
3. ✘ ₹9065
4. ✔ ₹9265

Question Number : 90 Question Id : 69817713141 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Chandini and Nandini working separately can do a piece of work in 20 days and 30 days respectively. If they work on alternate days beginning with Chandini, the number of days required to complete the work is

Options :

1. ✘ 25
2. ✘ 22
3. ✔ 24
4. ✘ 26

Question Number : 91 Question Id : 69817713142 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

The zero of the polynomial $x^3 - 3x^2 + 2x$ in the following is

Options :

1. ✘ 4

2. ✔ 2

3. ✘ 5

4. ✘ 3

Question Number : 92 Question Id : 69817713143 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

If A(5, 7), B(m, n), C(1, 2) and D(4, 6) are the vertices of a parallelogram

ABCD, then $\frac{3m+2n}{2m-n} =$

Options :

1. ✘ 14

2. ✘ 15

3. ✔ 12

4. ✘ 13

Question Number : 93 Question Id : 69817713144 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

A metallic cuboid with measures 18 cm, 48 cm and 16 cm is melted and converted into a cube. Then, the length (in cm) of edge of the cube formed is

Options :

1. ✘ 26

2. ✘ 28

3. ✘ 32

4. ✔ 24

Question Number : 94 Question Id : 69817713145 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Correct Marks : 0.5 Wrong Marks : 0

If the number 32642A4 is divisible by 9, the value of A is

Options :

1. ✘ 3

2. ✘ 5

3. ✘ 7

4. ✔ 6

Question Number : 95 Question Id : 69817713146 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Correct Marks : 0.5 Wrong Marks : 0

When Raju is asked about his age, he replied, 'if you subtract 5 times my age from the square of my age, the result is 6.' Then, his age is

Options :

1. ✘ 5

2. ✔ 6

3. ✘ 4

4. ✘ 8

Question Number : 96 Question Id : 69817713147 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

The pair of equations $\frac{3}{2}x + \frac{5}{3}y = 5$; $9x + 10y = 4$ has

Options :

1. ✘ a unique solution

2. ✘ exactly two solutions

3. ✔ no solution

4. ✘ infinitely many solutions

Question Number : 97 Question Id : 69817713148 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

The mean of first 8 two digit prime numbers is

Options :

1. ✔ 22.5

2. ✘ 13.5

3. ✘ 24.5

4. ✘ 18.5

Question Number : 98 Question Id : 69817713149 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

The equation whose roots are reciprocal of the roots of $x^2 - x - 6 = 0$ is

Options :

1. ✘ $6x^2 + 6x - 1 = 0$

2. ✘ $x^2 - 6x + 6 = 0$

3. ✔ $6x^2 + x - 1 = 0$

4. ✘ $6x^2 - x + 6 = 0$

Question Number : 99 Question Id : 69817713150 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Let the simple interest be S and compound interest be C for the principal amount (P), rate of interest(R%) and time (T).

Consider the possibilities: (i) $C > S$ (ii) $C = S$ (iii) $C < S$. Then,

Choose the correct answer from the following:

Options :

1. ✘ only (i) is correct

2. ✔ either (i) or (ii) is correct

3. ✘ either (ii) or (iii) is correct

4. ✘ only (iii) is correct

Question Number : 100 Question Id : 69817713151 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

$$\sqrt{\frac{0.00001225}{0.00002304}} =$$

Options :

1. ✘ $\frac{35}{38}$

2. ✔ $\frac{35}{48}$

3. ✘ $\frac{25}{38}$

4. ✘ $\frac{25}{48}$

Question Number : 101 Question Id : 69817713152 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

The single discount equivalent to successive discounts of 15% and 20% is

Options :

1. ✘ 17.5%

2. ✘ 35%

3. ✘ 28.5%

4. ✔ 32%

Question Number : 102 Question Id : 69817713153 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

The intersection point of all the three interior angle bisectors of the triangle is its

Options :

1. ✓ in-centre
2. ✗ circumcenter
3. ✗ centroid
4. ✗ orthocenter

Question Number : 103 Question Id : 69817713154 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

The slope of line joining the points $(4, 8)$ and $(1, -1)$ is

Options :

1. ✗ 5
2. ✗ 4
3. ✓ 3
4. ✗ 2

Question Number : 104 Question Id : 69817713155 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

The equation of line passing through the point of intersection of $x + 2y - 6 = 0$ and $2x + y = 2$, which is parallel to y -axis is

Options :

1. ✘ $3x - 10 = 0$

2. ✔ $3x + 2 = 0$

3. ✘ $3x + 10 = 0$

4. ✘ $3x - 2 = 0$

Question Number : 105 Question Id : 69817713156 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

The coordinates of the points of trisection of the line segment joining A(-1, 4) and B(8, -2) is

Options :

1. ✘ (3, 3); (4, 0)

2. ✔ (2, 2); (5, 0)

3. ✘ (3, 3); (5, 0)

4. ✘ (2, 2); (4, 0)

Question Number : 106 Question Id : 69817713157 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

If $\sin\theta = \frac{3}{4}$ then, $\cos 2\theta =$

Options :

1. ✘ $-\frac{\sqrt{63}}{8}$

2. ✘ $\frac{1}{8}$

3. ✘ $\frac{\sqrt{63}}{8}$

4. ✔ $-\frac{1}{8}$

Question Number : 107 Question Id : 69817713158 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Ogive graph is used for finding

Options :

1. ✔ Median

2. ✘ Mean

3. ✘ Mode

4. ✘ Class mark

Question Number : 108 Question Id : 69817713159 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

If the side of a square is increased by 15%, then the percentage increase in its area is

Options :

1. ✘ 32.5%

2. ✘ 31.25%

3. ✔ 32.25%

4. ✘ 31.5%

Question Number : 109 Question Id : 69817713160 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

If $A = \{1, 3, 6, 8, 10, 11\}$ and $B = \{2, 3, 6, 7, 9, 12\}$, then $A - B =$

Options :

1. ✘ $\{2, 7, 9, 12\}$

2. ✔ $\{1, 8, 10, 11\}$

3. ✘ $\{3, 6\}$

4. ✘ $\{1, 2, 7, 8, 9, 10, 11, 12\}$

Question Number : 110 Question Id : 69817713161 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

If 2nd February, 2024 is Friday, then the day on 2nd May, 2024 is

Options :

1. ✘ Sunday

2. ✘ Friday

3. ✘ Tuesday

4. ✔ Thursday

Question Number : 111 Question Id : 69817713162 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

The quadratic equation $q(x)$ with roots 11 and 13 is

Options :

1. ✘ $x^2 - 24x + 132 = 0$

2. ✘ $x^2 - 23x + 143 = 0$

3. ✘ $x^2 - 23x + 132 = 0$

4. ✔ $x^2 - 24x + 143 = 0$

Question Number : 112 Question Id : 69817713163 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

If $\sec x + \tan x = 2 + \sqrt{3}$, then $x =$

Options :

1. ✔ 60°

2. ✘ 30°

3. ✘ 45°

4. ✘ 90°

Question Number : 113 Question Id : 69817713164 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

A line AB passes through points A(-1, 3), B(3, 6). The slope of the line perpendicular to AB is

Options :

1. ✘ $\frac{3}{4}$

2. ✓ $-\frac{4}{3}$

3. ✗ $-\frac{3}{4}$

4. ✗ $\frac{4}{3}$

Question Number : 114 Question Id : 69817713165 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

The least number that is divisible by all the numbers from 3 to 8 is

Options :

1. ✗ 420

2. ✗ 3360

3. ✓ 840

4. ✗ 1680

Question Number : 115 Question Id : 69817713166 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

If one of the zeroes of cubic polynomial $x^3 + px^2 + qx + r$ is -1 , then product
of other two zeroes is

Options :

1. ✓ $q - p + 1$

2. ✗ $p - q + 1$

3. ✖ $q - p - 1$

4. ✖ $p - q - 1$

Question Number : 116 Question Id : 69817713167 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

A fraction becomes $\frac{1}{3}$ when 2 is subtracted from the numerator and it becomes

$\frac{1}{4}$ when 16 is added to its denominator. The fraction obtained is

Note: For this question, discrepancy is found in question/answer. Full Marks is being awarded to all candidates.

Options :

1. $\frac{11}{39}$

2. $\frac{6}{8}$

3. $\frac{3}{13}$

4. $\frac{5}{12}$

Question Number : 117 Question Id : 69817713168 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

If U (the universal set) = $\{x: x \text{ is a natural number less than } 19\}$ and

$P = \{x: x \text{ is a multiple of } 3 \text{ less than or equal to } 18\}$ then $P' =$

Options :

1. ✘ {3, 6, 9, 12}

2. ✔ {1, 2, 4, 5, 7, 8, 10, 11, 13, 14, 16, 17}

3. ✘ {15, 18}

4. ✘ {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18}

Question Number : 118 Question Id : 69817713169 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

If the curve of quadratic polynomial neither intersects nor touches the x -axis, then the roots of that polynomial are

Options :

1. ✘ two distinct real roots

2. ✘ two equal real roots

3. ✔ no real roots

4. ✘ one real root only

Question Number : 119 Question Id : 69817713170 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

If $(8)^3 \times (18)^2 \times (10)^3 = (2)^x \times (3)^y \times (5)^z$ then $xy - yz =$

Options :

1. ✔ 44

2. ✘ 56

3. ✘ 32

4. ✘ 12

Question Number : 120 Question Id : 69817713171 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Correct Marks : 0.5 Wrong Marks : 0

Which of the following measures **DOES NOT** represent sides of a triangle?

Options :

1. ✘ *2 cm, 3 cm, 4 cm*

2. ✘ *2 cm, 5 cm, 6 cm*

3. ✘ *4 cm, 5 cm, 6 cm*

4. ✔ *3 cm, 5 cm, 9 cm*

Question Number : 121 Question Id : 69817713172 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Correct Marks : 0.5 Wrong Marks : 0

When a transversal cuts a pair of parallel lines, the number of pairs of corresponding angles formed are

Options :

1. ✘ 8

2. ✔ 4

3. ✘ 6

4. ✘ 2

Question Number : 122 Question Id : 69817713173 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

If the lines $2x + 3y - 7 = 0$ and $-kx + 4y - 12 = 0$ are perpendicular to each other, then the value of k is

Options :

1. ✓ 6

2. ✗ -4

3. ✗ -6

4. ✗ 4

Question Number : 123 Question Id : 69817713174 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

If $\sin \theta = 0.6$, then $\cos \theta =$

Options :

1. ✗ 0.6

2. ✗ 0.4

3. ✓ 0.8

4. ✗ 0.2

Question Number : 124 Question Id : 69817713175 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

$$\cos 105^\circ =$$

Options :

1. ✘ $\frac{1+\sqrt{3}}{2\sqrt{2}}$

2. ✘ $\frac{\sqrt{3}-1}{2\sqrt{2}}$

3. ✘ $-\left(\frac{\sqrt{3}+1}{2\sqrt{2}}\right)$

4. ✔ $\frac{1-\sqrt{3}}{2\sqrt{2}}$

Question Number : 125 Question Id : 69817713176 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

A rectangular piece of dimensions 5cm × 3cm was cut from a rectangular sheet of paper of dimensions 16 cm × 12cm. Area (in sq.cm) of remaining sheet of paper is

Options :

1. ✘ 188

2. ✔ 177

3. ✘ 192

4. ✘ 99

Question Number : 126 Question Id : 69817713177 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

If $\log_{10} 2 = 0.3010$ then $\log_{10} 40 =$

Options :

1. ✘ 0.6020
2. ✘ 0.3980
3. ✘ 1.3010
4. ✔ 1.6020

Question Number : 127 Question Id : 69817713178 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

If the sum of n terms in the GP 3, 6, 12, 24, is 768 then $n =$

Note: For this question, discrepancy is found in question/answer. Full Marks is being awarded to all candidates.

Options :

1. 7
2. 6
3. 9
4. 8

Question Number : 128 Question Id : 69817713179 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

The centroid of the triangle whose vertices are $(-4, 9)$, $(6, -2)$ and $(7, 5)$ is

Options :

1. ✔ $(3, 4)$

2. ✘ (9, 12)

3. ✘ (3, -4)

4. ✘ (-9, 12)

Methodology

Section Id :	698177315
Section Number :	4
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	32
Number of Questions to be attempted :	32
Section Marks :	16
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	698177416
Question Shuffling Allowed :	Yes

Question Number : 129 Question Id : 69817713180 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes
Correct Marks : 0.5 Wrong Marks : 0

“In a triangle, if two sides are equal, then the angles opposite to those sides are equal”. The contrapositive of this theorem is:

Options :

In a triangle, if two angles are equal, then the sides opposite to those angles are equal.

1. ✘

In a triangle, if two angles are not equal, then the sides opposite to those angles are not equal.

2. ✔

3. ✘

In a triangle, if two sides are not equal, then the angles opposite to those sides are not equal.

In a triangle, if two sides are equal, then the angles opposite to those sides are not equal.

4. ✘

Question Number : 130 Question Id : 69817713181 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Identify the statements that show external correlation of mathematics from the following.

- A) Everyone needs some mathematical knowledge to choose any career in their life.
- B) All calculations in physics require mathematics.
- C) Generalised arithmetic is algebra.
- D) The design of various playgrounds depends on geometry.

Choose the correct answer:

Options :

1. ✘ A, B & C only

2. ✘ C & D only

3. ✔ A, B & D only

4. ✘ A, B, C & D

Question Number : 131 Question Id : 69817713182 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Read the following statements related to the barriers of students falling behind in mathematics.

Statement-I : If students do not understand the concepts of angles and triangles, then they cannot understand trigonometry.

Statement-II : Students can solve written problems even if they do not know mathematical terminology, symbols or signs.

Choose the correct answer:

Options :

1. ✖ Both the statements are true.
2. ✖ Both the statements are false.
3. ✔ Statement-I is true and Statement-II is false.
4. ✖ Statement-I is false and Statement-II is true.

Question Number : 132 Question Id : 69817713183 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Correct Marks : 0.5 Wrong Marks : 0

The period from 400 CE to 1200 CE in the history of Indian mathematics is known as:

Options :

1. ✖ Sulbasutra period
2. ✖ Astronomical period
3. ✖ Mathematical period
4. ✔ Astronomical and mathematical period

Question Number : 133 Question Id : 69817713184 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Correct Marks : 0.5 Wrong Marks : 0

Srinivasa Ramanujan's contribution to mathematics among the following is:

Options :

1. ✘ He wrote a book called Elements.
2. ✔ He introduced the concept of Highly Composite Numbers.
3. ✘ He stated that "the hypotenuse of a square is equal to the side of a square whose area is twice its area."
4. ✘ He was the first to state that the value of π is approximately 3.1416.

Question Number : 134 Question Id : 69817713185 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Correct Marks : 0.5 Wrong Marks : 0

If the student likes to do activities and projects with others in groups, then the value of teaching mathematics developed in that student is:

Options :

1. ✘ Patience
2. ✔ Cooperation
3. ✘ Honesty
4. ✘ Creativity

Question Number : 135 Question Id : 69817713186 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

“The student explains the steps involved in proving a theorem”, is the specification of this objective:

Options :

1. ✘ Knowledge
2. ✔ Understanding
3. ✘ Application
4. ✘ Skill

Question Number : 136 Question Id : 69817713187 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

If a student can classify different types of quadrilaterals based on their properties, then the academic standard achieved by the student is:

Options :

1. ✘ Problem Solving
2. ✘ Communication
3. ✔ Reasoning and proof
4. ✘ Visualization and Representation

Question Number : 137 Question Id : 69817713188 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Identify the characteristics of a mathematics teacher among the following.

- A) Must be able to use mathematical materials effectively.
- B) Have to identify students who are backward and gifted in mathematics and design same kind of programs for them
- C) Speed, accuracy, logic and reasoning should be practiced and students should be trained to practice as well.
- D) A mathematics club should be established in the school and make the students involved in its management.

Choose the correct answer:

Options :

- 1. ✘ B & C only
- 2. ✔ A, C & D only
- 3. ✘ A, B & D only
- 4. ✘ A, B, C & D

Question Number : 138 Question Id : 69817713189 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Read the following statements related to the role of mathematics teachers.

Statement-I : Mathematics teachers should encourage students to prepare the teaching materials, but should not prepare by themselves.

Statement-II: Mathematics teachers should inculcate interest among students towards mathematics.

Choose the correct answer:

Options :

- 1. ✘

Statement-I is true and Statement-II is false.

2. ✖ Both the statements are false.

3. ✖ Both the statements are true.

4. ✔ Statement-I is false and Statement-II is true.

Question Number : 139 Question Id : 69817713190 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Identify the agencies that students can learn mathematics among the following

- A) Home
- B) Surroundings
- C) Peers
- D) Society

Choose the correct answer:

Options :

1. ✖ A & B only

2. ✖ B, C & D only

3. ✖ A, C & D only

4. ✔ A, B, C & D

Question Number : 140 Question Id : 69817713191 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Read the following statements related to the constructivist pedagogical shift in mathematics.

Statement-I : Prior to the shift, knowledge acquired through rote memory was assessed.

Statement-II : After the shift, learning takes place within the four walls of the classroom.

Choose the correct answer:

Options :

1. ✘ Statement-I is false and Statement-II is true.
2. ✔ Statement-I is true and Statement-II is false.
3. ✘ Both the statements are true.
4. ✘ Both the statements are false.

Question Number : 141 Question Id : 69817713192 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Correct Marks : 0.5 Wrong Marks : 0

Which of the following is **NOT** an objective of Content Cum Methodology (CCM)?

Options :

1. ✘ Understanding the nature and form of content.
2. ✘ Effective use of instructional processes.
3. ✔ Selection of teaching and learning processes regardless of learner's age, and difficulty level of concepts.

- Continuing the teaching and learning process by combining content with meaningful methods.
4. ✘

Question Number : 142 Question Id : 69817713193 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Correct Marks : 0.5 Wrong Marks : 0

A constructivist curriculum is based on this assumption:

Options :

1. ✘ Attainment of competency happens only through extensive practice.
2. ✘ Learning is highly influenced by reinforcement.
3. ✘ The construction of concepts progresses from abstract to concrete.
4. ✔ The construction of concepts progresses from concrete to abstract.

Question Number : 143 Question Id : 69817713194 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Correct Marks : 0.5 Wrong Marks : 0

Identify the characteristics of the best mathematics textbook among the following.

- A) There should be variation in the problems given as examples.
- B) There should be exercises that students can do on their own.
- C) The subject should be teacher centric.
- D) There should be appropriate explanations to real-life situations and evidences.

Choose the correct answer:

Options :

1. ✘ A & C only

2. ✓ A, B & D only

3. ✗ B, C & D only

4. ✗ A, B, C & D

Question Number : 144 Question Id : 69817713195 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Identify the teacher's role in adapting mathematics curriculum to local conditions among the following.

- A) Teaching the content in the mathematics text book in view of the examinations.
- B) Creating learning activities through games that students play.
- C) Providing an opportunity for students to interact with skilled occupational people on the usage of mathematical concepts in their respective occupations.
- D) Giving priority to local knowledge systems in teaching mathematics.

Choose the correct answer:

Options :

1. ✗ A & D only

2. ✗ A, B & C only

3. ✓ B, C & D only

4. ✗ A, B, C & D

Question Number : 145 Question Id : 69817713196 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Who advocated that “learning is a characteristic of social nature”?

Options :

1. ✘ Ausubel
2. ✘ Bruner
3. ✘ Jean Piaget
4. ✔ Vygotsky

**Question Number : 146 Question Id : 69817713197 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes
Correct Marks : 0.5 Wrong Marks : 0**

Match the following mathematics problems with the most suitable teaching methods to teach them.

Problems	Suitable Teaching Methods
A) Total number of the boys and girls in a class is 51. If the number of girls is 13 more than that of boys, find the number of boys?	i. Inductive Method
B) Deriving the principle: "the product of L.C.M. and G.C.D. of two numbers is equal to the product of the numbers".	ii. Deductive Method
C) Take a map of India. Note the scale used there. Measure the distance between any two cities using a scale on the map. Calculate the actual distance between them.	iii. Analytic and Synthetic Method
D) Factorize $9x^2 - 4$.	iv. Project method

Choose the correct answer:

Options :

1. ✓ A-iii, B-i, C-iv, D-ii
2. ✗ A-ii, B-iii, C-iv, D-i
3. ✗ A-iii, B-i, C-ii, D-iv
4. ✗ A-iv, B-ii, C-i, D-iii

Question Number : 147 Question Id : 69817713198 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes
Correct Marks : 0.5 Wrong Marks : 0

The most suitable approach for learners to have overview of the content learnt in mathematics is:

Options :

1. ✘ Collaborative learning approach
2. ✘ Problem solving approach
3. ✔ Concept mapping
4. ✘ Experiential learning

Question Number : 148 Question Id : 69817713199 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Arrange the following phases of the 5E - Learning model in a sequential order.

- A) Explore
- B) Engage
- C) Elaborate
- D) Explain
- E) Evaluate

Choose the correct answer:

Options :

1. ✔ B, A, D, C, E
2. ✘ B, A, C, D, E
3. ✘ C, B, A, E, D
4. ✘ A, C, E, B, D

Question Number : 149 Question Id : 69817713200 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Read the following pairs, which are related to items in the mathematics kit and appropriate concepts that can be taught with them.

- A) Abacus: Place values
- B) Domino cards: The circumference and area of a circle
- C) Fractions disc: Addition and subtraction of mixed fractions
- D) Solid geometrical shapes: Recognising the edges, corners and faces of every shape

Choose the correct answer:

Options :

- 1. ✘ B & C only
- 2. ✘ A, B & D only
- 3. ✔ A, C & D only
- 4. ✘ A, B, C & D

Question Number : 150 Question Id : 69817713201 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Match the following mathematics teaching and learning resources with their uses:

Resources	Uses
A) Mathematics Library	i. Mathematical theorems can be tested.
B) Mathematics Laboratory	ii. Creativity can be brought out in the students to lead new innovations.
C) Mathematics Club	iii. A mathematics scrapbook can be prepared.
D) Mathematics Exhibition	iv. Biographies of mathematicians can be read.

Choose the correct answer:

Options :

1. ✓ A-iv, B-i, C-iii, D-ii
2. ✗ A-ii, B-iii, C-i, D-iv
3. ✗ A-iii, B-i, C-ii, D-iv
4. ✗ A-iv, B-ii, C-i, D-iii

Question Number : 151 Question Id : 69817713202 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Correct Marks : 0.5 Wrong Marks : 0

Identify the more essential areas that a teacher should proficient to teach mathematics through digital tools among the following.

- A) Content knowledge
- B) Pedagogical knowledge
- C) Technological knowledge
- D) Knowledge of writing software required for teaching mathematics

Choose the correct answer:

Options :

1. ✘ C & D only
2. ✔ A, B & C only
3. ✘ A, B & D only
4. ✘ A, B, C & D

Question Number : 152 Question Id : 69817713203 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

As there is much emphasis on meaningful learning in the changing education system, the importance of the following aspect in teaching mathematics is reduced:

Options :

1. ✘ Oral work
2. ✘ Written work
3. ✔ Drill
4. ✘ Speed and accuracy

Question Number : 153 Question Id : 69817713204 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

“Assessment of students learning” is an essential item in the design of these plans.

Options :

1. ✓ Period plan and Unit plan only
2. ✘ Unit plan and Annual plan only
3. ✘ Period plan and Annual plan only
4. ✘ Period plan, Unit plan and Annual plan

Question Number : 154 Question Id : 69817713205 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Correct Marks : 0.5 Wrong Marks : 0

In period plan, the Herbartian step in which the student's pre-concepts are connected with new concepts of the present teaching topic is:

Options :

1. ✘ Preparation
2. ✘ Presentation
3. ✓ Association
4. ✘ Application

Question Number : 155 Question Id : 69817713206 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Correct Marks : 0.5 Wrong Marks : 0

In a Period plan, 'Solving a Problem' belongs to this step:

Options :

1. ✓ Academic standards that should achieve

2. ✘ Introduction

3. ✔ Presentation and Discussion

4. ✘ Recapitulation

Note: For this question, ambiguity is found in question/answer. Candidate will get full marks for this question if any of the correct options are chosen.

Question Number : 156 Question Id : 69817713207 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Qualitative determination of students' level of learning as well as attitudes, skills, interests and levels of psychological development is called:

Options :

1. ✘ Examination

2. ✘ Measurement

3. ✔ Assessment

4. ✘ Evaluation

Question Number : 157 Question Id : 69817713208 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

"The logarithmic form of $a^m = x$ is _____." This question is:

Options :

1. ✘ Long answer question

2. ✘

Short answer question

3. ✓ Very short answer question

4. ✓ Objective question

Note: For this question, ambiguity is found in question/answer. Candidate will get full marks for this question if any of the correct options are chosen.

Question Number : 158 Question Id : 69817713209 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Correct Marks : 0.5 Wrong Marks : 0

Read the following pairs related to “types of evaluation and their purpose”.

- A) Formative evaluation: Assessing how far the students can compare quantities using proportion after completion of the proportion chapter in annual examination.
- B) Summative evaluation: Assessing the progress of students while teaching proportion.
- C) Diagnostic evaluation: Assessing which pre concepts are missing in a student one who cannot compare quantities using proportion.
- D) Prognostic evaluation: Assessing mathematics skills and predicting in which field a student can excel in future.

Choose the correct answer:

Options :

1. ✓ C & D only

2. ✗ A, B & C only

3. ✗ A, B & D only

4. ✗ A, B, C & D

Question Number : 159 Question Id : 69817713210 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Identify the advantages of the grading system in recording the progress of the students among the following.

- A) It helps for stress free learning.
- B) It encourages comparison among the toppers.
- C) It reduces multiple categorisation of the students.
- D) It classifies the students on the basis of marks.

Choose the correct answer:

Options :

- 1. ✓ A & C only
- 2. ✗ A, B & D only
- 3. ✗ B, C & D only
- 4. ✗ A, B, C & D

Question Number : 160 Question Id : 69817713211 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 0.5 Wrong Marks : 0

Mathematician who wrote "Elements" book:

Options :

- 1. ✗ Pythagoras
- 2. ✓ Euclid
- 3. ✗ Mahalanobis

4. ✖ Hypatia