

National Testing Agency

Question Paper Name :	Atmospheric Science Eng 10th June 2023 Shift 1
Subject Name :	Atmospheric Science Eng
Creation Date :	2023-06-10 16:05:53
Duration :	120
Total Marks :	400
Display Marks:	Yes

Atmospheric Science

Group Number :	1
Group Id :	920906103
Group Maximum Duration :	0
Group Minimum Duration :	120
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	400
Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No

Part A

Section Id :	920906205
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	21
Number of Questions to be attempted :	21
Section Marks :	100
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	920906338
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Id : 92090610331 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (1 to 5)

Question Label : Comprehension

According to the United Nations (UN) population estimates, this year, the population of India surpassed or will surpass that of China. Since 1950, the year the UN began keeping track of population data, China has been the most populous country. In the forthcoming decades, perhaps even centuries, this position will belong to India.

A key question that has resurfaced in this background is whether the large population is the bane of the Indian economy or boon for it.

Two relevant questions

In answering this question, the common practice is to compare India to China. But this is wholly misleading since the policy histories of the two countries are vastly different, China is a much richer country today than India. This means that even if it is at a disadvantage purely in terms of the composition of its population – for example, those 65 years or older make 13% of its population against only 7% of India's – it may be better placed to take care of its elderly.

The right way to pose the question therefore is not a comparison with China but to ask whether on a net basis a younger and larger population is more beneficial than an older and smaller population for the country.

These are two distinct questions with the first relating to the composition and the second to the size of the population. As such, they must be considered separately in succession.

Young demography helps

It should be relatively uncontroversial that the advantages of a young population far outweigh its disadvantages. First, a younger population translates in a proportionately large workforce and therefore higher gross domestic product (GDP) given the technology and volume of capital available.

Second, given that the young save more than the old, a younger population also translates in higher saving and therefore higher investment. The higher investment further adds to the GDP. Finally, a younger population brings greater energy and vibrancy to a nation, leading to more innovation and its greater exploitation.

A concern commonly expressed about a younger population is that it leads to greater unemployment. But the unemployment rate depends on policies, which surely do not depend on the age composition of the population.

Underemployment challenge

Factually, the unemployment rate in India has been consistently low in the 3-5% range. As I have argued in numerous writings, unemployment is not India's problem, it is underemployment. On this score, the output per worker has seen a clear rising trend (meaning declining underemployment) alongside rising workforce in the post-reform era. What is needed is acceleration in this trend. That in turn required further policy reform, not the older population.

Turning to the size question, I would argue that the benefits of a larger population also far outweigh its costs. There are vast benefits arising from economies of scale in the provision of public goods. Takes, for example, India's digital infrastructure. Once this infrastructure is created, 'it is there for all to use.

Sub questions

Question Number : 1 Question Id : 92090610332 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum

Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

In the passage there are references to two different questions. They are related to:

- (A) Composition
- (B) Size of the population
- (C) Technology and volume
- (D) Unemployment

Find the most appropriate options :

- (1) (A) and (C)
- (2) (A) and (B)
- (3) (A), (B), and (C)
- (4) (A), (B), and (D)

Options :

- 92090640801. 1
- 92090640802. 2
- 92090640803. 3
- 92090640804. 4

Question Number : 2 Question Id : 92090610333 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

According to the writer how China is better placed to take care of its elderly?

- (1) Its elderly population is older and richer than most indian population.
- (2) The older population requires less care and is self dependent.
- (3) Those 65 years or older make 13% of its population.
- (4) Only 7% of chinese population are 65 years or older.

Options :

- 92090640805. 1
- 92090640806. 2
- 92090640807. 3
- 92090640808. 4

Question Number : 3 Question Id : 92090610334 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Person not having sufficiently demanding paid work is:

- (1) Semiemployed
- (2) Overemployed
- (3) Underemployed
- (4) Less employed

Options :

- 92090640809. 1
- 92090640810. 2
- 92090640811. 3
- 92090640812. 4

Question Number : 4 Question Id : 92090610335 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The synonym of 'Bane' is:

- | | |
|-----------|---------------|
| (1) Boon | (2) Gift |
| (3) Curse | (4) Challenge |

Options :

- 92090640813. 1
- 92090640814. 2
- 92090640815. 3
- 92090640816. 4

Question Number : 5 Question Id : 92090610336 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The one word substitution for “ thing that is helpful or beneficial” or which is a favour is:-

- | | |
|---------------|-----------|
| (1) Bane | (2) Boon |
| (3) Boondocks | (4) Boong |

Options :

- 92090640817. 1
- 92090640818. 2
- 92090640819. 3
- 92090640820. 4

Question Id : 92090610331 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (1 to 5)

Question Label : Comprehension

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Turning to the size question, I would argue that the benefits of a larger population also far outweigh its costs. There are vast benefits arising from economies of scale in the provision of public goods. Takes, for example, India's digital infrastructure. Once this infrastructure is created, 'it is there for all to use.

Sub questions

Question Number : 1 Question Id : 92090610332 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

In the passage there are references to two different questions. They are related to:

- (A) Composition
- (B) Size of the population
- (C) Technology and volume
- (D) Unemployment

Find the most appropriate options :

- (1) (A) and (C)
- (2) (A) and (B)
- (3) (A), (B), and (C)
- (4) (A), (B), and (D)

Options :

- 92090640801. 1
- 92090640802. 2
- 92090640803. 3
- 92090640804. 4

Question Number : 2 Question Id : 92090610333 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

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- (4) Only 7% of chinese population are 65 years or older.

Options :

- 92090640805. 1
- 92090640806. 2
- 92090640807. 3
- 92090640808. 4

Question Number : 3 Question Id : 92090610334 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Person not having sufficiently demanding paid work is:

- (1) Semiemployed
- (2) Overemployed
- (3) Underemployed
- (4) Less employed

Options :

- 92090640809. 1

92090640810. 2

92090640811. 3

92090640812. 4

Question Number : 4 Question Id : 92090610335 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The synonym of 'Bane' is:

- | | |
|-----------|---------------|
| (1) Boon | (2) Gift |
| (3) Curse | (4) Challenge |

Options :

92090640813. 1

92090640814. 2

92090640815. 3

92090640816. 4

Question Number : 5 Question Id : 92090610336 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The one word substitution for “ thing that is helpful or beneficial” or which is a favour is:-

- | | |
|---------------|-----------|
| (1) Bane | (2) Boon |
| (3) Boondocks | (4) Boong |

Options :

92090640817. 1

92090640818. 2

92090640819. 3

92090640820. 4

Sub-Section Number :

2

Sub-Section Id :

920906339

Question Shuffling Allowed :

Yes

Is Section Default? :

null

Question Number : 6 Question Id : 92090610337 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The most suitable antonym of the given word 'HOLISTIC' is:

- | | |
|---------------|----------------|
| (1) Piecemeal | (2) Fearless |
| (3) Deletion | (4) Inadequate |

Options :

92090640821. 1
92090640822. 2
92090640823. 3
92090640824. 4

Question Number : 6 Question Id : 92090610337 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The most suitable antonym of the given word 'HOLISTIC' is:

- | | |
|---------------|----------------|
| (1) Piecemeal | (2) Fearless |
| (3) Deletion | (4) Inadequate |

Options :

92090640821. 1
92090640822. 2
92090640823. 3
92090640824. 4

Question Number : 7 Question Id : 92090610338 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

One who eats human flesh is:

- | | |
|---------------|--------------|
| (1) Canine | (2) Cabal |
| (3) Cirrhosis | (4) Cannibal |

Options :

92090640825. 1
92090640826. 2
92090640827. 3
92090640828. 4

Question Number : 7 Question Id : 92090610338 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

One who eats human flesh is:

- | | |
|---------------|--------------|
| (1) Canine | (2) Cabal |
| (3) Cirrhosis | (4) Cannibal |

Options :

92090640825. 1
92090640826. 2
92090640827. 3
92090640828. 4

Question Number : 8 Question Id : 92090610339 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Fill in the blanks with appropriate prepositions from the given options:

In a bid to check urban apathy _____ voters, the Election commission had decided _____ hold the poll _____ the middle _____ the week to prevent people planning an outing by clubbing the poll day holiday with the weekend break.

- | | |
|-----------------------|-------------------------|
| (1) among, of, to, in | (2) among, with, in, on |
| (3) among, to, in, of | (4) among, on, of, in |

Options :

92090640829. 1
92090640830. 2
92090640831. 3
92090640832. 4

Question Number : 8 Question Id : 92090610339 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Fill in the blanks with appropriate prepositions from the given options:

In a bid to check urban apathy _____ voters, the Election commission had decided _____ hold the poll _____ the middle _____ the week to prevent people planning an outing by clubbing the poll day holiday with the weekend break.

- | | |
|-----------------------|-------------------------|
| (1) among, of, to, in | (2) among, with, in, on |
| (3) among, to, in, of | (4) among, on, of, in |

Options :

92090640829. 1
92090640830. 2
92090640831. 3
92090640832. 4

Question Number : 9 Question Id : 92090610340 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Rearrange the following sentences into a meaningful paragraph:

- (A) Research confirms that retaining mental sharpness requires certain life style interventions, specifically, adjusting what and how you eat, how much you exercise, how you deal with life's challenges and how you interact with others.
- (B) The good news is that declining brain health and cognitive loss are not in evitable.
- (C) If you turn these behaviours into habits that you can sustain over the long term that will have dramatic effects not only on your cognitive fitness, but also on your overall health.
- (D) Maintaining cognitive fitness requires far more than a simple "train your brain" programme or diet as some quick fix online programmes suggest:

Choose the correct answer from the options given below :

- (1) (B), (D), (A), (C)
- (2) (B), (A), (C), (D)
- (3) (A), (C), (B), (D)
- (4) (A), (D), (B), (C)

Options :

- 92090640833. 1
- 92090640834. 2
- 92090640835. 3
- 92090640836. 4

Question Number : 9 Question Id : 92090610340 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Rearrange the following sentences into a meaningful paragraph:

- (A) Research confirms that retaining mental sharpness requires certain life style interventions, specifically, adjusting what and how you eat, how much you exercise, how you deal with life's challenges and how you interact with others.
- (B) The good news is that declining brain health and cognitive loss are not in evitable.
- (C) If you turn these behaviours into habits that you can sustain over the long term that will have dramatic effects not only on your cognitive fitness, but also on your overall health.
- (D) Maintaining cognitive fitness requires far more than a simple "train your brain" programme or diet as some quick fix online programmes suggest:

Choose the correct answer from the options given below :

- (1) (B), (D), (A), (C)
- (2) (B), (A), (C), (D)
- (3) (A), (C), (B), (D)
- (4) (A), (D), (B), (C)

Options :

- 92090640833. 1
- 92090640834. 2
- 92090640835. 3
- 92090640836. 4

Question Number : 10 Question Id : 92090610341 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Fill in the blanks in list I with correct group of prepositions given in list II :

List I

List II

- (A) _____ Mrs. Kapoor, the neighbour, who lived _____ her mansion moved _____ Manali _____ the cold.
- (B) _____ the PTA, Ms. Verma stood _____ the podium _____ the crowd _____ the President and presented him with a plaque.
- (C) _____ a report published the cost of living _____ to COVID 19 was _____ the reach of the common, but _____ high inflation rate past COVID 19 cost of living has escalated.
- (D) _____ the rain, my neighbour put a blue tarp _____ his roof, _____ a fibre glass sheet but _____ all measures, water did seep in.
- (I) on behalf, next to, in place of, in front of, in place of
- (II) according to, prior to, with in, because of
- (III) because of, on top of, along with, in spite of
- (IV) according to, because, next to, away from, because

Choose the correct answer from the options given below:

- (1) (A)-(I), (B)-(IV), (C)-(III), (D)-(II)
- (2) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)
- (3) (A)-(II), (B)-(III), (C)-(I), (D)-(IV)
- (4) (A)-(III), (B)-(II), (C)-(IV), (D)-(I)

Options :

92090640837. 1
92090640838. 2
92090640839. 3
92090640840. 4

Question Number : 10 Question Id : 92090610341 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Fill in the blanks in list I with correct group of prepositions given in list II :

List I

List II

- (A) _____ Mrs. Kapoor, the neighbour, who lived _____ her mansion moved _____ Manali _____ the cold.
- (B) _____ the PTA, Ms. Verma stood _____ the podium _____ the crowd _____ the President and presented him with a plaque.
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- (I) on behalf, next to, in place of, in front of, in place of
- (II) according to, prior to, with in, because of
- (III) because of, on top of, along with, in spite of
- (IV) according to, because, next to, away from, because

Choose the correct answer from the options given below:

- (1) (A)-(I), (B)-(IV), (C)-(III), (D)-(II)
- (2) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)
- (3) (A)-(II), (B)-(III), (C)-(I), (D)-(IV)
- (4) (A)-(III), (B)-(II), (C)-(IV), (D)-(I)

Options :

92090640837. 1
92090640838. 2
92090640839. 3
92090640840. 4

Question Number : 11 Question Id : 92090610342 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If a sum of ₹ 5,000 is deposited on compound interest at 10% per annum, then the amount received after 2 years is:

- (1) ₹ 6,000 (2) ₹ 6,050
- (3) ₹ 7,200 (4) ₹ 8,000

Options :

92090640841. 1

92090640842. 2

92090640843. 3

92090640844. 4

Question Number : 11 Question Id : 92090610342 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If a sum of ₹ 5,000 is deposited on compound interest at 10% per annum, then the amount received after 2 years is:

(1) ₹ 6,000

(2) ₹ 6,050

(3) ₹ 7,200

(4) ₹ 8,000

Options :

92090640841. 1

92090640842. 2

92090640843. 3

92090640844. 4

Question Number : 12 Question Id : 92090610343 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If $\cot 20^\circ \tan (90^\circ - A) = 1$, then value of A is:

(1) 50°

(2) 45°

(3) 70°

(4) 60°

Options :

92090640845. 1

92090640846. 2

92090640847. 3

92090640848. 4

Question Number : 12 Question Id : 92090610343 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If $\cot 20^\circ \tan (90^\circ - A) = 1$, then value of A is:

(1) 50°

(2) 45°

(3) 70°

(4) 60°

Options :

92090640845. 1
92090640846. 2
92090640847. 3
92090640848. 4

Question Number : 13 Question Id : 92090610344 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If $a\%$ of $a + b\%$ of $b = 2\%$ of ab , then what percent of a is b ?

- | | |
|----------|----------|
| (1) 50% | (2) 75% |
| (3) 100% | (4) 120% |

Options :

92090640849. 1
92090640850. 2
92090640851. 3
92090640852. 4

Question Number : 13 Question Id : 92090610344 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If $a\%$ of $a + b\%$ of $b = 2\%$ of ab , then what percent of a is b ?

- | | |
|----------|----------|
| (1) 50% | (2) 75% |
| (3) 100% | (4) 120% |

Options :

92090640849. 1
92090640850. 2
92090640851. 3
92090640852. 4

Question Number : 14 Question Id : 92090610345 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The volume of cylinder is 1408 cm^3 and its height is 7 cm. Find the total surface area of the cylinder (correct to 2 decimal places).

(Use $\pi = \frac{22}{7}$)

(1) 352.55 cm^2

(2) 548.75 cm^2

(3) 754.29 cm^2

(4) 458.39 cm^2

Options :

92090640853. 1

92090640854. 2

92090640855. 3

92090640856. 4

Question Number : 14 Question Id : 92090610345 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The volume of cylinder is 1408 cm^3 and its height is 7 cm. Find the total surface area of the cylinder (correct to 2 decimal places).

(Use $\pi = \frac{22}{7}$)

(1) 352.55 cm^2

(2) 548.75 cm^2

(3) 754.29 cm^2

(4) 458.39 cm^2

Options :

92090640853. 1

92090640854. 2

92090640855. 3

92090640856. 4

Question Number : 15 Question Id : 92090610346 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Ram has a sum of money, which is sufficient to pay either Usha's wages for 30 days or Manika's wages for 60 days. If he employs them together, the money is sufficient to pay their wages for how many days?

(1) 30

(2) 20

(3) 12

(4) 10

Options :

92090640857. 1

92090640858. 2

92090640859. 3

92090640860. 4

Question Number : 15 Question Id : 92090610346 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Ram has a sum of money, which is sufficient to pay either Usha's wages for 30 days or Manika's wages for 60 days. If he employs them together, the money is sufficient to pay their wages for how many days?

(1) 30

(2) 20

(3) 12

(4) 10

Options :

92090640857. 1

92090640858. 2

92090640859. 3

92090640860. 4

Question Number : 16 Question Id : 92090610347 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The following question has two statements and three conclusions. Check the conclusion on the basis of the statement and choose the correct option from the following:

Statements : (A) All Dogs are animals
(B) All animals are mammals

Conclusions : 1. Some Dogs are animals
2. Some mammals are animals
3. All dogs are mammals

In the light of the above statements, choose the correct answer from the options given below :

- (1) Only 1 follows
- (2) Only 1 and 2 follows
- (3) Only 2 and 3 follows
- (4) All three follows

Options :

- 92090640861. 1
- 92090640862. 2
- 92090640863. 3
- 92090640864. 4

Question Number : 16 Question Id : 92090610347 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The following question has two statements and three conclusions. Check the conclusion on the basis of the statement and choose the correct option from the following:

Statements : (A) All Dogs are animals
(B) All animals are mammals

Conclusions : 1. Some Dogs are animals
2. Some mammals are animals
3. All dogs are mammals

In the light of the above statements, choose the correct answer from the options given below :

- (1) Only 1 follows
- (2) Only 1 and 2 follows
- (3) Only 2 and 3 follows
- (4) All three follows

Options :

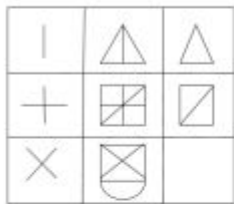
- 92090640861. 1
- 92090640862. 2
- 92090640863. 3
- 92090640864. 4

Question Number : 17 Question Id : 92090610348 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

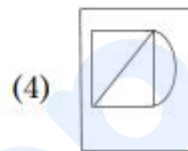
Correct Marks : 4 Wrong Marks : 1

Find out the answer figure which completes the figure matrix?

Problem figure



Answer figures



Options :

92090640865. 1

92090640866. 2

92090640867. 3

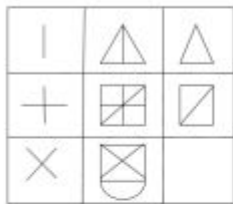
92090640868. 4

Question Number : 17 Question Id : 92090610348 Question Type : MCQ Option Shuffling : No Is
Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum
Instruction Time : 0

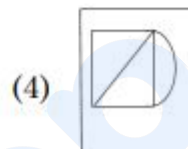
Correct Marks : 4 Wrong Marks : 1

Find out the answer figure which completes the figure matrix?

Problem figure



Answer figures



Options :

- 92090640865. 1
- 92090640866. 2
- 92090640867. 3
- 92090640868. 4

Question Number : 18 Question Id : 92090610349 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Read the given information carefully to answer the question:

A family consists of six members P, Q, R, S, T, and Z. Q is the son of R but R is not mother of Q. P and R are married couple. T is the brother of R. S is the daughter of P and Z is the brother of P.

How many male members are there in the family?

- (1) One
- (2) Two
- (3) Three
- (4) Four

Options :

- 92090640869. 1
- 92090640870. 2
- 92090640871. 3
- 92090640872. 4

Question Number : 18 Question Id : 92090610349 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Read the given information carefully to answer the question:

A family consists of six members P, Q, R, S, T, and Z. Q is the son of R but R is not mother of Q. P and R are married couple. T is the brother of R. S is the daughter of P and Z is the brother of P.

How many male members are there in the family?

- | | |
|-----------|----------|
| (1) One | (2) Two |
| (3) Three | (4) Four |

Options :

- 92090640869. 1
- 92090640870. 2
- 92090640871. 3
- 92090640872. 4

Question Number : 19 Question Id : 92090610350 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If South – West becomes West, North – West becomes North and so on. What will become East?

- | | |
|------------------|------------------|
| (1) South - East | (2) North – East |
| (3) North | (4) South |

Options :

- 92090640873. 1
- 92090640874. 2
- 92090640875. 3
- 92090640876. 4

Question Number : 19 Question Id : 92090610350 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If South – West becomes West, North – West becomes North and so on. What will become East?

- | | |
|------------------|------------------|
| (1) South - East | (2) North – East |
| (3) North | (4) South |

Options :

92090640873. 1
92090640874. 2
92090640875. 3
92090640876. 4

Question Number : 20 Question Id : 92090610351 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

There are three conclusions are taken for the given statement:

Statement : All the students of this class are average in studies. Savita is a brilliant student.

- Conclusions :**
- I. Some students are bright in studies.
 - II. Savita must be working hard.
 - III. Savita is not the student of this class.

In the light of the above statement, choose the correct answer from the options given below :

- (1) Only conclusion I follows.
- (2) Only conclusion III follows.
- (3) Either II or III follows.
- (4) Neither I nor II follows.

Options :

92090640877. 1
92090640878. 2
92090640879. 3
92090640880. 4

Question Number : 20 Question Id : 92090610351 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

There are three conclusions are taken for the given statement:

Statement : All the students of this class are average in studies. Savita is a brilliant student.

Conclusions : I. Some students are bright in studies.
II. Savita must be working hard.
III. Savita is not the student of this class.

In the light of the above statement, choose the correct answer from the options given below :

- (1) Only conclusion I follows.
- (2) Only conclusion III follows.
- (3) Either II or III follows.
- (4) Neither I nor II follows.

Options :

- 92090640877. 1
- 92090640878. 2
- 92090640879. 3
- 92090640880. 4

Question Number : 21 Question Id : 92090610352 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Photo cell converts light energy into:

- (1) Heat Energy
- (2) Electrical energy
- (3) Chemical Energy
- (4) Mechanical energy

Options :

- 92090640881. 1
- 92090640882. 2
- 92090640883. 3
- 92090640884. 4

Question Number : 21 Question Id : 92090610352 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Photo cell converts light energy into:

- | | |
|---------------------|-----------------------|
| (1) Heat Energy | (2) Electrical energy |
| (3) Chemical Energy | (4) Mechanical energy |

Options :

92090640881. 1
92090640882. 2
92090640883. 3
92090640884. 4

Question Number : 22 Question Id : 92090610353 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

What is the first month of the Saka calendar (National Calendar System):

- | | |
|--------------|------------|
| (1) Vaishakh | (2) Magha |
| (3) Kartik | (4) Chitra |

Options :

92090640885. 1
92090640886. 2
92090640887. 3
92090640888. 4

Question Number : 22 Question Id : 92090610353 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

What is the first month of the Saka calendar (National Calendar System):

- | | |
|--------------|------------|
| (1) Vaishakh | (2) Magha |
| (3) Kartik | (4) Chitra |

Options :

92090640885. 1
92090640886. 2
92090640887. 3
92090640888. 4

Question Number : 23 Question Id : 92090610354 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which Indian states touch the border of China?

- (A) West Bengal
- (B) Himachal Pradesh
- (C) Punjab
- (D) Uttarakhand

Choose the correct answer from the options given below :

- (1) (A) and (D) only.
- (2) (B) and (D) only.
- (3) (A), (C) and (D).
- (4) (C) and (D) only.

Options :

- 92090640889. 1
- 92090640890. 2
- 92090640891. 3
- 92090640892. 4

Question Number : 23 Question Id : 92090610354 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which Indian states touch the border of China?

- (A) West Bengal
- (B) Himachal Pradesh
- (C) Punjab
- (D) Uttarakhand

Choose the correct answer from the options given below :

- (1) (A) and (D) only.
- (2) (B) and (D) only.
- (3) (A), (C) and (D).
- (4) (C) and (D) only.

Options :

- 92090640889. 1
- 92090640890. 2
- 92090640891. 3

Question Number : 24 Question Id : 92090610355 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements :

Statement I : Gaganyaan is the maiden human space flight project of India for carrying Indian astronauts to Space. "Vyomamitra" accompanies Indian Astronauts in Space missions.

Statement II : "Vyomamitra" is a famous lady astronaut who accompanies the Gaganyaan space craft.

In the light of the above statements, choose the correct answer from the options given below:

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

Options :

92090640893. 1

92090640894. 2

92090640895. 3

92090640896. 4

Question Number : 24 Question Id : 92090610355 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements :

Statement I : Gaganyaan is the maiden human space flight project of India for carrying Indian astronauts to Space. "Vyomamitra" accompanies Indian Astronauts in Space missions.

Statement II : "Vyomamitra" is a famous lady astronaut who accompanies the Gaganyaan space craft.

In the light of the above statements, choose the correct answer from the options given below:

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

Options :

- 92090640893. 1
- 92090640894. 2
- 92090640895. 3
- 92090640896. 4

Question Number : 25 Question Id : 92090610356 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

To whom does the speaker gives his resignation?

- (1) Deputy speaker
- (2) Prime minister
- (3) President
- (4) Governor

Options :

- 92090640897. 1
- 92090640898. 2
- 92090640899. 3
- 92090640900. 4

Question Number : 25 Question Id : 92090610356 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

To whom does the speaker gives his resignation?

- | | |
|--------------------|--------------------|
| (1) Deputy speaker | (2) Prime minister |
| (3) President | (4) Governor |

Options :

92090640897. 1
92090640898. 2
92090640899. 3
92090640900. 4

Part B: Atmospheric Science

Section Id :	920906206
Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	75
Number of Questions to be attempted :	75
Section Marks :	300
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	920906340
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 26 Question Id : 92090610357 Question Type : MCQ Option Shuffling : No Is
Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum
Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Match List-I with List-II :

List-I (Material)	List-II (Property)
(A) Copper	(I) Antiferromagnet
(B) BaTiO_3	(II) Ferroelectric
(C) CoO	(III) Semiconductor
(D) Germanium	(IV) Metal

Choose the correct answer from the options given below :

1. (A)–(I); (B)–(II); (C)–(IV); (D)–(III)
2. (A)–(IV); (B)–(II); (C)–(I); (D)–(III)
3. (A)–(II); (B)–(III); (C)–(IV); (D)–(I)
4. (A)–(III); (B)–(IV); (C)–(II); (D)–(I)

Options :

92090640901. 1
92090640902. 2
92090640903. 3
92090640904. 4

Question Number : 26 Question Id : 92090610357 Question Type : MCQ Option Shuffling : No Is
Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum
Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

सूची I के साथ सूची II का मिलान कीजिए

सूची-I	सूची -II
(A) कोपर	(I) एंटी फ़ैरोमग्नेटिक
(B) BaTiO_3	(II) फ़ैरोइलैक्ट्रिक
(C) CoO	(III) अर्धचालक
(D) जर्मेनियम	(IV) धातु

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

- (1) A-I, B-II, C-IV, D-III
- (2) A-IV, B-II, C-I, D-III
- (3) A-II, B-III, C-IV, D-I
- (4) A-III, B-IV, C-II, D-I

Options :

92090640901. 1
92090640902. 2
92090640903. 3
92090640904. 4

**Question Number : 27 Question Id : 92090610358 Question Type : MCQ Option Shuffling : No Is
Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum
Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1**

Match List-I with List-II :

List-I	List-II
(A) Diffraction	(I) Dispersion
(B) Compton scattering	(II) Wave nature of light
(C) Wavelength dependence of refractive index	(III) Polaroid sunglasses
(D) Brewster's angle	(IV) Particle nature of light

Choose the correct answer from the options given below :

1. (A)–(II); (B)–(IV); (C)–(I); (D)–(III)
2. (A)–(III); (B)–(I); (C)–(II); (D)–(IV)
3. (A)–(I); (B)–(II); (C)–(III); (D)–(IV)
4. (A)–(III); (B)–(I); (C)–(IV); (D)–(II)

Options :

92090640905. 1

92090640906. 2

92090640907. 3

92090640908. 4

Question Number : 27 Question Id : 92090610358 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

सूची I के साथ सूची II का मिलान कीजिए

सूची-I	सूची -II
(A) विवर्तन	(I) परिक्षेपण
(B) कोम्पटन पुकीर्णन	(II) प्रकाश का तरंग स्वरूप
(C) अपवर्तनांक का तरंगदैर्घ्य पर आधारण	(III) पोलैरोइड धुप का चश्मा
(D) ब्रूस्टर कोण	(IV) प्रकाश का कण स्वरूप

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

- (1) A-II, B-IV, C-I, D-III
- (2) A-III, B-I, C-II, D-IV
- (3) A-I, B-II, C-III, D-IV
- (4) A-III, B-I, C-IV, D-II

Options :

92090640905. 1
92090640906. 2
92090640907. 3
92090640908. 4

Question Number : 28 Question Id : 92090610359 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Arrange the following elements in terms of their electrical resistivity in increasing order (at room temperature) :

- A. Copper
- B. p -type silicon
- C. metallic sodium
- D. diamond

Choose the correct answer from the options given below.

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

Options :

- 92090640909. 1
- 92090640910. 2
- 92090640911. 3
- 92090640912. 4

Question Number : 28 Question Id : 92090610359 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दिए गए तत्वों को उनकी विद्युत प्रतिरोधकता के बढ़ते हुए क्रम (सामान्य ताप पर) में व्यवस्थित कीजिए

- | | |
|--------------------|---------------------|
| (1) कोपर | (2) p- टाईप सिलिकोन |
| (3) धात्विक सोडियम | (4) डायमंड |

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

- (1) A,B,D,C
- (2) A,C,B,D
- (3) B,D,C,A
- (4) C,A,D,B

Options :

- 92090640909. 1
- 92090640910. 2
- 92090640911. 3
- 92090640912. 4

Question Number : 29 Question Id : 92090610360 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R) :

Assertion (A) : In a photoelectric effect experiment, the intensity of light beam does not change the maximum energy of an ejected photoelectron.

Reason (R) : Intensity of light does not relate to energy carried by electromagnetic waves.

In the light of the above statements, choose the *most appropriate answer* from the options given below.

1. Both (A) and (R) are correct and (R) is the correct explanation of (A)
2. Both (A) and (R) are correct but (R) is not the correct explanation of (A)
3. (A) is correct but (R) is not correct
4. (A) is not correct but (R) is correct

Options :

92090640913. 1
92090640914. 2
92090640915. 3
92090640916. 4

Question Number : 29 Question Id : 92090610360 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं: एक अभिकथन (Assertion A) के रूप में लिखित है तो दूसरा उसके कारण (Reason R) के रूप में;

अभिकथन A : एक प्रकाश – विद्युत प्रभाव प्रयोग में, प्रकाश किरणपुंज की तीव्रता, निष्कासित फोटो इलेक्ट्रान की अधिकतम ऊर्जा को परिवर्तित नहीं करती।

कारण R : प्रकाश की तीव्रता, विद्युत चुम्बकीय तरंगों की ऊर्जा से संबंधित नहीं है।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सबसे उपयुक्त उत्तर का चयन कीजिए

- (1) A और R दोनों सही हैं और R, A की सही व्याख्या है
- (2) A और R दोनों सही हैं, लेकिन R, A की सही व्याख्या नहीं है
- (3) A सही हैं, लेकिन R सही नहीं है
- (4) A सही नहीं हैं, लेकिन R सही है

Options :

92090640913. 1
92090640914. 2
92090640915. 3
92090640916. 4

Question Number : 30 Question Id : 92090610361 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Wein's displacement law ($\lambda_{\max} T = 2.89 \times 10^{-3} \text{ m-K}$) is useful in determining

1. velocity of light
2. displacement current of dielectrics
3. density of liquids
4. surface temperature of stars

Options :

92090640917. 1
92090640918. 2
92090640919. 3
92090640920. 4

Question Number : 30 Question Id : 92090610361 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

वीन (Wein's) विस्थापन नियम ($\lambda_{\max} T = 2.89 \times 10^{-3} \text{ m-K}$), निम्नलिखित में से किसे निर्धारित करने में लाभदायक होता है ?

- (1) प्रकाश का वेग
- (2) परावैद्युत की विस्थापन धारा
- (3) द्रव का घनत्व
- (4) तारों का पृष्ठीय तापमान

Options :

92090640917. 1
92090640918. 2
92090640919. 3
92090640920. 4

Question Number : 31 Question Id : 92090610362 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum

Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A sample of m kg of water is slowly heated from T_1 K to T_2 K. The specific heat capacity of water is $C = 4200 \text{ J kg}^{-1} \text{ K}^{-1}$. The total change in entropy of water is given by

1. $mC \ln \frac{T_2}{T_1}$
2. $mC \frac{T_2 - T_1}{T_1}$
3. $mC(T_2 - T_1)$
4. $mC \left(\frac{T_2}{T_1} \right)$

Options :

92090640921. 1

92090640922. 2

92090640923. 3

92090640924. 4

Question Number : 31 Question Id : 92090610362 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

एक m कि.ग्रा. पानी के नमूने को धीरे - धीरे T_1 K से T_2 K तापमान तक गर्म किया जाता है। पानी की विशिष्ट ऊष्मा धारिता $C = 4200 \text{ J kg}^{-1} \text{ K}^{-1}$ है। पानी की इन्ट्रॉपी में कुल परिवर्तन किसके द्वारा बताया जा सकता है?

1. $mC \ln \frac{T_2}{T_1}$
2. $mC \ln \frac{T_2 - T_1}{T_1}$
3. $mC \ln(T_2 - T_1)$
4. $mC \frac{T_2}{T_1}$

Options :

92090640921. 1

92090640922. 2

92090640923. 3

Question Number : 32 Question Id : 92090610363 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Two cars of unequal masses use similar tyres. If they are moving at the same initial speed, the minimum stopping distance

1. is smaller for the heavier car
2. is smaller for the lighter car
3. is same for both the cars
4. depends in the volume of the car

Options :

- 92090640925. 1
- 92090640926. 2
- 92090640927. 3
- 92090640928. 4

Question Number : 32 Question Id : 92090610363 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

विभिन्न द्रव्यमान की दो कारें एक समान टायर प्रयोग करती है। यदि उनकी प्रारंभिक चाल समान है तो न्यूनतम विरामन दूरी

- 1) भारी कार के लिए कम होगी।
- 2) हल्की कार के लिए कम होगी।
- 3) दोनों कारों के लिए समान होगी।
- 4) कार के आयतन पर निर्भर करती है।

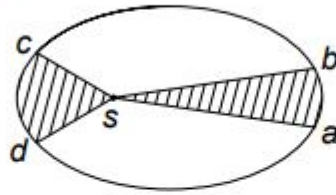
Options :

- 92090640925. 1
- 92090640926. 2
- 92090640927. 3
- 92090640928. 4

Question Number : 33 Question Id : 92090610364 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Figure shows the elliptical path of a planet around the sun. The two shaded parts have equal area. If t_1 and t_2 be the time taken by the planet to go from a to b and c to d respectively, then



1. $t_1 < t_2$
2. $t_1 > t_2$
3. $t_1 = t_2$
4. $t_1^2 = t_2^3$

Options :

92090640929. 1

92090640930. 2

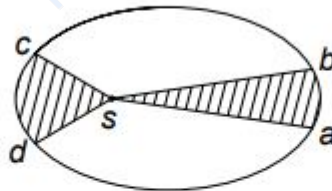
92090640931. 3

92090640932. 4

Question Number : 33 Question Id : 92090610364 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

दिया गया चित्र सूर्य के चारों ओर एक ग्रह का दीर्घ कृत्य पथ दिखाता है। दोनों छायांकित भागों का आयतन समान है। यदि t_1 और t_2 क्रमशः ग्रह द्वारा बिंदु a से b और c से d जाने का समय दर्शाते हैं तो –



1. $t_1 < t_2$
2. $t_1 > t_2$
3. $t_1 = t_2$
4. $t_1^2 = t_2^3$

Options :

92090640929. 1

92090640930. 2

92090640931. 3

92090640932. 4

Question Number : 34 Question Id : 92090610365 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Two objects A and B are thrown upward simultaneously with the same speed. Mass of A is greater than mass of B . Neglect the air resistance. Which of the following statement is true?

1. The two bodies will reach the same height
2. A will go higher than B
3. B will go higher than A
4. Depends on the speed with which the objects are thrown

Options :

92090640933. 1

92090640934. 2

92090640935. 3

92090640936. 4

Question Number : 34 Question Id : 92090610365 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

दो पिंड A और B , एक ही समय पर समान चाल से ऊपर फेंके जाते हैं। A का द्रव्यमान B के द्रव्यमान से अधिक है (वायु प्रतिरोध की उपेक्षा करे) तो –

- 1) दोनों पिंड बराबर ऊँचाई तक जाएँगे।
- 2) A , B से अधिक ऊँचाई तक जाएगा।
- 3) B , A से अधिक ऊँचाई तक जाएगा।
- 4) उस चाल पर निर्भर करता है जिनसे दोनों पिंडों को ऊपर फेंका गया है

Options :

92090640933. 1

92090640934. 2

92090640935. 3

92090640936. 4

Question Number : 35 Question Id : 92090610366 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the following statement is *not* correct regarding photoelectric effect experiment?

1. At fixed intensity, stopping potential varies with frequency of incident light.
2. Higher intensity implies higher saturation current.
3. There is a time lag of approximately 1 second between ejection of photoelectron and light incidence.
4. Below 'threshold' frequency no photo electron is ejected.

Options :

- 92090640937. 1
- 92090640938. 2
- 92090640939. 3
- 92090640940. 4

Question Number : 35 Question Id : 92090610366 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

निम्नलिखित में से कौन सा कथन प्रकाश- विद्रव्युत प्रभाव प्रयोग के संबंध में सही नहीं है?

- 1) निश्चित तीव्रता पर, निरोधी विभव, आपतित प्रकाश की आवृत्ति के अनुसार बदलता है।
- 2) उच्च आवृत्ति, उच्च संतृप्ति धारा को इंगित करती है।
- 3) आपतित प्रकाश और निष्कासित फोटो इलेक्ट्रॉन के बीच में लगभग एक सेकेन्ड का अंतराल होता है।
- 4) देहली आवृत्ति के नीचे कोई फोटो इलेक्ट्रॉन निष्कासित नहीं होता।

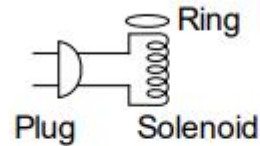
Options :

- 92090640937. 1
- 92090640938. 2
- 92090640939. 3
- 92090640940. 4

Question Number : 36 Question Id : 92090610367 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If you place a metal ring on top of a solenoid and then switch on the solenoid, the ring will



1. continue to stay over the solenoid
2. move horizontally
3. move vertically upward
4. be sucked into the solenoid

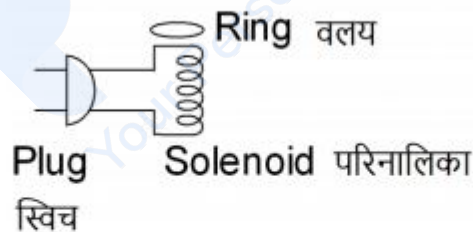
Options :

92090640941. 1
92090640942. 2
92090640943. 3
92090640944. 4

Question Number : 36 Question Id : 92090610367 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि आप एक धातु के वलय (मेटल रिंग) को एक परिनालिका के ऊपर रखे और परिनालिका से धारा चालू कर दें तो वलय



- 1) परिनालिका के ऊपर ही रहेगा।
- 2) क्षैतिज गति करेगा।
- 3) उध्वाँधर ऊपर गति करेगा।
- 4) परिनालिका के भीतर चूषित हो जाएगा।

Options :

92090640941. 1
92090640942. 2
92090640943. 3
92090640944. 4

Question Number : 37 Question Id : 92090610368 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Young's modulus is defined as

1. the ratio of tensile stress over tensile strain
2. the ratio of volume stress over volume strain
3. the ratio of shear stress over shearing strain
4. the ratio of fractional change in the transverse length to the fractional change in the longitudinal length.

Options :

- 92090640945. 1
- 92090640946. 2
- 92090640947. 3
- 92090640948. 4

Question Number : 37 Question Id : 92090610368 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

निम्नलिखित में से कौन यंग के गुणांक को परिभाषित करता है?

- 1) तनन प्रतिबल का तनन विकृति का अनुपात
- 2) आयतन प्रतिबल का आयतन विकृति का अनुपात
- 3) अपरूपण प्रतिबल का अपरूपण विकृति का अनुपात
- 4) अनुप्रस्थ लम्बाई में प्रमाजी परिवर्तन और अनुदैर्घ्य लम्बाई में प्रमाजी परिवर्तन का अनुपात

Options :

- 92090640945. 1
- 92090640946. 2
- 92090640947. 3
- 92090640948. 4

Question Number : 38 Question Id : 92090610369 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements :

Statement-I : Electrical resistivity of semiconductors exponentially increase with increasing temperature.

Statement-II : In metals, both electrical conductivity and thermal conductivity decrease with increasing temperature.

In the light of the above statements, choose the *correct* answer from the options given below.

1. Both Statement-I and Statement-II are true
2. Both Statement-I and Statement-II are false
3. Statement-I is true but Statement-II is false
4. Statement-I is false but Statement-II is true

Options :

92090640949. 1
92090640950. 2
92090640951. 3
92090640952. 4

Question Number : 38 Question Id : 92090610369 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं:

कथन I : एक अर्धचालक की विद्युत प्रतिरोधकता, तापमान के बढ़ाने पर, चरघातकिय तरीके से बढ़ती है।

कथन II : धातुओं में दोनों, विद्युत चालकता और तापीय चालकता तापमान के बढ़ने के साथ घटती है।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सबसे सही उत्तर का चयन कीजिए

1. कथन I और II दोनों सत्य हैं
- (2) कथन I और II दोनों असत्य हैं
- (3) कथन I सत्य है, लेकिन कथन II असत्य है
- (4) कथन I असत्य है, लेकिन कथन II सत्य है

Options :

92090640949. 1
92090640950. 2
92090640951. 3
92090640952. 4

Question Number : 39 Question Id : 92090610370 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements :

Statement-I : If Δx is the uncertainty in the measurement of the x component of its position and Δp_x is the uncertainty in the simultaneous measurement of the x component of its momentum, then $\Delta x \cdot \Delta p_x \geq \frac{h}{4\pi}$ where h is the Planck's constant.

Statement-II : In quantum mechanics, the lowest energy of a particle confined to a box can be zero.

In the light of the above statements, choose the *most appropriate* answer from the options given below.

1. Both Statement-I and Statement-II are correct
2. Both Statement-I and Statement-II are incorrect
3. Statement-I is correct but Statement-II is incorrect
4. Statement-I is incorrect but Statement-II is correct

Options :

92090640953. 1

92090640954. 2

92090640955. 3

92090640956. 4

Question Number : 39 Question Id : 92090610370 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं:

कथन I : यदि Δx , x घटक की स्थिति मापने की अनिश्चितता दर्शाती है और x घटक के समकालिक संवेग की अनिश्चितता Δpx है, तो $\Delta x \cdot \Delta px \geq \frac{h}{4\pi}$ होता है। (h प्लांक का स्थिरांक)

कथन II : क्वांटम यांत्रिकी में, किसी बाक्स में परिरूद्ध किसी कण की न्यूनतम ऊर्जा शून्य हो सकती है।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सबसे उपयुक्त उत्तर का चयन कीजिए

1. कथन I और II दोनों सही हैं
- (2) कथन I और II दोनों गलत हैं
- (3) कथन I सही है, लेकिन कथन II गलत है
- (4) कथन I गलत है, लेकिन कथन II सही है

Options :

92090640953. 1
92090640954. 2
92090640955. 3
92090640956. 4

Question Number : 40 Question Id : 92090610371 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Choose the correct statement(s) :

- A. Frictional force is an electromagnetic force
- B. Protons and Neutrons inside nucleus are held together by a 'weak' force
- C. For the same mass, charge and distance, gravitational force is stronger than the electromagnetic force
- D. β -decay in radioactivity is related to strong force

Choose the most appropriate answer from the options given below.

1. A only
2. A and B only
3. A, B and C only
4. A, B, C and D only

Options :

92090640957. 1
92090640958. 2

92090640959. 3

92090640960. 4

Question Number : 40 Question Id : 92090610371 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

सही कथन चुनिए

- A. घर्षण बल एक विद्युत चुम्बकीय बल है
- B. नाभिक के भीतर, प्रोटोन और न्यूट्रान, एक दूसरे से दुर्बल बल से बंधे होते हैं।
- C. एक समान द्रव्यमान, आवेश और दूरी के लिए, गुरुत्वाकर्षण बल, विद्युत चुम्बकीय बल से प्रबल होता है
- D. रेडियो सक्रियता में β -क्षय, प्रबल बल से संबंधित है

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए :

- 1) केवल A,
- 2) केवल A और B
- 3) केवल A,B और C
- 4) A,B,C, और D

Options :

92090640957. 1

92090640958. 2

92090640959. 3

92090640960. 4

Question Number : 41 Question Id : 92090610372 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the following is the general solution to the ODE $y' + \tan(x)y = \sin(2x)$?

- 1. $y(x) = c \cos(x) - 2 \cos^2(x)$
- 2. $y(x) = c \sin(x) - 2 \sin^2(x)$
- 3. $y(x) = c \cos(cx) - 2 \cos^2(cx)$
- 4. $y(x) = c \sin(cx) - 2 \sin^2(x)$

Options :

92090640961. 1
92090640962. 2
92090640963. 3
92090640964. 4

Question Number : 41 Question Id : 92090610372 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

निम्नलिखित में से कौन सा ODE $y' + \tan(x)y = \sin(2x)$ का सामान्य हल है ?

1. $y(x) = c \cos(x) - 2 \cos^2(x)$
2. $y(x) = c \sin(x) - 2 \sin^2(x)$
3. $y(x) = c \cos(cx) - 2 \cos^2(cx)$
4. $y(x) = c \sin(cx) - 2 \sin^2(x)$

Options :

92090640961. 1
92090640962. 2
92090640963. 3
92090640964. 4

Question Number : 42 Question Id : 92090610373 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Ordinary differential equation involves

1. only one independent variable
2. only two independent variables
3. infinite independent variable
4. no dependent variable

Options :

92090640965. 1
92090640966. 2
92090640967. 3
92090640968. 4

Question Number : 42 Question Id : 92090610373 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

सामान्य अवकल समीकरण में होता है –

- 1) केवल एक स्वतन्त्र चर
- 2) केवल दो स्वतंत्र चर
- 3) असीमित स्वतन्त्र चर
- 4) कोई भी पर परतंत्र चर नहीं

Options :

92090640965. 1
92090640966. 2
92090640967. 3
92090640968. 4

Question Number : 43 Question Id : 92090610374 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match List-I with List-II :

List-I	List-II
(A) Singular matrix	(I) Determinant is not zero
(B) Non-singular matrix	(II) Determinant is always one
(C) Real symmetric	(III) Determinant is zero
(D) Orthogonal matrix	(IV) Eigen values are always real

Choose the correct answer from the options given below :

1. (A)–(III); (B)–(I); (C)–(IV); (D)–(II)
2. (A)–(III); (B)–(II); (C)–(I); (D)–(IV)
3. (A)–(III); (B)–(IV); (C)–(II); (D)–(I)
4. (A)–(II); (B)–(III); (C)–(IV); (D)–(I)

Options :

92090640969. 1
92090640970. 2
92090640971. 3

Question Number : 43 Question Id : 92090610374 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

सूची I के साथ सूची II का मिलान कीजिए

सूची-I

- (A) अव्युत्क्रमणीय आव्यूह
- (B) व्युत्क्रमणीय आव्यूह
- (C) वास्तविक सममित
- (D) लम्बकोणीय आव्यूह

सूची -II

- (I) सारणिक शून्य नहीं होता
- (II) सारणिक हमेशा 1 होता है
- (III) सारणिक शून्य होता है
- (IV) अमिलक्षणीक हमेशा वास्तविक होते हैं

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

- (1) A-III, B-I, C-IV, D-II
- (2) A-III, B-II, C-I, D-IV
- (3) A-III, B-IV, C-II, D-I
- (4) A-II, B-III, C-IV, D-I

Options :

- 92090640969. 1
- 92090640970. 2
- 92090640971. 3
- 92090640972. 4

Question Number : 44 Question Id : 92090610375 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which one of the following is the product of the matrices $\begin{pmatrix} 1 & 1 \\ 0 & 1 \end{pmatrix}$ and $\begin{pmatrix} 1 & 1 \\ 1 & 0 \end{pmatrix}$ given by matrix multiplication?

1. $\begin{pmatrix} 2 & 1 \\ 1 & 0 \end{pmatrix}$

2. $\begin{pmatrix} 2 & 2 \\ 1 & 0 \end{pmatrix}$

3. $\begin{pmatrix} 2 & 1 \\ 2 & 0 \end{pmatrix}$

4. $\begin{pmatrix} 2 & 2 \\ 0 & 1 \end{pmatrix}$

Options :

92090640973. 1

92090640974. 2

92090640975. 3

92090640976. 4

Question Number : 44 Question Id : 92090610375 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

निम्नलिखित में से कौन सा आव्यूह $\begin{pmatrix} 1 & 1 \\ 0 & 1 \end{pmatrix}$ और $\begin{pmatrix} 1 & 1 \\ 1 & 0 \end{pmatrix}$ का आव्यूह गुणनफल द्वारा दिया गया गुणनफल है

1. $\begin{pmatrix} 2 & 1 \\ 1 & 0 \end{pmatrix}$

2. $\begin{pmatrix} 2 & 2 \\ 1 & 0 \end{pmatrix}$

3. $\begin{pmatrix} 2 & 1 \\ 2 & 0 \end{pmatrix}$

4. $\begin{pmatrix} 2 & 2 \\ 0 & 1 \end{pmatrix}$

Options :

92090640973. 1
92090640974. 2
92090640975. 3
92090640976. 4

Question Number : 45 Question Id : 92090610376 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The determinant of the matrix $\begin{pmatrix} 1 & a & a \\ 0 & -a & 0 \\ 1 & 0 & -a \end{pmatrix}$ is

1. 1
2. a
3. a^2
4. $2a^2$

Options :

92090640977. 1
92090640978. 2
92090640979. 3
92090640980. 4

Question Number : 45 Question Id : 92090610376 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

आव्यूह $\begin{pmatrix} 1 & a & a \\ 0 & -a & 0 \\ 1 & 0 & -a \end{pmatrix}$

का सारणिक बताइए

1. 1
2. a
3. a^2
4. $2a^2$

Options :

- 92090640977. 1
- 92090640978. 2
- 92090640979. 3
- 92090640980. 4

Question Number : 46 Question Id : 92090610377 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R) :

Assertion (A) : The determinant of the matrix $\begin{pmatrix} 1 & 1 \\ 2 & 2 \end{pmatrix}$ is 0.

Reason (R) : There are no solutions to the equation $\begin{pmatrix} 1 & 1 \\ 2 & 2 \end{pmatrix} x = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$

In the light of the above statements, choose the *correct answer* from the options given below.

1. Both (A) and (R) are true and (R) is the correct explanation of (A)
2. Both (A) and (R) are true but (R) is not the correct explanation of (A)
3. (A) is true but (R) is not false
4. (A) is false but (R) is true

Options :

- 92090640981. 1
- 92090640982. 2
- 92090640983. 3
- 92090640984. 4

Question Number : 46 Question Id : 92090610377 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं: एक अभिकथन (Assertion A) के रूप में लिखित है तो दूसरा उसके कारण (Reason R) के रूप में;

अभिकथन A : आव्यूह $\begin{pmatrix} 1 & 1 \\ 2 & 2 \end{pmatrix}$ का सारणिक शून्य है

कारण R : $\begin{pmatrix} 1 & 1 \\ 2 & 2 \end{pmatrix}x = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$ समीकरण का कोई हल नहीं है

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सबसे उपयुक्त उत्तर का चयन कीजिए

- (1) A और R दोनों सही हैं और R, A की सही व्याख्या है
- (2) A और R दोनों सही हैं, लेकिन R, A की सही व्याख्या नहीं है
- (3) A सही है, लेकिन R सही नहीं है
- (4) A सही नहीं है, लेकिन R सही है

Options :

92090640981. 1

92090640982. 2

92090640983. 3

92090640984. 4

Question Number : 47 Question Id : 92090610378 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If $f(x)$ is an odd function and its Fourier series is $f(x) = \sum_{n=1}^{\infty} b_n \sin \frac{n\pi}{L} x$ then b_n is equal to

1. $\frac{1}{L} \int_0^L f(x) \sin \frac{n\pi x}{L} dx$
2. $\frac{1}{L} \int_0^{\infty} f(x) \sin \frac{n\pi x}{L} dx$
3. $\frac{2}{L} \int_0^L f(x) \sin \frac{n\pi x}{L} dx$
4. $\frac{2}{L} \int_{-L}^L f(x) \sin \frac{n\pi x}{L} dx$

Options :

92090640985. 1

92090640986. 2

92090640987. 3

Question Number : 47 Question Id : 92090610378 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि $f(x)$ एक विषम फलन है और उसकी फुरियर श्रेणी $f(x) = \sum_{n=1}^{\infty} b_n \sin \frac{n\pi}{L} x$ है, तो b_n किसके बराबर है?

1. $\frac{1}{L} \int_0^L f(x) \sin \frac{n\pi x}{L} dx$
2. $\frac{1}{L} \int_0^{\infty} f(x) \sin \frac{n\pi x}{L} dx$
3. $\frac{2}{L} \int_0^L f(x) \sin \frac{n\pi x}{L} dx$
4. $\frac{2}{L} \int_{-L}^L f(x) \sin \frac{n\pi x}{L} dx$

Options :

92090640985. 1
 92090640986. 2
 92090640987. 3
 92090640988. 4

Question Number : 48 Question Id : 92090610379 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The Laplace transform of $\frac{\sin^2 t}{t}$ is equal to

1. $\log(s^2 + 4)$
2. $2 \log\left(\frac{s^2 + 4}{s^2}\right)$
3. $4 \log\left(\frac{s^2 + 4}{s^2}\right)$
4. $\frac{1}{4} \log\left(\frac{s^2 + 4}{s^2}\right)$

Options :

- 92090640989. 1
- 92090640990. 2
- 92090640991. 3
- 92090640992. 4

Question Number : 48 Question Id : 92090610379 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

$\frac{\sin^2 t}{t}$ का लाप्लैस रूपांतर किसके बराबर होगा ?

- 1. $\log(s^2 + 4)$
- 2. $2 \log\left(\frac{s^2 + 4}{s^2}\right)$
- 3. $4 \log\left(\frac{s^2 + 4}{s^2}\right)$
- 4. $\frac{1}{4} \log\left(\frac{s^2 + 4}{s^2}\right)$

Options :

- 92090640989. 1
- 92090640990. 2
- 92090640991. 3
- 92090640992. 4

Question Number : 49 Question Id : 92090610380 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If $z = e^{i\theta}$, then $|e^{iz}|$ is equal to

- 1. $e^{-r \cos \theta}$
- 2. $e^{-r \sin \theta}$
- 3. $re^{-r \sin \theta}$
- 4. $re^{-r \cos \theta}$

Options :

- 92090640993. 1
- 92090640994. 2
- 92090640995. 3
- 92090640996. 4

Question Number : 49 Question Id : 92090610380 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि $z = e^{i\theta}$, तो $|e^{iz}|$ किसके बराबर है

- 1. $e^{-r \cos \theta}$
- 2. $e^{-r \sin \theta}$
- 3. $re^{-r \sin \theta}$
- 4. $re^{-r \cos \theta}$

Options :

- 92090640993. 1
- 92090640994. 2
- 92090640995. 3
- 92090640996. 4

Question Number : 50 Question Id : 92090610381 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given complex number $z_1 = 1+2i$ and $z_2 = 2+i$, what is the complex number

$\frac{z_1}{z_2}$?

- 1. $\frac{4}{5} - \frac{3}{5}i$
- 2. $\frac{4}{5} + \frac{3}{5}i$
- 3. $4 - 3i$
- 4. $4 + 3i$

Options :

- 92090640997. 1

92090640998. 2

92090640999. 3

92090641000. 4

Question Number : 50 Question Id : 92090610381 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

दी गई सम्मिश्र संख्याएं $z_1 = 1 + 2i$ and $z_2 = 2 + i$, तो सम्मिश्र संख्या $\frac{z_1}{z_2}$ किसके बराबर होगी ?

1. $\frac{4}{5} - \frac{3}{5}i$

2. $\frac{4}{5} + \frac{3}{5}i$

3. $4 - 3i$

4. $4 + 3i$

Options :

92090640997. 1

92090640998. 2

92090640999. 3

92090641000. 4

Question Number : 51 Question Id : 92090610382 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

How many normals can be drawn from any point to a given parabola?

1. Two

2. Three

3. Four

4. Six

Options :

92090641001. 1

92090641002. 2

92090641003. 3

92090641004. 4

Question Number : 51 Question Id : 92090610382 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

किसी बिंदु से एक दिए गए परवलय में कितने अमिलंब आरेखित (खींचे) किए जा सकते हैं?

- 1) दो
- 2) तीन
- 3) चार
- 4) छः

Options :

92090641001. 1
92090641002. 2
92090641003. 3
92090641004. 4

Question Number : 52 Question Id : 92090610383 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The equation of the focal chord through the point $(at^2, 2at)$ of parabola $y^2 = 4ax$ is

1. $2ty = (t^2 - 1)(x - a)$
2. $(2t - 1)y = t^2(x - a)$
3. $(t^2 - 1) = 2t(x - a)$
4. $(t^2 - 1)y = 2t(x + a)$

Options :

92090641005. 1
92090641006. 2
92090641007. 3
92090641008. 4

Question Number : 52 Question Id : 92090610383 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

परवलय $y^2 = 4ax$ के किसी बिन्दु $(at^2, 2at)$ से होती हुई फोकस जीवा का समीकरण क्या होगा?

1. $2ty = (t^2 - 1)(x - a)$
2. $(2t - 1)y = t^2(x - a)$
3. $(t^2 - 1) = 2t(x - a)$
4. $(t^2 - 1)y = 2t(x + a)$

Options :

92090641005. 1
92090641006. 2
92090641007. 3
92090641008. 4

Question Number : 53 Question Id : 92090610384 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The distance between the foci of a hyperbola is 16 and its eccentricity is $\sqrt{2}$. The equation for the hyperbola is?

1. $x^2 - y^2 = 32$
2. $x^2 - y^2 = 8$
3. $x^2 - y^2 = 16$
4. $x^2 - y^2 = 64$

Options :

92090641009. 1
92090641010. 2
92090641011. 3
92090641012. 4

Question Number : 53 Question Id : 92090610384 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

एक अतिपरवलय के दो फोकस के बीच की दूरी 16 है और उसकी उत्केन्द्रता $\sqrt{2}$. तो ऐसे अतिपरवलय के लिए समीकरण क्या होगा ?

1. $x^2 - y^2 = 32$

2. $x^2 - y^2 = 8$

3. $x^2 - y^2 = 16$

4. $x^2 - y^2 = 64$

Options :

92090641009. 1

92090641010. 2

92090641011. 3

92090641012. 4

Question Number : 54 Question Id : 92090610385 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Let $u = \{1, 2, 3, \dots, 20\}$. Let X, Y, Z be the subsets of U .

Let X be the set of all numbers, which are perfect squares.

Let Y be the set of all numbers, which are multiples of 5.

Let Z be the set of all numbers, which are divisible by 2 and 3.

Consider the following statements and select the true statements :

A. X, Y, Z are mutually exclusive

B. X, Y, Z are mutually exhaustive

C. The number of elements in the complement set of $X \cup Y$ is 12

Choose the correct answer from the options given below.

1. A and B only

2. A and C only

3. B and C only

4. A only

Options :

92090641013. 1

92090641014. 2

92090641015. 3

92090641016. 4

Question Number : 54 Question Id : 92090610385 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

माना $u = \{1, 2, 3, \dots, 20\}$. यदि X , Y , और Z , U के उपसमुच्चय है।

और यदी

X सभी पूर्ण वर्ग संख्याओं का समुच्चय है.

Y उन सभी संख्याओं का समुच्चय है जो 5 के गुणज है तथा

Z , 2 और 3 से भाज्य होने वाली सभी संख्याओं समुच्चय है

ऊपर सभी पर विचार करते हुए नीचे दिए गए उचित कथन चुनिए

A. X , Y , और Z परस्पर अपवर्जी है

B. X , Y , Z परस्पर निश्शेष है

C. पूरक समुच्चय $A \cup B$ में अवयवों की संख्या 12 है

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए :

1) केवल A, और B

2) केवल A और C

3) केवल B और C

4) केवल A

Options :

92090641013. 1

92090641014. 2

92090641015. 3

92090641016. 4

Question Number : 55 Question Id : 92090610386 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

In the gathering of students, 75% knew some probability and 30% knew some statistics. 20% of students knew some amount of both probability and statistics. What percentage of students had some knowledge of either probability or statistics?

1. 15%
2. 30%
3. 75%
4. 85%

Options :

92090641017. 1
92090641018. 2
92090641019. 3
92090641020. 4

Question Number : 55 Question Id : 92090610386 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

विद्यार्थियों के एक समूह में 75% विद्यार्थी कुछ प्रायिकता जानते हैं और 30% कुछ सांख्यिकी जानते हैं। 20% विद्यार्थी कुछ मात्रा में प्रायिकता और सांख्यिकी दोनों जानते हैं। कितने प्रतिशत विद्यार्थी कम से कम एक (कुछ प्रायिकता या कुछ सांख्यिकी) को जानते हैं ?

1. 15%
2. 30%
3. 75%
4. 85%

Options :

92090641017. 1
92090641018. 2
92090641019. 3
92090641020. 4

Question Number : 56 Question Id : 92090610387 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If the both regression coefficient b_{yx} and b_{xy} are positive, then

1. $\frac{1}{b_{yx}} + \frac{1}{b_{xy}} > \frac{2}{r}$

2. $\frac{1}{b_{yx}} + \frac{1}{b_{xy}} < \frac{2}{r}$

3. $\frac{1}{b_{yx}} + \frac{1}{b_{xy}} < \frac{r}{2}$

4. $\frac{1}{b_{yx}} + \frac{1}{b_{xy}} > \frac{r}{2}$

Options :

92090641021. 1

92090641022. 2

92090641023. 3

92090641024. 4

Question Number : 56 Question Id : 92090610387 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि दोनों समाश्रयण गुणांक b_{yx} और b_{xy} धनात्मक है तो

1. $\frac{1}{b_{yx}} + \frac{1}{b_{xy}} > \frac{2}{r}$

2. $\frac{1}{b_{yx}} + \frac{1}{b_{xy}} < \frac{2}{r}$

3. $\frac{1}{b_{yx}} + \frac{1}{b_{xy}} < \frac{r}{2}$

4. $\frac{1}{b_{yx}} + \frac{1}{b_{xy}} > \frac{r}{2}$

Options :

92090641021. 1

92090641022. 2

92090641023. 3

92090641024. 4

Question Number : 57 Question Id : 92090610388 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

For two variables x and y , the two regression lines are $x + 2y - 5 = 0$; $2x + 3y - 8 = 0$ and variance $(X) = 12$. Then σ_y is

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

Options :

92090641025. 1
92090641026. 2
92090641027. 3
92090641028. 4

Question Number : 57 Question Id : 92090610388 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि दो चरो, x और y , के लिए दो समाश्रयण रेखाएँ हैं, $x + 2y - 5 = 0$; $2x + 3y - 8 = 0$ और प्रसरण $(X) = 12$. तो σ_y किसके बराबर होगा?

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

Options :

92090641025. 1
92090641026. 2
92090641027. 3
92090641028. 4

Question Number : 58 Question Id : 92090610389 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the following are two methods for finding mode in discrete series?

1. Grouping method and ascending method
2. Grouping method and descending method
3. Table method and midpoint method
4. Grouping method and inspecting method

Options :

92090641029. 1

92090641030. 2

92090641031. 3

92090641032. 4

Question Number : 58 Question Id : 92090610389 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

निम्नलिखित विधियों में से कौन सी दो विधियों से विविक्त श्रेणी में विधा (मोड) निकाला जा सकता है?

- 1) समूहन विधि और आरोही विधि
- 2) समूहन विधि और अवरोही विधि
- 3) सारणी विधि और मध्यविन्दु विधि
- 4) समूघ्न विधि और निरीक्षण विधि

Options :

92090641029. 1

92090641030. 2

92090641031. 3

92090641032. 4

Question Number : 59 Question Id : 92090610390 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the following statement is NOT true?

1. The measure of skewness is dependent upon the amount of dispersion
2. In a symmetric distribution, the values of mean, median and mode are the same
3. In a positively skewed distribution : mean > median > mode
4. In a negatively skewed distribution : mode > mean > median

Options :

- 92090641033. 1
- 92090641034. 2
- 92090641035. 3
- 92090641036. 4

Question Number : 59 Question Id : 92090610390 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

निम्नलिखित में से, कौन सा कथन सत्य नहीं है ?

- 1) वैषम्य का मापन, परिक्षेपण की मात्रा पर निर्भर करता है।
- 2) एक सममित वितरण में माध्य, माधिका और विधा का मान समान होता है।
- 3) एक धनात्मक विषम वितरण में माध्य > माधिका > विधा
- 4) एक ऋणात्मक विषम वितरण में विधा > माध्य > माधिका

Options :

- 92090641033. 1
- 92090641034. 2
- 92090641035. 3
- 92090641036. 4

Question Number : 60 Question Id : 92090610391 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R) :

Assertion (A) : To determine average rate of change of concentration of CO_2 in the atmosphere for the entire period, when the rates of change of concentration in different periods is given, geometric mean can be used.

Reason (R) : The geometric mean is one of the measures of central tendency and is defined as the n th root of the product of given n positive observations.

In the light of the above statements, choose the *most appropriate answer* from the options given below.

1. Both (A) and (R) are true and (R) is the correct explanation of (A)
2. Both (A) and (R) are true but (R) is not the correct explanation of (A)
3. (A) is true but (R) is false
4. (A) is false but (R) is true

Options :

92090641037. 1

92090641038. 2

92090641039. 3

92090641040. 4

Question Number : 60 Question Id : 92090610391 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं: एक अभिकथन (Assertion A) के रूप में लिखित है तो दूसरा उसके कारण (Reason R) के रूप में;

अभिकथन A : वायुमंडल में CO_2 की औसत सांद्रता की परिवर्तन दर को पूरी अवधि के लिए मापने के लिए, जबकि विभिन्न अवधियों की सांद्रता परिवर्तन दर दी गई हो, तब ज्यामितीय माध्य का प्रयोग कर सकते हैं

कारण R : ज्यामितीय माध्य केन्द्रीय प्रवृत्ति माप में से एक है और यह दिए गए n घनात्मक प्रेक्षणों के गुणनफल के n th मूल से परिभाषित है

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सबसे उपयुक्त उत्तर का चयन कीजिए

- (1) A और R दोनों सही हैं और R, A की सही व्याख्या है
- (2) A और R दोनों सही हैं, लेकिन R, A की सही व्याख्या नहीं है
- (3) A सही हैं, लेकिन R सही नहीं है
- (4) A सही नहीं हैं, लेकिन R सही है

Options :

92090641037. 1
92090641038. 2
92090641039. 3
92090641040. 4

Question Number : 61 Question Id : 92090610392 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The correlation coefficient is independent of

1. change of origin only
2. change of scale only
3. both change of scale and origin
4. neither change of scale nor change of origin

Options :

92090641041. 1
92090641042. 2
92090641043. 3
92090641044. 4

Question Number : 61 Question Id : 92090610392 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum

Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

सह संबंध गुणांक किस पर निर्भर नहीं करता ?

- (1) केवल बिंदु के परिवर्तन पर
- (2) केवल मापनी (स्केल) के परिवर्तन पर
- (3) मूल बिंदु और मापनी (स्केल) दोनों के परिवर्तन पर
- (4) न मूल बिंदु और न मापनी (स्केल) के परिवर्तन पर

Options :

92090641041. 1

92090641042. 2

92090641043. 3

92090641044. 4

Question Number : 62 Question Id : 92090610393 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The variance of the first n natural numbers is

- 1. $\frac{n^2 + 1}{12}$
- 2. $\frac{n^2 - 1}{12}$
- 3. $\frac{n(n+1)(2n+1)}{6}$
- 4. $\frac{n(n-1)(2n-1)}{6}$

Options :

92090641045. 1

92090641046. 2

92090641047. 3

92090641048. 4

Question Number : 62 Question Id : 92090610393 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

पहली n प्राकृत संख्याओं का प्रसरण किसके बराबर होता है

1. $\frac{n^2 + 1}{12}$

2. $\frac{n^2 - 1}{12}$

3. $\frac{n(n+1)(2n+1)}{6}$

4. $\frac{n(n-1)(2n-1)}{6}$

Options :

92090641045. 1

92090641046. 2

92090641047. 3

92090641048. 4

Question Number : 63 Question Id : 92090610394 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements :

Statement-I : According to one investigator's model, the data are like 50 draws made at random from large box. The null hypothesis says that average of the box is equal to 100. The alternative says that average of box is more than 100. The average of the draw is 107.3 and the SD is 22.1. The SE for sample average is 3.1. Now $z = \left(\frac{107.3 - 100}{3.1} \right) = 2.35$ and $P = 1\%$.

Statement-II : If the null hypothesis is right, there is only a 1% chance of getting a Z value bigger than 2.35.

In the light of the above statements, choose the *correct* answer from the options given below.

1. Both Statement-I and Statement-II are true
2. Both Statement-I and Statement-II are false
3. Statement-I is true but Statement-II is false
4. Statement-I is false but Statement-II is true

Options :

92090641049. 1
92090641050. 2
92090641051. 3
92090641052. 4

Question Number : 63 Question Id : 92090610394 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं:

- कथन I एक अन्वेषण (जांच) मॉडल के अनुसार, एक बड़े बक्से में 50 यादृच्छिक कर्ष (ड्रा) निकाले जाते हैं। निराकरणिय परिकल्पना कहती है कि बाक्स का औसत 100 के बराबर है। वैकल्पिक परिकल्पना कहता है कि बाक्स का औसत 100 से अधिक है। कर्ष (ड्रा) का औसत 107.3 और मानक विचलन 22.1 है। प्रतिदर्श के औसत का SE (Standard Error) 3.1 है तो $z = \left(\frac{107.3 - 100}{3.1} \right) = 2.35$ और $P = 1\%$.
- कथन II यदि निराकरणिय परिकल्पना उचित है तो Z मान की 2.35 होने की संभावना केवल 1% है।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सबसे उपयुक्त उत्तर का चयन कीजिए

1. कथन I और II दोनों सही है
- (2) कथन I और II दोनों गलत है
- (3) कथन I सही है, लेकिन कथन II गलत है
- (4) कथन I गलत है, लेकिन कथन II सही है

Options :

92090641049. 1
92090641050. 2
92090641051. 3
92090641052. 4

Question Number : 64 Question Id : 92090610395 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match List-I with List-II :

List-I	List-II
(A) Chi square test	(I) Testing the significance of differences of the mean values among more than two sample group
(B) ANOVA test	(II) Testing the goodness of fit of a distribution
(C) z-test	(III) Testing the significance of difference of mean value between two small size sample when population standard deviation is not available
(D) t-test	(IV) Testing the significance of difference of mean value between two large sized samples.

Choose the correct answer from the options given below :

1. (A)–(I); (B)–(II); (C)–(III); (D)–(IV)
2. (A)–(II); (B)–(I); (C)–(IV); (D)–(III)
3. (A)–(I); (B)–(III); (C)–(IV); (D)–(II)
4. (A)–(II); (B)–(I); (C)–(III); (D)–(IV)

Options :

92090641053. 1

92090641054. 2

92090641055. 3

92090641056. 4

Question Number : 64 Question Id : 92090610395 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

सूची I के साथ सूची II का मिलान कीजिए

सूची-I	सूची-II
(A) चार्ज वर्ग – परीक्षण	(I) दो से अधिक प्रतिदर्श समूहों के माध्य मानों के अंतर की सार्थकता का परीक्षण
(B) एनोवा – परीक्षण	(II) एक बंटन के गुडनैस फीट का परीक्षण
(C) z- परीक्षण	(III) दो लघु आकार के प्रतिदर्शों के माध्य मानों के अंतर की सार्थकता का परीक्षण जब जनसंख्या मानकविय उपलब्ध नहीं है.
(D) t- परीक्षण	(IV) दो बड़े आकार के प्रतिदर्शों के माध्य मानों के अंतर की सार्थकता का परीक्षण

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

- (1) A-I, B-II, C-III, D-IV
- (2) A-II, B-I, C-IV, D-III
- (3) A-I, B-III, C-IV, D-II
- (4) A-II, B-I, C-III, D-IV

Options :

92090641053. 1
92090641054. 2
92090641055. 3
92090641056. 4

Question Number : 65 Question Id : 92090610396 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Arrange the following steps in the process of hypothesis testing in proper sequence :

- A. Select the level of significance
- B. Setup null and alternative hypothesis
- C. Establish the decision rule
- D. Performance computations
- E. Select test statistics
- F. Draw conclusion

Choose the correct answer from the options given below.

- 1. A, B, C, D, E, F
- 2. A, B, E, D, C, F
- 3. B, A, C, D, E, F
- 4. B, A, E, C, D, F

Options :

- 92090641057. 1
- 92090641058. 2
- 92090641059. 3
- 92090641060. 4

Question Number : 65 Question Id : 92090610396 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दिए गए पदों को, परिकल्पना परीक्षण की प्रक्रिया के उचित क्रम से व्यवस्थित कीजिए

- A सार्थकता का स्तर चुनना
- B निराकरणीय और वैकलिष्क परिकल्पना को तैयार करना
- C निर्णयन नियम को स्थापित करना
- D निष्पादन संगणना
- E परीक्षण सांख्यिकों को चुनना
- F निष्कर्ष निकालना

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

1. A, B, C, D, E, F
2. A, B, E, D, C, F
3. B, A, C, D, E, F
4. B, A, E, C, D, F

Options :

- 92090641057. 1
- 92090641058. 2
- 92090641059. 3
- 92090641060. 4

Question Number : 66 Question Id : 92090610397 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the following is NOT a data type in Structured Query Language (SQL)?

1. Float
2. Double
3. Decimal
4. Date

Options :

- 92090641061. 1
- 92090641062. 2
- 92090641063. 3
- 92090641064. 4

Question Number : 66 Question Id : 92090610397 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

निम्नलिखित में से, कौन संरचना वृच्छक भाषा (S Q L) में आंकड़ों के प्रकार (डाटा टाईप) को नहीं दर्शाता ?

- | | |
|----------------------|------------------|
| (1) फ्लोट (FLOAT) | (2) डबल (DOUBLE) |
| (3) डेसिमल (DECIMAL) | (4) डेट (DATE) |

Options :

- 92090641061. 1
- 92090641062. 2
- 92090641063. 3
- 92090641064. 4

Question Number : 67 Question Id : 92090610398 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements :

Statement-I : In computer networking, bandwidth is often used as a synonym for data transfer rate.

Statement-II : Wider the bandwidth of a communication system, greater is the amount of data that can be transferred over a fixed period of time.

In the light of the above statements, choose the *correct* answer from the options given below.

- 1. Both Statement-I and Statement-II are true
- 2. Both Statement-I and Statement-II are false
- 3. Statement-I is true but Statement-II is false
- 4. Statement-I is false but Statement-II is true

Options :

- 92090641065. 1
- 92090641066. 2
- 92090641067. 3
- 92090641068. 4

Question Number : 67 Question Id : 92090610398 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं:

कथन I : कम्प्यूटर जाल तंत्र में, बैंड चौड़ाई को डाटा स्थानांतरण दर के पर्याय की तरह प्रयोग किया जाता है

कथन II : जितनी एक संचार तंत्र की बैंड चौड़ाई, चौड़ी होती है, उतना अधिक मात्रा में डाटा किसी निश्चित काल में, संचरित किया जा सकता है

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सबसे उपयुक्त उत्तर का चयन कीजिए

1. कथन I और II दोनों सही हैं
- (2) कथन I और II दोनों गलत हैं
- (3) कथन I सही है, लेकिन कथन II गलत है
- (4) कथन I गलत है, लेकिन कथन II सही है

Options :

92090641065. 1

92090641066. 2

92090641067. 3

92090641068. 4

Question Number : 68 Question Id : 92090610399 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Choose the correct statements about type of network and the respective network range.

- A. LAN has network range up to a few kilometers
- B. WAN has suitability over large geographical areas, often a country or continent
- C. MAN has network range between 5 to 100 km
- D. PAN has network range of less than 10 m

Choose the correct answer from the options given below.

1. A, B and C only
2. A, C and D only
3. B, C and D only
4. A, B, C and D only

Options :

- 92090641069. 1
- 92090641070. 2
- 92090641071. 3
- 92090641072. 4

Question Number : 68 Question Id : 92090610399 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

जालतंत्र के प्रकार और उनकी अपने निजी जालतंत्र परिसर के लिए उचित कथन चुनिए

- A. LAN की जालतंत्र परिसर कुछ किलोमीटर तक होता है
- B. WAN की उपयुक्तता बड़े भौगोलिक क्षेत्र अधिकतर एक देश या महाद्वीप तक होती है
- C. MAN की जालतंत्र परिसर 5 से 100 की.मी. तक होता है
- D. PAN का जालतंत्र परिसर 10 मीटर से कम होता है

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

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

Options :

- 92090641069. 1
- 92090641070. 2
- 92090641071. 3
- 92090641072. 4

Question Number : 69 Question Id : 92090610400 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the following are NOT used in relational algebra?

- A. Projection
- B. Product
- C. Union
- D. Cartesian multiplication

Choose the correct answer from the options given below.

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

Options :

92090641073. 1

92090641074. 2

92090641075. 3

92090641076. 4

Question Number : 69 Question Id : 92090610400 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

निम्नलिखित में से कौन संबंधपरक बिजगणित के लिए प्रयोग नहीं होता ?

- A. प्रक्षेप
- B. गुणनफल
- C. सम्मिलन
- D. कार्टीजियन गुणन

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

- 1. केवल B और C
- 2. केवल A और D
- 3. केवल A और C
- 4. केवल B और D

Options :

92090641073. 1

92090641074. 2

92090641075. 3

92090641076. 4

Question Number : 70 Question Id : 92090610401 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements regarding advantages of Database approach.

Statement-I : It maintains data integrity and quality.

Statement-II : It maximizes data inconsistencies.

In the light of the above statements, choose the *correct* answer from the options given below.

1. Both Statement-I and Statement-II are true
2. Both Statement-I and Statement-II are false
3. Statement-I is true but Statement-II is false
4. Statement-I is false but Statement-II is true

Options :

92090641077. 1

92090641078. 2

92090641079. 3

92090641080. 4

Question Number : 70 Question Id : 92090610401 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं:

डाटा आधार (बेस) पद्धति के लाभ में बारे में

कथन I : यह डाटा की अखंडता और विशेषता को कायम रखती है।

कथन II : यह डाटा असंगति को उच्चतम सीमा तक ले जाती है

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सबसे उपयुक्त उत्तर का चयन कीजिए

1. कथन I और II दोनों सही है
- (2) कथन I और II दोनों गलत है
- (3) कथन I सही है, लेकिन कथन II गलत है
- (4) कथन I गलत है, लेकिन कथन II सही है

Options :

92090641077. 1
92090641078. 2
92090641079. 3
92090641080. 4

Question Number : 71 Question Id : 92090610402 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the following is NOT a basic data type?

1. char
2. float
3. long
4. double

Options :

92090641081. 1
92090641082. 2
92090641083. 3
92090641084. 4

Question Number : 71 Question Id : 92090610402 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

निम्नलिखित में से कौन मूलभूत डाटा प्रकार नहीं है?

- (1) चार (CHAR)
- (2) फ्लोट (FLOAT)
- (3) लॉग (long)
- (4) डबल (Double)

Options :

92090641081. 1
92090641082. 2
92090641083. 3
92090641084. 4

Question Number : 72 Question Id : 92090610403 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

In which CPU scheduling technique, the CPU time requirement of each process must be known in advance?

1. Round robin
2. First come, first serve
3. Shortest job first
4. All of the above

Options :

92090641085. 1
92090641086. 2
92090641087. 3
92090641088. 4

Question Number : 72 Question Id : 92090610403 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

किस CPU नियोजन पद्धति में हर प्रक्रिया के CPU समय की माँग का पता अग्रिम (पहले से) होना चाहिए

- (1) राउण्ड रोबिन (Round Robin)
- (2) पहले आने वाले की पहले सेवा
- (3) सबसे छोटा कार्य सबसे पहले
- (4) उपरोक्त सभी

Options :

- 92090641085. 1
- 92090641086. 2
- 92090641087. 3
- 92090641088. 4

Question Number : 73 Question Id : 92090610404 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The person responsible for authorizing access to the database is known as

- 1. database designer
- 2. database administrator
- 3. parametric end user
- 4. application programmer

Options :

- 92090641089. 1
- 92090641090. 2
- 92090641091. 3
- 92090641092. 4

Question Number : 73 Question Id : 92090610404 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

वह व्यक्ति जो डाटाबेस के अभिगमन (प्राप्ति) को प्राधिकृत करने के लिए उत्तरदायी है, वह क्या कहलाता है?

- (1) डाटाबेस अभिकल्पक
- (2) डाटाबेस प्रशासक
- (3) प्रायलिक अंतिम उपभोक्ता
- (4) अनुप्रयोग प्रोगामर

Options :

- 92090641089. 1
- 92090641090. 2
- 92090641091. 3
- 92090641092. 4

Question Number : 74 Question Id : 92090610405 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match List-I with List-II :

List-I	List-II
(Generation of computers)	(Major technology used)
(A) First generation computers	(I) Microprocessors
(B) Second generation computers	(II) Vaccum tubes
(C) Third generation computers	(III) Integrated circuits
(D) Fourth generation computers	(IV) Transistors

Choose the correct answer from the options given below :

1. (A)–(I); (B)–(II); (C)–(III); (D)–(IV)
2. (A)–(I); (B)–(IV); (C)–(II); (D)–(III)
3. (A)–(III); (B)–(I); (C)–(II); (D)–(IV)
4. (A)–(II); (B)–(IV); (C)–(III); (D)–(I)

Options :

92090641093. 1

92090641094. 2

92090641095. 3

92090641096. 4

Question Number : 74 Question Id : 92090610405 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

सूची I के साथ सूची II का मिलान कीजिए

सूची-I कंप्यूटर की पीढ़ी

सूची -II प्रयोग की गई
प्रधान तकनीकी

- | | |
|----------------------------|---------------------|
| (A) प्रथम पीढ़ी कंप्यूटर | (I) माइक्रोप्रोसेसर |
| (B) द्वितीय पीढ़ी कंप्यूटर | (II) निर्वात नली |
| (C) तृतीय पीढ़ी कंप्यूटर | (III) समाकलित परिपथ |
| (D) चतुर्थ पीढ़ी कंप्यूटर | (IV) ट्रांजिस्टरस |

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

- (1) A-I, B-II, C-III, D-IV
- (2) A-I, B-IV, C-II, D-III
- (3) A- III, B-I, C-II, D-IV
- (4) A-II, B- IV, C-III, D-I

Options :

92090641093. 1
92090641094. 2
92090641095. 3
92090641096. 4

**Question Number : 75 Question Id : 92090610406 Question Type : MCQ Option Shuffling : No Is
Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum
Instruction Time : 0**

Correct Marks : 4 Wrong Marks : 1

The component which is built into the computer and is the first code run by the computer when it is switched on is called

1. linker
2. loader
3. BIOS
4. disk space analysers

Options :

92090641097. 1
92090641098. 2
92090641099. 3
92090641100. 4

Question Number : 75 Question Id : 92090610406 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

वह घटक जो कंप्यूटर के भीतर होता है और जब कंप्यूटर का स्विच खोलते हैं तो वह कंप्यूटर द्वारा चालित पहला कोड होता है वह क्या कहलाता है ?

1. लिंकर (linker)
2. लोडर (loader)
3. BIOS
4. डिस्क स्पेस एनालाइजर (disk space analysers)

Options :

- 92090641097. 1
- 92090641098. 2
- 92090641099. 3
- 92090641100. 4

Question Number : 76 Question Id : 92090610407 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the following is NOT correct?

- A. Temperature increases with depth in lithosphere.
- B. Lithosphere is the rigid and brittle outer shell of earth.
- C. Lithosphere is thicker beneath the continents and thinner beneath the oceans.
- D. Heat transfer in lithosphere occurs by convection.

Choose the correct answer from the options given below.

1. A and D only
2. B and C only
3. C and D only
4. D only

Options :

- 92090641101. 1
- 92090641102. 2
- 92090641103. 3

Question Number : 76 Question Id : 92090610407 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

निम्न लिखित में से कौन सा कथन सत्य नहीं है।

- A. स्थलमंडल में गहाराई बढ़ने से तापमान बढ़ता है।
 - B. स्थलमंडल, पृथ्वी का सख्त और भंगुर बाहरी आवरण है
 - C. स्थलमंडल महाद्वीप के नीचे मोटा और समुद्र के नीचे पतला होता है
 - D. स्थल मंडल के ऊष्मा का स्थानांतरण संवदन द्वारा होता है
- नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

- 1. केवल A और D
- 2. केवल B, और C,
- 3. केवल C, और D
- 4. केवल D

Options :

- 92090641101. 1
- 92090641102. 2
- 92090641103. 3
- 92090641104. 4

Question Number : 77 Question Id : 92090610408 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The Moho discontinuity in the earth separates

- 1. the upper crust from the lower crust
- 2. the crust from the mantle
- 3. the upper mantle from the lower mantle
- 4. the mantle from the core

Options :

- 92090641105. 1
- 92090641106. 2
- 92090641107. 3
- 92090641108. 4

Question Number : 77 Question Id : 92090610408 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

पृथ्वी में मोहो असंतपयता किसको पृथक्क करती है?

- (1) ऊपरी भूपर्पटी को नीचले भूपटल से
- (2) भूपर्पटी को प्रावार (मैंटल) से
- (3) ऊपरी मैंटल को निचले मैंटल से
- (4) मैंटल को क्रोड से

Options :

92090641105. 1
92090641106. 2
92090641107. 3
92090641108. 4

Question Number : 78 Question Id : 92090610409 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which among the following is the fastest type of mass movement during mass wasting processes?

1. Creep
2. Debris avalanche
3. Mudflow
4. Earthflow

Options :

92090641109. 1
92090641110. 2
92090641111. 3
92090641112. 4

Question Number : 78 Question Id : 92090610409 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

निम्न लिखित में से कौनसी व्यापक नष्ट प्रक्रिया के दौरान व्यापक चालन की तीव्रतम प्रकार है

- (1) रेंगना (Creep)
- (2) मलबाहिमस्खलन (Debris Avalanche)
- (3) मृदा प्रवाह (Mudflow)
- (4) भूप्रवाह (Earthflow)

Options :

92090641109. 1
92090641110. 2
92090641111. 3
92090641112. 4

Question Number : 79 Question Id : 92090610410 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Location where the seismic waves are not recorded is called

1. hypocentre
2. shadow zone
3. focus
4. epicentre

Options :

92090641113. 1
92090641114. 2
92090641115. 3
92090641116. 4

Question Number : 79 Question Id : 92090610410 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

वह स्थान जहाँ भूकंपी तरंगे रिकार्ड (दर्ज) नहीं की जा सकतीं, क्या कहलाते हैं?

- (1) अवकेन्द्र
- (2) छाया क्षेत्र
- (3) फोकस
- (4) एपिसेंटर

Options :

92090641113. 1
92090641114. 2
92090641115. 3
92090641116. 4

Question Number : 80 Question Id : 92090610411 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

In subduction zone, which type of following rock is expected?

1. High temperature–low pressure
2. Low temperature–low pressure
3. Low temperature–high pressure
4. High temperature–high pressure

Options :

92090641117. 1
92090641118. 2
92090641119. 3
92090641120. 4

Question Number : 80 Question Id : 92090610411 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

एक सबडकशन (स्बडुक्ति आनू) क्षेत्र में कौन से प्रकार की चट्टान होने की सम्भावना होती है ?

- (1) उच्च तापमान – निम्न दाब
- (2) निम्न तापमान – निम्न दाब
- (3) निम्न तापमान - उच्च दाब
- (4) उच्च ताप - उच्च दाब

Options :

92090641117. 1
92090641118. 2
92090641119. 3
92090641120. 4

Question Number : 81 Question Id : 92090610412 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

In which of the following structure, the beds are dipping away from each other?

1. Basin
2. Synform
3. Syncline
4. Dome

Options :

92090641121. 1
92090641122. 2
92090641123. 3
92090641124. 4

Question Number : 81 Question Id : 92090610412 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

निम्नलिखित में से कौन सी संरचना में, तल एक दूसरे से दूर जाते हैं।

- (1) बेसिन
- (2) सिनफ़ार्म
- (3) सिन् क्लाइन
- (4) डोम

Options :

92090641121. 1
92090641122. 2
92090641123. 3
92090641124. 4

Question Number : 82 Question Id : 92090610413 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

What is the concentration of nitrogen in ppm unit in ambient atmosphere?

1. ~78.08
2. ~7808
3. ~78080
4. ~780800

Options :

92090641125. 1
92090641126. 2
92090641127. 3
92090641128. 4

Question Number : 82 Question Id : 92090610413 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

परिवेशीय वायुमंडल में नाइट्रोजन की PPM युनिट में सांद्रता किसके बराबर होती है?

- (1) ~ 78.08
- (2) ~ 7808
- (3) ~ 78080
- (4) ~ 780800

Options :

92090641125. 1
92090641126. 2
92090641127. 3
92090641128. 4

Question Number : 83 Question Id : 92090610414 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which one of the following is a feature of speleotheme rising upwards from the floor of the caves?

1. Stalactites
2. Stalagmites
3. Dolines
4. Uvalas

Options :

- 92090641129. 1
- 92090641130. 2
- 92090641131. 3
- 92090641132. 4

Question Number : 83 Question Id : 92090610414 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

निम्नलिखित में से कौन गुफाओं के फर्श (तल) से ऊपर की दिशा में निकलते हुए स्पियोथम का लक्षण है।

- (1) स्टैलैकटाइट
- (2) स्टैलैग् माइट
- (3) डोलाइन
- (4) ऊवलास

Options :

- 92090641129. 1
- 92090641130. 2
- 92090641131. 3
- 92090641132. 4

Question Number : 84 Question Id : 92090610415 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

What is the correct order of the Earth's layers with decreasing density?

- A. Outer core
- B. Oceanic crust
- C. Continental crust
- D. Mantle

Choose the correct answer from the options given below.

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

Options :

92090641133. 1
92090641134. 2
92090641135. 3
92090641136. 4

Question Number : 84 Question Id : 92090610415 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

पृथ्वी की परतों को घटते घनत्व के अनुरूप सही क्रम में व्यवस्थित करें

- A. बाहरी क्रोड
- B. समुद्री भूपर्पटी
- C. महाद्वीपिय भूपर्पटी
- D. प्रावार

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

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

Options :

92090641133. 1
92090641134. 2
92090641135. 3
92090641136. 4

Question Number : 85 Question Id : 92090610416 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Arrange the following elements in descending order of their relative abundance in the whole earth:

- A. Silicon
- B. Iron
- C. Magnesium
- D. Oxygen
- E. Nickel

Choose the correct answer from the options given below.

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

Options :

- 92090641137. 1
- 92090641138. 2
- 92090641139. 3
- 92090641140. 4

Question Number : 85 Question Id : 92090610416 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

निम्नलिखित तत्वों को उनकी पूरी पृथ्वी में प्रचुरता के अनुसार घटते हुए क्रम में व्यवस्थित करें।

- A. सिलिकॉन
- B. आयरन
- C. मैग्नीशियम
- D. ऑक्सीजन
- E. निकल

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

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

Options :

- 92090641137. 1
- 92090641138. 2
- 92090641139. 3
- 92090641140. 4

Question Number : 86 Question Id : 92090610417 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the following structure develop in a divergent tectonic setting?

- 1. Island arc
- 2. Trench
- 3. Orogenic belt
- 4. Mid-oceanic ridge

Options :

- 92090641141. 1
- 92090641142. 2
- 92090641143. 3
- 92090641144. 4

Question Number : 86 Question Id : 92090610417 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

निम्नलिखित में से कौन सी संरचना अपसारी विवर्तनिक व्यवस्था में विकसित होती है?

1. द्वीप चाप
2. ट्रेंच
3. पर्वत-उत्पत्ति मेखला
4. मध्य सागर कटक

Options :

92090641141. 1
92090641142. 2
92090641143. 3
92090641144. 4

Question Number : 87 Question Id : 92090610418 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R) :

Assertion (A) : Tropical rain forest of the earth occurs in intertropical convergence zone of high temperature and heavy rainfall.

Reason (R) : The lower atmosphere from 10 °N to 10 °S of the equator is heated, expands and becomes less dense. Rising hot air cools because it expands as it rises, resulting in heavy average precipitation.

In the light of the above statements, choose the *correct answer* from the options given below.

1. Both (A) and (R) are true and (R) is the correct explanation of (A)
2. Both (A) and (R) are true but (R) is not the correct explanation of (A)
3. (A) is true but (R) is false
4. (A) is false but (R) is true

Options :

92090641145. 1
92090641146. 2

92090641147. 3

92090641148. 4

Question Number : 87 Question Id : 92090610418 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं: एक अभिकथन (Assertion A) के रूप में लिखित है तो दूसरा उसके कारण (Reason R) के रूप में;

अभिकथन A : पृथ्वी के उष्णकटिबंधीय वर्षावन, उच्च तापमान और भारी वर्षा के अंतः उष्णकटिबंधीय अभिसरण क्षेत्र में पाए जाते हैं

कारण R : भूमध्य रेखा का 10°N to 10°S का निचला वायुमंडल गर्म होकर फैल जाता है और उसका घनत्व कम हो जाता है। ऊपर जाती हुई गर्म हवा ठंडी हो जाती है क्योंकि जैसे ही यह ऊपर जाती है फैल जाती है और उसका परिणाम भारी औसत वर्षा होता है

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए

- (1) A और R दोनों सही हैं और R, A की सही व्याख्या है
- (2) A और R दोनों सही हैं, लेकिन R, A की सही व्याख्या नहीं है
- (3) A सही है, लेकिन R सही नहीं है
- (4) A सही नहीं है, लेकिन R सही है

Options :

92090641145. 1

92090641146. 2

92090641147. 3

92090641148. 4

Question Number : 88 Question Id : 92090610419 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the following is not a warm current?

1. East Australian Current
2. West Australian Current
3. North Atlantic Current
4. California Current

Options :

92090641149. 1

92090641150. 2

92090641151. 3

92090641152. 4

Question Number : 88 Question Id : 92090610419 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

निम्नलिखित में से कौन सी गर्म धारा नहीं है?

- (1) पूर्वी आस्ट्रेलियाई धारा
- (2) पश्चिमी आस्ट्रेलियाई धारा
- (3) उत्तरी अटलांटिक धारा
- (4) कैलिफोर्निया धारा

Options :

92090641149. 1

92090641150. 2

92090641151. 3

92090641152. 4

Question Number : 89 Question Id : 92090610420 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements :

Statement-I : In a tropical cyclone, minimum atmospheric pressure is observed at the center of the cyclone.

Statement-II : Surface winds move in clockwise direction in tropical cyclone in northern hemisphere.

In the light of the above statements, choose the *most appropriate* answer from the options given below.

- 1. Both Statement-I and Statement-II are correct
- 2. Both Statement-I and Statement-II are incorrect
- 3. Statement-I is correct but Statement-II is incorrect
- 4. Statement-I is incorrect but Statement-II is correct

Options :

92090641153. 1

92090641154. 2

92090641155. 3

92090641156. 4

Question Number : 89 Question Id : 92090610420 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं

कथन I : एक ऊष्ण कटिबंधीय चक्रवात में, चक्रवात के केन्द्र पर न्यूनतम वायुमंडलीय दाब होता है

कथन II : एक ऊष्ण कटिबंधीय चक्रवात में, उत्तरी अर्धगोलार्ध में सतही हवाएँ दक्षिणावर्त दिशा में चलती हैं

1. कथन I और II दोनों सही हैं
- (2) कथन I और II दोनों गलत हैं
- (3) कथन I सही है, लेकिन कथन II गलत है
- (4) कथन I गलत है, लेकिन कथन II सही है

Options :

92090641153. 1

92090641154. 2

92090641155. 3

92090641156. 4

Question Number : 90 Question Id : 92090610421 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match List-I with List-II :

List-I	List-II
(A) El Nino	(I) Seasonal reversal of surface winds
(B) La Nina	(II) Colder than normal sea surface temperature in eastern Pacific Ocean
(C) Southern oscillations	(III) Warmer than normal sea surface temperature in eastern Pacific Ocean
(D) Monsoon	(IV) Reversing surface air pressure between east and west Pacific Ocean

Choose the correct answer from the options given below :

1. (A)–(III); (B)–(IV); (C)–(II); (D)–(I)
2. (A)–(II); (B)–(III); (C)–(I); (D)–(IV)
3. (A)–(II); (B)–(III); (C)–(IV); (D)–(I)
4. (A)–(III); (B)–(II); (C)–(IV); (D)–(I)

Options :

92090641157. 1
92090641158. 2
92090641159. 3
92090641160. 4

Question Number : 90 Question Id : 92090610421 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

सूची I के साथ सूची II का मिलान कीजिए

सूची-I

सूची -II

(A) अल नीनो

(B) ला नीना

(C) दक्षिणी दोलन

(D) मानसून

(I) पृष्ठीय पवन का मौसमी उत्क्रमण

(II) पूर्वी प्रशान्त महासागर में सामान्य सागर पृष्ठ ताप से अधिक ठंडा

(III) पूर्वी प्रशान्त महासागर में सामान्य सागर पृष्ठ ताप से गर्म

(IV) पूर्वी और पश्चिमी प्रशान्त महासागर के बीच पृष्ठ पवन दाब का उत्क्रमण

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

(1) A-III, B-IV, C-II, D-I

(2) A-II, B-III, C-I, D-IV

(3) A- II, B-III, C-IV, D-I

(4) A-III, B- II, C-IV, D-I

Options :

92090641157. 1

92090641158. 2

92090641159. 3

92090641160. 4

Question Number : 91 Question Id : 92090610422 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match List-I with List-II :

List-I	List-II
(A) Egypt	(I) Tundra climate
(B) Brazil	(II) Mediterranean climate
(C) Italy	(III) Wet and dry tropical climate
(D) Greenland	(IV) Dry climate

Choose the correct answer from the options given below :

1. (A)–(IV); (B)–(III); (C)–(II); (D)–(I)
2. (A)–(II); (B)–(III); (C)–(I); (D)–(IV)
3. (A)–(III); (B)–(IV); (C)–(II); (D)–(I)
4. (A)–(II); (B)–(IV); (C)–(I); (D)–(III)

Options :

92090641161. 1
92090641162. 2
92090641163. 3
92090641164. 4

**Question Number : 91 Question Id : 92090610422 Question Type : MCQ Option Shuffling : No Is
Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum
Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1**

सूची I के साथ सूची II का मिलान कीजिए

सूची-I देश

सूची-II जलवायु

- | | |
|---------------|---|
| (A) मिस्र | (I) टुंड्रा जलवायु |
| (B) ब्राजील | (II) भूमध्य जलवायु |
| (C) इटली | (III) आद्र और शुष्क उष्णकटिबंधीय जलवायु |
| (D) ग्रीनलैंड | (IV) शुष्क जलवायु |

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

- (1) A- IV, B- III, C-II, D-I
- (2) A-II, B-III, C-I, D-IV
- (3) A- III, B-IV, C-II, D-I
- (4) A-II, B- IV, C-I, D-III

Options :

92090641161. 1
92090641162. 2
92090641163. 3
92090641164. 4

Question Number : 92 Question Id : 92090610423 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R) :

Assertion (A) : A characteristic feature of troposphere is regular decrease in air temperature with increasing altitude.

Reason (R) : Air in troposphere is heated by absorption of incoming shortwave solar radiation.

In the light of the above statements, choose the *correct answer* from the options given below.

1. Both (A) and (R) are true and (R) is the correct explanation of (A)
2. Both (A) and (R) are true but (R) is not the correct explanation of (A)
3. (A) is true but (R) is false
4. (A) is false but (R) is true

Options :

- 92090641165. 1
- 92090641166. 2
- 92090641167. 3
- 92090641168. 4

Question Number : 92 Question Id : 92090610423 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं: एक अभिकथन (Assertion A) के रूप में लिखित है तो दूसरा उसके कारण (Reason R) के रूप में;

अभिकथन A : हवा के तापमान का ऊँचाई बढ़ने के साथ नियमित घटना क्षोभमंडल का विशेष लक्षण होता है।

कारण R : क्षोभमंडल में हवा, सौर कि किरणों से आने वाली लघु तरंगों के अवशोषण से गर्म होती है।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए

- (1) A और R दोनों सत्य हैं और R, A की सही व्याख्या है
- (2) A और R दोनों सत्य हैं, लेकिन R, A की सही व्याख्या नहीं है
- (3) A सत्य हैं, लेकिन R असत्य है
- (4) A असत्य हैं, लेकिन R सत्य है

Options :

- 92090641165. 1
- 92090641166. 2
- 92090641167. 3
- 92090641168. 4

Question Number : 93 Question Id : 92090610424 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the following deserts are NOT affected by the trade winds?

- 1. Sahara Desert
- 2. Thar Desert
- 3. Gobi Desert
- 4. Kalahari Desert

Options :

- 92090641169. 1

92090641170. 2

92090641171. 3

92090641172. 4

Question Number : 93 Question Id : 92090610424 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

निम्नलिखित में से कौन से मरूस्थल व्यापार पवनों (ट्रेड विंड्स) से प्रभावित नहीं होते ?

- (1) सहारा मरूस्थल
- (2) थार मरूस्थल
- (3) गोबी मरूस्थल
- (4) कालाहारी मरूस्थल

Options :

92090641169. 1

92090641170. 2

92090641171. 3

92090641172. 4

Question Number : 94 Question Id : 92090610425 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements :

Statement-I : Dry climates are characterized by more evaporation and less precipitation that is not adequate for the growth of plants.

Statement-II : Steppe is a type of dry climate.

In the light of the above statements, choose the *correct* answer from the options given below.

- 1. Both Statement-I and Statement-II are true
- 2. Both Statement-I and Statement-II are false
- 3. Statement-I is true but Statement-II is false
- 4. Statement-I is false but Statement-II is true

Options :

92090641173. 1

92090641174. 2

92090641175. 3

Question Number : 94 Question Id : 92090610425 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं

कथन I : शुष्क जलवायु की विशेषता है, अधिक वाष्पीकरण और कम अवक्षेपण, जो पौधों के वर्धन के लिए पर्याप्त नहीं है।

कथन II : स्टेपी एक प्रकार की शुष्क जलवायु है।

उपरोक्त कथनों के आलोक में, नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए

1. कथन I और II दोनों सही हैं
- (2) कथन I और II दोनों गलत हैं
- (3) कथन I सही है, लेकिन कथन II गलत है
- (4) कथन I गलत है, लेकिन कथन II सही है

Options :

92090641173. 1

92090641174. 2

92090641175. 3

92090641176. 4

Question Number : 95 Question Id : 92090610426 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If a stream has width of 100 m, depth of 15 m, and flowing at 3 m/s. What is the discharge of that stream?

1. $300 \text{ m}^3/\text{s}$
2. $1500 \text{ m}^3/\text{s}$
3. $500 \text{ m}^3/\text{s}$
4. $4500 \text{ m}^3/\text{s}$

Options :

92090641177. 1

92090641178. 2

92090641179. 3

Question Number : 95 Question Id : 92090610426 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि किसी शाखा (प्रवाह) की चौड़ाई 100 मीटर, गहराई 15 मी. है और वह 3 मीटर/सेकेन्ड की चाल से प्रवाहित हो रही है तो प्रवाह (शाखा) की निकासी क्या होगी?

1. $300 \text{ m}^3/\text{s}$
2. $1500 \text{ m}^3/\text{s}$
3. $500 \text{ m}^3/\text{s}$
4. $4500 \text{ m}^3/\text{s}$

Options :

92090641177. 1

92090641178. 2

92090641179. 3

92090641180. 4

Question Number : 96 Question Id : 92090610427 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R) :

Assertion (A) : Ozone hole is more prominent over Antarctica (South Pole) between altitude of 15 km and 20 km during September/October months.

Reason (R) : Special vortex weather conditions in the lower stratosphere above south pole in winter causes denitrification and lead to conversion of inactive chlorine into Cl_2 and HOCl . These two compounds produce atomic Chlorine when sunlight appears and destroy ozone.

In the light of the above statements, choose the *correct answer* from the options given below.

1. Both (A) and (R) are correct and (R) is the correct explanation of (A)
2. Both (A) and (R) are correct but (R) is not the correct explanation of (A)
3. (A) is true but (R) is false
4. (A) is false but (R) is true

Options :

92090641181. 1
92090641182. 2
92090641183. 3
92090641184. 4

Question Number : 96 Question Id : 92090610427 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं: एक अभिकथन (Assertion A) के रूप में लिखित है तो दूसरा उसके कारण (Reason R) के रूप में;

अभिकथन A : ओजोन छिद्र अंटार्कटिका (दक्षिणी ध्रुव) पर, सितम्बर/ अक्टूबर महीनो में, 15 और 20 किलोमीटर की ऊँचाई के बीच अधिक सुप्रकट होता है।

कारण R : नीचे के समताप मंडल में, दक्षिणी ध्रुव के ऊपर, सर्दी में विशेष चक्रवात जलवायु स्थिति, विनाइट्रकरण उत्पन्न करती है, और असक्रिय क्लोरिन को Cl_2 और HOCl में परिवर्तित कर देती है। ये दो घटक सूर्य की किरणों के आने पर अणु क्लोरिन को पैदा करती है जो ओजोन को नष्ट करती है।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए

- (1) A और R दोनों सत्य हैं और R, A की सही व्याख्या है
- (2) A और R दोनों सत्य हैं, लेकिन R, A की सही व्याख्या नहीं है
- (3) A सत्य हैं, लेकिन R असत्य है
- (4) A असत्य हैं, लेकिन R सत्य है

Options :

92090641181. 1

92090641182. 2

92090641183. 3

92090641184. 4

Question Number : 97 Question Id : 92090610428 Question Type : MCQ Option Shuffling : No Is

Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum

Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R) :

Assertion (A) : Year round high temperature and high rainfall leaches basic cations and also promotes transformation and subsequent leaching of Si, leaving iron and aluminium oxide minerals into the soil. Such soils are termed as acidic soils.

Reason (R) : Soluble aluminium and presence of pyrite minerals can release protons into soilsssss environment and lead to formations of soil acidic conditions.

In the light of the above statements, choose the *correct answer* from the options given below.

1. Both (A) and (R) are true and (R) is the correct explanation of (A)
2. Both (A) and (R) are true but (R) is not the correct explanation of (A)
3. (A) is true but (R) is false
4. (A) is false but (R) is true

Options :

92090641185. 1

92090641186. 2

92090641187. 3

92090641188. 4

Question Number : 97 Question Id : 92090610428 Question Type : MCQ Option Shuffling : No Is

Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum

Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं: एक अभिकथन (Assertion A) के रूप में लिखित है तो दूसरा उसके कारण (Reason R) के रूप में;

अभिकथन A : पूरे वर्ष उच्च ताप और भारी वर्षा के कारण मूलभूत धनायन विक्षालित हो जाते हैं और Si को घुल कर बह जाने में और बदलाव में मदद करते हैं; जिस कारण आयरन और अलुमीनीयम ऑक्साइड के खनिज मृदा में शेष रह जाते हैं। ऐसी मृदा को अम्लीय मृदा कहते हैं।

कारण R : घुलनशील अलुमीनीयम एवं पाइराइट खनिजों की उपस्थिति मृदा वातावरण में प्रोटॉन छोड़ते हैं और मृदा में अम्लीय स्थिति पैदा करते हैं।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए

- (1) A और R दोनों सत्य हैं और R, A की सही व्याख्या है
- (2) A और R दोनों सत्य हैं, लेकिन R, A की सही व्याख्या नहीं है
- (3) A सत्य हैं, लेकिन R असत्य है
- (4) A असत्य हैं, लेकिन R सत्य है

Options :

92090641185. 1
92090641186. 2
92090641187. 3
92090641188. 4

Question Number : 98 Question Id : 92090610429 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R) :

Assertion (A) : Metro cities in the northern India encounter severe case of air pollution during winter time due to biomass, crop-residue burning in the States of Haryana and Punjab and frequent temperature inversion conditions.

Reason (R) : Photochemical smog is formed by photochemical reactions among NO_x, volatile organic compounds in the presence of sunlight. This is more frequent when the earth is tilted towards sun.

In the light of the above statements, choose the *most appropriate answer* from the options given below.

1. Both (A) and (R) are correct and (R) is the correct explanation of (A)
2. Both (A) and (R) are correct but (R) is not the correct explanation of (A)
3. (A) is correct but (R) is not correct
4. (A) is not correct but (R) is correct

Options :

92090641189. 1

92090641190. 2

92090641191. 3

92090641192. 4

Question Number : 98 Question Id : 92090610429 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं: एक अभिकथन (Assertion A) के रूप में लिखित है तो दूसरा उसके कारण (Reason R) के रूप में;

अभिकथन A : उत्तरी भारत के महानगरीय शहरों में सर्दी के समय में, पंजाब और हरियाणामें जैव पदार्थ और फसलो के अवशेष जलाने से और निरंतर तापमान प्रतिलोमन की स्थितिओ के कारण, वायु प्रदूषण के अनेक मामले होते हैं।

कारण R : प्रकाश रसायनिक स्मॉग, NO_x और वाष्पशील कार्बनिक यौगिक के बीच सौर प्रकाश की उपस्थिति में प्रकाश रसायनिक अभिक्रियाओं के कारण बनती है, जब पृथ्वी सूर्य की तरफ झुकी होती है तो यह अधिक होती है

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए

- (1) A और R दोनों सत्य हैं और R, A की सही व्याख्या है
- (2) A और R दोनों सत्य हैं, लेकिन R, A की सही व्याख्या नहीं है
- (3) A सत्य हैं, लेकिन R असत्य है
- (4) A असत्य हैं, लेकिन R सत्य है

Options :

92090641189. 1

92090641190. 2

92090641191. 3

92090641192. 4

Question Number : 99 Question Id : 92090610430 Question Type : MCQ Option Shuffling : No Is

Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum

Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Choose the correct statements :

- A. High dissolved oxygen in water can cause gas bubble disease
- B. Cadmium poisoning cause itai-itai disease
- C. High nitrate ion concentration in water causes blue baby syndrome
- D. Arsenic contamination and exposure causes Minamata disease
- E. High soluble carbonates cause acidity in lake water

Choose the correct answer from the options given below.

- 1. B, C and D only
- 2. B, C and E only
- 3. A, B and C only
- 4. A, B, D and E only

Options :

- 92090641193. 1
- 92090641194. 2
- 92090641195. 3
- 92090641196. 4

Question Number : 99 Question Id : 92090610430 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

सही कथन चुनिए।

- A. पानी में उच्च घुली ऑक्सीजन, गैस बबल रोग कर सकती है
- B. कैडमियम विषाक्तता, इटाइ- इटाइ रोग करती है.
- C. पानी में उच्च नाइट्रेट आयन सांद्रता, ब्ल्यू बेबी सिंड्रोम रोग करती है
- D. आर्सेनिक का दूषण और प्रभावन मिनामेटा रोग करती है
- E. उच्च धुलनशील कार्बोनेट झील के पानी में अम्लता करते है।

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

- 1. B, C और D
- 2. B, C और E
- 3. A, B और C
- 4. A, B, D और E

Options :

- 92090641193. 1
- 92090641194. 2
- 92090641195. 3
- 92090641196. 4

Question Number : 100 Question Id : 92090610431 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Which of the following gas are not transparent to outgoing IR radiations?

- A. O_3
- B. NO_2
- C. N_2O
- D. SF_6
- E.

Choose the correct answer from the options given below.

- 1. A, C, D, and E only
- 2. C and D only
- 3. B and D only
- 4. B only

Options :

92090641197. 1

92090641198. 2

92090641199. 3

92090641200. 4

Question Number : 100 Question Id : 92090610431 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

निम्नलिखित में से कौन सी गैस बाहर जाने वाली IR विकिरणों के लिए पारदर्शी नहीं है?

- A. O_3
- B. NO_2
- C. N_2O
- D. SF_6
- E. CH_4

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

- 1. केवल A, C, D और E
- 2. केवल C और D
- 3. केवल B और D
- 4. केवल B

Options :

92090641197. 1

92090641198. 2

92090641199. 3

92090641200. 4

