

National Testing Agency

Question Paper Name :	Data Science Artificial Intelligence Eng 26th June 2023 Shift 2
Subject Name :	Data Science Artificial Intelligence Eng
Creation Date :	2023-06-26 18:29:26
Duration :	120
Total Marks :	400
Display Marks:	Yes

Data Science Artificial Intelligence

Group Number :	1
Group Id :	920906250
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 :	920906499
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 :	920906810
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Id : 92090625206 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

Read the passage and answer the following Questions :-(Q01 _ 05)

Wings of Fire is an autobiography of Dr. APJ Abdul Kalam and covers his early life and work in Indian space research and missile programmes. It is a simple tale of a boy from a humble background who went on to occupy the highest seat, that of the president of the country.

Dr. Kalam has been a key player in Indian space research / Indian missile programmes. The book gained immense popularity in India and has been translated into multiple languages. It is an engaging reading to say the least. However, it tends to drag towards the end. The technical details given therein are lost on the common readers since they are specific to space research and missile projects.

In my opinion, the initial chapters of *Wings of Fire* are lovable as they describe the quest of this young boy on the road to realizing his dreams. Another important factor is Dr. Kalam's positive thinking and outlook that resonates throughout the book. Despite holding many high ranking positions in various organizations, Dr. Kalam's humility shines throughout like a beacon. The secret to his success is indeed his ability to ignore negative things around him.

Sub questions

Question Number : 1 Question Id : 92090625207 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 opposite of success:

- (1) failure
- (2) victory
- (3) happiness
- (4) popular

Options :

92090699601. 1
92090699602. 2
92090699603. 3
92090699604. 4

Question Number : 2 Question Id : 92090625208 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 book 'Wings of Fire' covers:

- (1) Dr. APJ Abdul Kalam's music research
- (2) Dr. APJ Abdul Kalam's science research
- (3) Dr. APJ Abdul Kalam's space research
- (4) Dr. APJ Abdul Kalam's missile research

Options :

- 92090699605. 1
- 92090699606. 2
- 92090699607. 3
- 92090699608. 4

Question Number : 3 Question Id : 92090625209 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 do you understand about Dr. Kalam's thinking? Is it _____.

- (1) negative
- (2) positive
- (3) energetic
- (4) boredom

Options :

- 92090699609. 1
- 92090699610. 2
- 92090699611. 3
- 92090699612. 4

Question Number : 4 Question Id : 92090625210 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 secret to his success is _____.

- (1) his ability to ignore negative things.
- (2) to focus on negative things.
- (3) to realize the negative things.
- (4) to accept the negative things.

Options :

- 92090699613. 1
- 92090699614. 2
- 92090699615. 3
- 92090699616. 4

Question Number : 5 Question Id : 92090625211 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 meaning of 'tale' is

- (1) a story
- (2) an essay
- (3) a film
- (4) a review

Options :

- 92090699617. 1
- 92090699618. 2
- 92090699619. 3
- 92090699620. 4

Question Id : 92090625206 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

Read the passage and answer the following Questions :-(Q01 _ 05)

Wings of Fire is an autobiography of Dr. APJ Abdul Kalam and covers his early life and work in Indian space research and missile programmes. It is a simple tale of a boy from a humble background who went on to occupy the highest seat, that of the president of the country.

Dr. Kalam has been a key player in Indian space research / Indian missile programmes. The book gained immense popularity in India and has been translated into multiple languages. It is an engaging reading to say the least. However, it tends to drag towards the end. The technical details given therein are lost on the common readers since they are specific to space research and missile projects.

In my opinion, the initial chapters of *Wings of Fire* are lovable as they describe the quest of this young boy on the road to realizing his dreams. Another important factor is Dr. Kalam's positive thinking and outlook that resonates throughout the book. Despite holding many high ranking positions in various organizations, Dr. Kalam's humility shines throughout like a beacon. The secret to his success is indeed his ability to ignore negative things around him.

Sub questions

Question Number : 1 Question Id : 92090625207 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 opposite of success:

- (1) failure
- (2) victory
- (3) happiness
- (4) popular

Options :

92090699601. 1
92090699602. 2
92090699603. 3
92090699604. 4

Question Number : 2 Question Id : 92090625208 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 book 'Wings of Fire' covers:

- (1) Dr. APJ Abdul Kalam's music research
- (2) Dr. APJ Abdul Kalam's science research
- (3) Dr. APJ Abdul Kalam's space research
- (4) Dr. APJ Abdul Kalam's missile research

Options :

- 92090699605. 1
- 92090699606. 2
- 92090699607. 3
- 92090699608. 4

Question Number : 3 Question Id : 92090625209 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 do you understand about Dr. Kalam's thinking? Is it _____.

- (1) negative
- (2) positive
- (3) energetic
- (4) boredom

Options :

- 92090699609. 1
- 92090699610. 2
- 92090699611. 3
- 92090699612. 4

Question Number : 4 Question Id : 92090625210 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 secret to his success is _____.

- (1) his ability to ignore negative things.
- (2) to focus on negative things.
- (3) to realize the negative things.
- (4) to accept the negative things.

Options :

- 92090699613. 1

92090699614. 2

92090699615. 3

92090699616. 4

Question Number : 5 Question Id : 92090625211 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 meaning of 'tale' is

- (1) a story
- (2) an essay
- (3) a film
- (4) a review

Options :

92090699617. 1

92090699618. 2

92090699619. 3

92090699620. 4

Sub-Section Number :

2

Sub-Section Id :

920906811

Question Shuffling Allowed :

Yes

Is Section Default? :

null

Question Number : 6 Question Id : 92090625212 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 form of verb to fill in the blank.

This work _____ up by you now.

- (1) can taken
- (2) can't taken
- (3) could be taking
- (4) can't be taking

Options :

92090699621. 1

92090699622. 2

92090699623. 3

92090699624. 4

Question Number : 6 Question Id : 92090625212 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 form of verb to fill in the blank.

This work _____ up by you now.

- (1) can taken
- (2) can't taken
- (3) could be taking
- (4) can't be taking

Options :

- 92090699621. 1
- 92090699622. 2
- 92090699623. 3
- 92090699624. 4

Question Number : 7 Question Id : 92090625213 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

Among the four options given, choose the correct sequence given below, to make a meaningful sentence:

- A. the tangled oak treetops that you can barely see the sky
- B. moss and licher drip so thickly from
- C. in the southwest of England
- D. in Wistman's Wood in Dastmoor National Park

Choose the correct answer from the options given below :

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

Options :

- 92090699625. 1
- 92090699626. 2
- 92090699627. 3
- 92090699628. 4

Question Number : 7 Question Id : 92090625213 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

Among the four options given, choose the correct sequence given below, to make a meaningful sentence:

- A. the tangled oak treetops that you can barely see the sky
- B. moss and licher drip so thickly from
- C. in the southwest of England
- D. in Wistman's Wood in Dastmoor National Park

Choose the correct answer from the options given below :

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

Options :

- 92090699625. 1
- 92090699626. 2
- 92090699627. 3
- 92090699628. 4

Question Number : 8 Question Id : 92090625214 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

Identify the meaning of the underlined idiom from the options given.

At school, Neha is always in high spirit.

- (1) laughing
- (2) uncontrollable
- (3) talkactive
- (4) cheerful

Options :

- 92090699629. 1
- 92090699630. 2
- 92090699631. 3
- 92090699632. 4

Question Number : 8 Question Id : 92090625214 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

Identify the meaning of the underlined idiom from the options given.

At school, Neha is always in high spirit.

- (1) laughing
- (2) uncontrollable
- (3) talkative
- (4) cheerful

Options :

92090699629. 1
92090699630. 2
92090699631. 3
92090699632. 4

Question Number : 9 Question Id : 92090625215 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 a one – word substitute for ‘the art of beautiful handwriting’?

- (1) epigraphy
- (2) castography
- (3) topography
- (4) calligraphy

Options :

92090699633. 1
92090699634. 2
92090699635. 3
92090699636. 4

Question Number : 9 Question Id : 92090625215 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 a one – word substitute for ‘the art of beautiful handwriting’?

- (1) epigraphy
- (2) castography
- (3) topography
- (4) calligraphy

Options :

- 92090699633. 1
- 92090699634. 2
- 92090699635. 3
- 92090699636. 4

Question Number : 10 Question Id : 92090625216 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 can be taken to be synonyms for ‘obstreperous’?

- (1) objectionable
- (2) sycophantic
- (3) disruptive
- (4) obsequious

Options :

- 92090699637. 1
- 92090699638. 2
- 92090699639. 3
- 92090699640. 4

Question Number : 10 Question Id : 92090625216 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 can be taken to be synonyms for ‘obstreperous’?

- (1) objectionable
- (2) sycophantic
- (3) disruptive
- (4) obsequious

Options :

- 92090699637. 1
- 92090699638. 2
- 92090699639. 3
- 92090699640. 4

Question Number : 11 Question Id : 92090625217 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 $5 \tan \theta = 12$, then find the value of $\cos \theta - \sin \theta$:

- (1) -1
- (2) $\frac{5}{13}$
- (3) $-\frac{7}{13}$
- (4) $\frac{27}{20}$

Options :

- 92090699641. 1
- 92090699642. 2
- 92090699643. 3
- 92090699644. 4

Question Number : 11 Question Id : 92090625217 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 $5 \tan \theta = 12$, then find the value of $\cos \theta - \sin \theta$:

- (1) -1
- (2) $\frac{5}{13}$
- (3) $-\frac{7}{13}$
- (4) $\frac{27}{20}$

Options :

- 92090699641. 1
- 92090699642. 2

92090699643. 3

92090699644. 4

Question Number : 12 Question Id : 92090625218 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 an office 60% of the staffs are male. In an election in the office, 40% of the females and 60% of the males voted for Anju. The percentage of votes Anju got was:

- (1) 42%
- (2) 50%
- (3) 52%
- (4) 54%

Options :

92090699645. 1

92090699646. 2

92090699647. 3

92090699648. 4

Question Number : 12 Question Id : 92090625218 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 an office 60% of the staffs are male. In an election in the office, 40% of the females and 60% of the males voted for Anju. The percentage of votes Anju got was:

- (1) 42%
- (2) 50%
- (3) 52%
- (4) 54%

Options :

92090699645. 1

92090699646. 2

92090699647. 3

92090699648. 4

Question Number : 13 Question Id : 92090625219 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 is twice as good a workman as B. Together they finish a piece of work in 24 days.
In how many days B alone can finish the work?

- (1) 36
- (2) 54
- (3) 72
- (4) 90

Options :

- 92090699649. 1
- 92090699650. 2
- 92090699651. 3
- 92090699652. 4

Question Number : 13 Question Id : 92090625219 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 is twice as good a workman as B. Together they finish a piece of work in 24 days.
In how many days B alone can finish the work?

- (1) 36
- (2) 54
- (3) 72
- (4) 90

Options :

- 92090699649. 1
- 92090699650. 2
- 92090699651. 3
- 92090699652. 4

Question Number : 14 Question Id : 92090625220 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 incomes of A and B are in the ratio 2:3 and their expenditures are in the ratio 4:5. If their savings are ₹ 9,000 and ₹ 17,500 respectively, then find the income of A.

- (1) ₹ 12,500
- (2) ₹ 25,000
- (3) ₹ 37,500
- (4) ₹ 50,000

Options :

- 92090699653. 1
- 92090699654. 2
- 92090699655. 3
- 92090699656. 4

Question Number : 14 Question Id : 92090625220 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 incomes of A and B are in the ratio 2:3 and their expenditures are in the ratio 4:5. If their savings are ₹ 9,000 and ₹ 17,500 respectively, then find the income of A.

- (1) ₹ 12,500
- (2) ₹ 25,000
- (3) ₹ 37,500
- (4) ₹ 50,000

Options :

- 92090699653. 1
- 92090699654. 2
- 92090699655. 3
- 92090699656. 4

Question Number : 15 Question Id : 92090625221 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

Nitin sells two articles for ₹ 4,000 each with no profit, no loss in the whole transaction. If one was sold at a gain 25%, then the other is sold at a loss of:

- (1) 20%
- (2) $18\frac{2}{9}\%$
- (3) $16\frac{2}{3}\%$
- (4) $15\frac{3}{4}\%$

Options :

- 92090699657. 1
- 92090699658. 2
- 92090699659. 3
- 92090699660. 4

Question Number : 15 Question Id : 92090625221 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

Nitin sells two articles for ₹ 4,000 each with no profit, no loss in the whole transaction. If one was sold at a gain 25%, then the other is sold at a loss of:

- (1) 20%
- (2) $18\frac{2}{9}\%$
- (3) $16\frac{2}{3}\%$
- (4) $15\frac{3}{4}\%$

Options :

- 92090699657. 1
- 92090699658. 2
- 92090699659. 3
- 92090699660. 4

Question Number : 16 Question Id : 92090625222 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 in a certain language, CHIRCAR is coded as 3214384 and CROADS is coded as 345867, how is the word HARIROADS coded in that language?

- (1) 812448567
- (2) 281448576
- (3) 284145867
- (4) 285154876

Options :

- 92090699661. 1
- 92090699662. 2
- 92090699663. 3
- 92090699664. 4

Question Number : 16 Question Id : 92090625222 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 in a certain language, CHIRCAR is coded as 3214384 and CROADS is coded as 345867, how is the word HARIROADS coded in that language?

- (1) 812448567
- (2) 281448576
- (3) 284145867
- (4) 285154876

Options :

- 92090699661. 1
- 92090699662. 2
- 92090699663. 3
- 92090699664. 4

Question Number : 17 Question Id : 92090625223 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 the angle between the hands of a clock when the time is 30 min past 3.

- (1) 65°
- (2) 75°
- (3) 85°
- (4) 105°

Options :

- 92090699665. 1
- 92090699666. 2
- 92090699667. 3
- 92090699668. 4

Question Number : 17 Question Id : 92090625223 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 the angle between the hands of a clock when the time is 30 min past 3.

- (1) 65°
- (2) 75°
- (3) 85°
- (4) 105°

Options :

92090699665. 1
92090699666. 2
92090699667. 3
92090699668. 4

Question Number : 18 Question Id : 92090625224 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 water – image of the given combination:

“V A Y U 8 4 3 6”

- (1)
- (2)
- (3)
- (4)

Options :

92090699669. 1
92090699670. 2
92090699671. 3
92090699672. 4

Question Number : 18 Question Id : 92090625224 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 water – image of the given combination:

“V A Y U 8 4 3 6”

- (1)
- (2)
- (3)
- (4)

Options :

92090699669. 1
92090699670. 2
92090699671. 3
92090699672. 4

Question Number : 19 Question Id : 92090625225 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 mirror image of the figure (X):

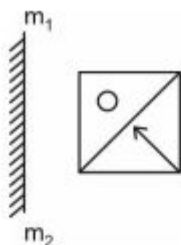


Figure (X)

- (1)
- (2)
- (3)
- (4)

Options :

92090699673. 1

92090699674. 2

92090699675. 3

92090699676. 4

Question Number : 19 Question Id : 92090625225 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 mirror image of the figure (X):

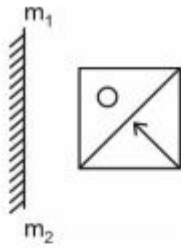


Figure (X)

- (1)
- (2)
- (3)
- (4)

Options :

- 92090699673. 1
- 92090699674. 2
- 92090699675. 3
- 92090699676. 4

Question Number : 20 Question Id : 92090625226 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): Hot air balloon rises up in sky, because hot air is less dense than cold air.

Reasons (R): Volume of a gas increases on heating.

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 :

92090699677. 1

92090699678. 2

92090699679. 3

92090699680. 4

Question Number : 20 Question Id : 92090625226 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): Hot air balloon rises up in sky, because hot air is less dense than cold air.

Reasons (R): Volume of a gas increases on heating.

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 :

92090699677. 1

92090699678. 2

92090699679. 3

92090699680. 4

Question Number : 21 Question Id : 92090625227 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

Golden Quadrilateral projects for the development of National Highways was initiated by _____

- (1) P.V. Narasimha Rao
- (2) I.K. Gujral
- (3) Manmohan Singh
- (4) Atal Bihari Vajpayee

Options :

- 92090699681. 1
- 92090699682. 2
- 92090699683. 3
- 92090699684. 4

Question Number : 21 Question Id : 92090625227 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

Golden Quadrilateral projects for the development of National Highways was initiated by _____

- (1) P.V. Narasimha Rao
- (2) I.K. Gujral
- (3) Manmohan Singh
- (4) Atal Bihari Vajpayee

Options :

- 92090699681. 1
- 92090699682. 2
- 92090699683. 3
- 92090699684. 4

Question Number : 22 Question Id : 92090625228 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 : Alauddin Khilji adopted the policy of blood and iron in tackling the mongols.

Statement II : Amir Khusrau and Mir Hassan Dehlvi were the poets of Alauddin Khilji court.

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 :

- 92090699685. 1
- 92090699686. 2
- 92090699687. 3
- 92090699688. 4

Question Number : 22 Question Id : 92090625228 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 : Alauddin Khilji adopted the policy of blood and iron in tackling the mongols.

Statement II : Amir Khusrau and Mir Hassan Dehlvi were the poets of Alauddin Khilji court.

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 :

- 92090699685. 1
- 92090699686. 2
- 92090699687. 3

92090699688. 4

Question Number : 23 Question Id : 92090625229 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 pairs is NOT properly matched?

- (1) Reliance – Mukesh Ambani
- (2) Wipro – R. Krishna Murthy
- (3) Airtel – Bharti Mittal
- (4) Nano car – Ratan Tata

Options :

- 92090699689. 1
- 92090699690. 2
- 92090699691. 3
- 92090699692. 4

Question Number : 23 Question Id : 92090625229 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 pairs is NOT properly matched?

- (1) Reliance – Mukesh Ambani
- (2) Wipro – R. Krishna Murthy
- (3) Airtel – Bharti Mittal
- (4) Nano car – Ratan Tata

Options :

- 92090699689. 1
- 92090699690. 2
- 92090699691. 3
- 92090699692. 4

Question Number : 24 Question Id : 92090625230 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 (Books)	List II (Author)
(A) Unhappy India	(I) Jawaharlal Nehru
(B) India Divided	(II) Lala Lajpat Rai
(C) The Discovery of India	(III) Jyotiba Phule
(D) Ghulam Giri	(IV) Rajendra Prasad

Choose the correct answer from the options given below:

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

Options :

92090699693. 1
92090699694. 2
92090699695. 3
92090699696. 4

Question Number : 24 Question Id : 92090625230 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 (Books)	List II (Author)
(A) Unhappy India	(I) Jawaharlal Nehru
(B) India Divided	(II) Lala Lajpat Rai
(C) The Discovery of India	(III) Jyotiba Phule
(D) Ghulam Giri	(IV) Rajendra Prasad

Choose the correct answer from the options given below:

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

Options :

92090699693. 1
92090699694. 2

92090699695. 3

92090699696. 4

Question Number : 25 Question Id : 92090625231 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

Instrument used to study the behavior of a vibrating string is _____.

- (1) Hygrometer
- (2) Sonometer
- (3) Barometer
- (4) Hydrometer

Options :

92090699697. 1

92090699698. 2

92090699699. 3

92090699700. 4

Question Number : 25 Question Id : 92090625231 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

Instrument used to study the behavior of a vibrating string is _____.

- (1) Hygrometer
- (2) Sonometer
- (3) Barometer
- (4) Hydrometer

Options :

92090699697. 1

92090699698. 2

92090699699. 3

92090699700. 4

Part B: Data Science Artificial Intelligence

Section Id :	920906500
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 :	920906812
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 26 Question Id : 92090625232 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 total number of subset of a finite set A has 56 more elements than the total number of subset of another finite set B. What is the number of elements in set A

1. 5
2. 6
3. 7
4. 8

Options :

92090699701. 1
92090699702. 2
92090699703. 3
92090699704. 4

Question Number : 26 Question Id : 92090625232 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 परिमित समुच्चय A में पुरे उपसमुच्चयों कि संख्या किसी दुसरे परिमित समुच्चय B में उपसमुच्चयों कि संख्या से 56 अधिक तत्व (एलिमेंट्स) हैं। समुच्चय A में तत्वों (एलिमेंट्स) की संख्या कितनी है?

1. 5
2. 6
3. 7
4. 8

Options :

92090699701. 1
92090699702. 2
92090699703. 3
92090699704. 4

Question Number : 27 Question Id : 92090625233 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 maximum number of different Boolean function involving n Boolean variables?

1. n^2
2. 2^n
3. 2^{2^n}
4. 2^{n^2}

Options :

92090699705. 1
92090699706. 2
92090699707. 3
92090699708. 4

Question Number : 27 Question Id : 92090625233 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

n बूलियन चरों (वैरिएबल्स) से कितने अधिकतम संख्या में अलग-अलग बूलियन फंक्शन बन सकते हैं?

1. n^2
2. 2^n
3. 2^{2^n}
4. 2^{n^2}

Options :

92090699705. 1
92090699706. 2
92090699707. 3
92090699708. 4

Question Number : 28 Question Id : 92090625234 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 cardinality of a set A is 4 and that of a set B is 3, then what is the cardinality of the set $A \Delta B$? where Δ is difference.

1. 1
2. 5
3. 7
4. can't be determined

Options :

92090699709. 1

92090699710. 2

92090699711. 3

92090699712. 4

Question Number : 28 Question Id : 92090625234 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 समुच्चय A की कार्डिनैलिटी 4 है और समुच्चय B की 3 है तो समुच्चय $A \Delta B$ की कार्डिनैलिटी कितनी होगी? जहाँ Δ एक अंतर (डिफरेंस) प्रतीक है।

1. 1
2. 5
3. 7
4. नहीं निकाल सकते।

Options :

92090699709. 1

92090699710. 2

92090699711. 3

92090699712. 4

Question Number : 29 Question Id : 92090625235 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 want to retain the first 4 bits of given string of 8 bits and complement the last 4 bits then the correct mask and the operation should be

1. XOR and 00001111
2. XOR and 11110000
3. AND and 00001111
4. OR and 11110000

Options :

92090699713. 1
92090699714. 2
92090699715. 3
92090699716. 4

Question Number : 29 Question Id : 92090625235 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

अगर आप पहले 4 बिट्स किसी दिए हुए 8 बिट्स के स्ट्रिंग को बनाए रखना चाहते हैं और अंतिम 4 बिट्स का पूरक (कमप्लिमेंट्स) लेते हैं तो सही मास्क और कार्यवाही (ऑपरेशन) क्या होगा?

1. XOR और 00001111
2. XOR और 11110000
3. AND और 00001111
4. OR और 11110000

Options :

92090699713. 1
92090699714. 2
92090699715. 3
92090699716. 4

Question Number : 30 Question Id : 92090625236 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 mapping $f: R \rightarrow R$ which is defined as $f(x) = \cos x$, $x \in R$ is

1. one- one only
2. onto only
3. neither one - one nor onto
4. one - one and onto

Options :

92090699717. 1
92090699718. 2
92090699719. 3
92090699720. 4

Question Number : 30 Question Id : 92090625236 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 मानचित्रण (मैपिंग) $f: R \rightarrow R$ जो कि परिभाषित है $f(x) = \cos x, x \in R$

1. वन-वन ऑनली
2. ऑनटो ऑनली
3. नाइदर वन-वन नॉर ऑनटो
4. वन-वन और ऑनटो

Options :

92090699717. 1
92090699718. 2
92090699719. 3
92090699720. 4

Question Number : 31 Question Id : 92090625237 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: Let a and b be integers, not both zero and let d be their greatest common divisor, then there are integers r and s such that $d = ra + sb$

Statement II: A pair, a,b of integers is relatively prime if and only if there are integers r and s such that $ra + sb = 1$

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 :

92090699721. 1
92090699722. 2
92090699723. 3

Question Number : 31 Question Id : 92090625237 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:

वाक्य I: माना a और b दो पूर्णांक (इन्टिजर) हैं, जहाँ दोनों शून्य नहीं हैं, और उनके महत्तम सामान्य भाजक है, तब r और s पूर्णांक इस प्रकार से हैं $d = ra + sb$

वाक्य II: a और b पूर्णांक के जोड़ा रिलेटिवली प्राईम होगा यदि और सिर्फ यदि पूर्णांक r और s इस प्रकार से हैं $ra + sb = 1$

उपर के वाक्य के आधार पर सबसे सही उत्तर चुनें।

1. दोनों वाक्य I और वाक्य II सही हैं।
2. दोनों वाक्य I और वाक्य II गलत हैं।
3. वाक्य I सही है और वाक्य II गलत है।
4. वाक्य I गलत है और वाक्य II सही है।

Options :

92090699721. 1

92090699722. 2

92090699723. 3

92090699724. 4

Question Number : 32 Question Id : 92090625238 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 $A = \{a, b, c\}$ and $R = \{(a,a), (a,b), (b,c), (b,b), (c,c), (c,a)\}$ is a binary relation on A then which one of the following is correct?

1. R is reflexive and symmetric but not transitive
2. R is reflexive and transitive but not symmetric
3. R is reflexive but neither symmetric nor transitive
4. R is reflexive, symmetric and transitive

Options :

92090699725. 1

92090699726. 2

92090699727. 3

92090699728. 4

Question Number : 32 Question Id : 92090625238 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 $A = \{a, b, c\}$ और $R = \{(a,a), (a,b), (b,c), (b,b), (c,c), (c,a)\}$ निम्न एक बाइनरी संबंध है तो निम्न में से कौन सही है?

1. R रिफ्लेक्सिव और सिमेट्रिक है पर ट्रांसिटिव नहीं है।
2. R रिफ्लेक्सिव और ट्रांसिटिव है पर बिमेट्रिक नहीं है।
3. R रिफ्लेक्सिव है पर ना तो सिमेट्रिक है और ना ही ट्रांसिटिव है।
4. R रिफ्लेक्सिव, सिमेट्रिक और ट्रांसिटिव है।

Options :

92090699725. 1
92090699726. 2
92090699727. 3
92090699728. 4

Question Number : 33 Question Id : 92090625239 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 a regular language?

1. $L = \{a^n b^l a^k : n = l \text{ or } l \neq k\}$
2. $L = \{a^n b^l : n \leq l\}$
3. $L = \{a^n b^l a^k : k \neq n + l\}$
4. $L = \{a^n b^m : n \geq 2, m \geq 3\}$

Options :

92090699729. 1
92090699730. 2
92090699731. 3
92090699732. 4

Question Number : 33 Question Id : 92090625239 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

इसमें से कौन एक रेगुलर लैंग्वेज है?

1. $L = \{a^n b^l a^k : n = l \text{ or } l \neq k\}$
2. $L = \{a^n b^l : n \leq l\}$
3. $L = \{a^n b^l a^k : k \neq n + l\}$
4. $L = \{a^n b^m : n \geq 2, m \geq 3\}$

Options :

92090699729. 1
92090699730. 2
92090699731. 3
92090699732. 4

Question Number : 34 Question Id : 92090625240 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 string does not belong to the set of strings represented by regular expression $(a+b)^*(ab+bba)$

1. ababababab
2. ababababbba
3. ababbbbb
4. ababaaaaaab

Options :

92090699733. 1
92090699734. 2
92090699735. 3
92090699736. 4

Question Number : 34 Question Id : 92090625240 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

इनमें से कौन-सा स्ट्रिंग दिए गये रेगुलर एक्सप्रेसन $(a+b)^*(ab+bba)$ से संबंध नहीं रखता।

1. ababababab
2. ababababbba
3. ababbbbb
4. Ababaaaaaab

Options :

- 92090699733. 1
- 92090699734. 2
- 92090699735. 3
- 92090699736. 4

Question Number : 35 Question Id : 92090625241 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

All regular, context free, context-sensitive, and recursive language are

- 1. Recursively enumerable
- 2. Non-recursively enumerable
- 3. Linear
- 4. Non- linear

Options :

- 92090699737. 1
- 92090699738. 2
- 92090699739. 3
- 92090699740. 4

Question Number : 35 Question Id : 92090625241 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

सारे रेगुलर काँटेकस्ट फ्री काँटेकस्ट सेन्सिटिव और रिकर्सिव भाषाएँ (लैंगवेजेज) होते हैं -

- 1. रिकर्सिव इनुमरेबल
- 2. वॉन रिकर्सिव इनुमरेबल
- 3. लिनीयर
- 4. नॉन लिनीयर

Options :

- 92090699737. 1
- 92090699738. 2
- 92090699739. 3
- 92090699740. 4

Question Number : 36 Question Id : 92090625242 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 context free grammar is in

$S \rightarrow AB$

$B \rightarrow CD$

$B \rightarrow Ad$

$B \rightarrow b$

$D \rightarrow AD$

$D \rightarrow d$

$A \rightarrow b$

$C \rightarrow a$

1. Chomsky Normal Form
2. Greibach Normal Form
3. Chomsky Normal Form and Greibach Normal Form
4. Neither chomsky nor Greibach Normal Form

Options :

92090699741. 1

92090699742. 2

92090699743. 3

92090699744. 4

Question Number : 36 Question Id : 92090625242 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 कॅंटेक्स्ट फ्री व्याकरण (ग्रामर) है -

$S \rightarrow AB$

$B \rightarrow CD$

$B \rightarrow AD$

$B \rightarrow b$

$D \rightarrow AD$

$D \rightarrow d$

$A \rightarrow b$

$C \rightarrow a$

1. चॉम्सकी नॉर्मल फॉर्म
2. ग्रीबेक नॉर्मल फॉर्म
3. चॉम्सकी नॉर्मल फॉर्म और ग्रीबेक फॉर्म
4. ना तो चॉम्सकी और ना ही ग्रीबेक नॉर्मल फॉर्म

Options :

92090699741. 1
92090699742. 2
92090699743. 3
92090699744. 4

Question Number : 37 Question Id : 92090625243 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: $L = \{a^n b^n c^n : n \geq 0\}$ is a context free language.

Statement II: $L = \{ww : w \in \{a,b\}^*\}$ is not context free.

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 :

92090699745. 1
92090699746. 2
92090699747. 3
92090699748. 4

Question Number : 37 Question Id : 92090625243 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:

वाक्य I : $L = \{a^n b^n c^n : n \geq 0\}$ एक कॉन्टेक्स्ट फ्री भाषा है।

वाक्य II: $L = \{ww : w \in \{a,b\}^*\}$ एक कॉन्टेक्स्ट फ्री भाषा नहीं है।

ऊपर दिए वाक्यों के आधार पर सबसे सही उत्तर चुनें।

1. दोनों **वाक्य I** और **वाक्य II** सही हैं।
2. दोनों **वाक्य I** और **वाक्य II** गलत है।
3. **वाक्य I** सही है और **वाक्य II** गलत है।
4. **वाक्य I** गलत है और **वाक्य II** सही है।

Options :

- 92090699745. 1
- 92090699746. 2
- 92090699747. 3
- 92090699748. 4

Question Number : 38 Question Id : 92090625244 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: Non- deterministic pushdown automata can be designed for the given language $L=\{x^n y^n z^n; n \geq 1\}$

Statement II: Non-deterministic pushdown automata can be constructed for all context-free languages

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 :

- 92090699749. 1
- 92090699750. 2
- 92090699751. 3
- 92090699752. 4

Question Number : 38 Question Id : 92090625244 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 वाक्य दिए गए:

अधिकथन A: नॉन डिटरमिनिस्टिक पुशडाउन ऑटोमेटा दिए हुए भाषा के लिए डिजाइन कर सकते $L = \{x^n y^n z^n : n \geq 1\}$

कारण R: नॉन डिटरमिनिस्टिक पुशडाउन ऑटोमेटा सभी कॉन्टेक्ट फ्री भाषाओं के लिए बना सकते।

उपर दिए कथनों के आधार पर सबसे सही उत्तर चुनें।

1. दोनों **A** और **R** सही है और **R, A** का सही व्याख्या है।
2. दोनों **A** और **R** सही है लेकिन **R, A** का सही व्याख्या नहीं है।
3. **A** सही है लेकिन **R** सही नहीं है।
4. **A** सही नहीं है लेकिन **R** सही है।

Options :

92090699749. 1
92090699750. 2
92090699751. 3
92090699752. 4

Question Number : 39 Question Id : 92090625245 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 numbers of 1^s in Binary representation of $(3 \times 4096 + 12 \times 256 + 5 \times 16 + 3)$ are

1. 8
2. 9
3. 10
4. 12

Options :

92090699753. 1
92090699754. 2
92090699755. 3
92090699756. 4

Question Number : 39 Question Id : 92090625245 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

बाइनरी निरूपण $(3 \times 4096 + 12 \times 256 + 5 \times 16 + 3)$ में 1's की संख्या कितनी हैं?

1. 8
2. 9
3. 10
4. 12

Options :

92090699753. 1
92090699754. 2
92090699755. 3
92090699756. 4

Question Number : 40 Question Id : 92090625246 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

Identify the operation which is commutative but not associative?

1. OR
2. NOR
3. EX-OR
4. NAND

Options :

92090699757. 1
92090699758. 2
92090699759. 3
92090699760. 4

Question Number : 40 Question Id : 92090625246 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 ऑपरेशन पहचानें जो कि कम्यूटेटिव है लेकिन एसोसिएटिव नहीं है?

1. OR
2. NOR
3. EX-OR
4. NAND

Options :

92090699757. 1
92090699758. 2
92090699759. 3

92090699760. 4

Question Number : 41 Question Id : 92090625247 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 decimal number equivalent of $(4057.06)_8$ is

1. 2095.75
2. 2095.075
3. 2095.937
4. 2095.0937

Options :

92090699761. 1
92090699762. 2
92090699763. 3
92090699764. 4

Question Number : 41 Question Id : 92090625247 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

डेसिमल संख्या जो $(4057.06)_8$ के बराबर हो।

1. 2095.75
2. 2095.075
3. 2095.937
4. 2095.0937

Options :

92090699761. 1
92090699762. 2
92090699763. 3
92090699764. 4

Question Number : 42 Question Id : 92090625248 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 value of X in the following equation?

$$(11101101000)_2 + (765)_{16} = (X)_8$$

1. 3545
2. 7315
3. 1285
4. 4580

Options :

92090699765. 1
92090699766. 2
92090699767. 3
92090699768. 4

Question Number : 42 Question Id : 92090625248 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

निचे दिए समीकरण में X का मान क्या होगा?

$$(11101101000)_2 + (765)_{16} = (X)_8$$

1. 3545
2. 7315
3. 1285
4. 4580

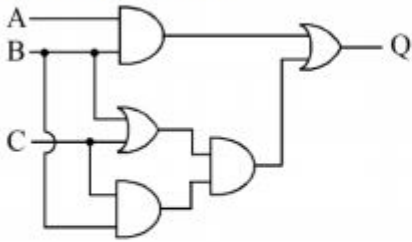
Options :

92090699765. 1
92090699766. 2
92090699767. 3
92090699768. 4

Question Number : 43 Question Id : 92090625249 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 simplified form of Boolean expression represented by Q in the following circuit?



1. $(A + B) \cdot (B \cdot C) + (B + C)$
2. $AB + AC + BC$
3. $AB + BC$
4. $AB + (B+C) (BC)$

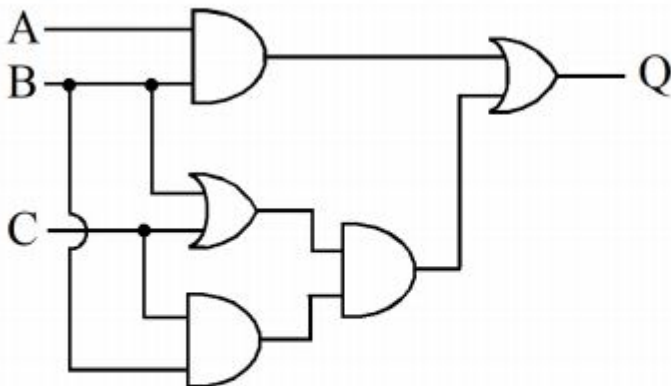
Options :

92090699769. 1
 92090699770. 2
 92090699771. 3
 92090699772. 4

Question Number : 43 Question Id : 92090625249 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

Q के द्वारा दर्शाए गए बूलियन एक्सप्रेसन का सरलतम रूप (फॉर्म) क्या होगा?



1. $(A + B) \cdot (B \cdot C) + (B + C)$
2. $AB + AC + BC$
3. $AB + BC$
4. $AB + (B+C) (BC)$

Options :

92090699769. 1
 92090699770. 2
 92090699771. 3

Question Number : 44 Question Id : 92090625250 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.	1 Zettabyte	I.	1024 Megabytes
B.	1 Terabyte	II.	1024*1024 Petabytes
C.	1 Gigabyte	III.	1024*1024 Megabytes
D.	1 Petabyte	IV.	1024 Terabytes

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

Options :

92090699773. 1
92090699774. 2
92090699775. 3
92090699776. 4

Question Number : 44 Question Id : 92090625250 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

लिस्ट I का लिस्ट II के साथ संबंध स्थापित करें :

लिस्ट I		लिस्ट II	
A.	1 जेटाबाइट	I.	1024 मेगाबाइट्स
B.	1 टेटाबाइट	II.	1024*1024 पेटाबाइट्स
C.	1 गीगाबाइट	III.	1024*1024 मेगाबाइट
D.	1 पेटाबाइट	IV.	1024 टेराबाइट्स

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

Options :

92090699773. 1

92090699774. 2

92090699775. 3

92090699776. 4

Question Number : 45 Question Id : 92090625251 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

Calculate the capacity of a two-platter disk unit with 18000 cylinders, an average of 520 sectors per track, and a sector size of 512 Bytes

1. 17.85 GB

2. 18.85 GB

3. 16.58 GB

4. 15.58 GB

Options :

92090699777. 1

92090699778. 2

92090699779. 3

92090699780. 4

Question Number : 45 Question Id : 92090625251 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 दो प्लेटर डिस्क यूनिट जिसके साथ 18000 सिलिन्डर जिसके औसतन 520 सेक्टर प्रति ट्रैक और एक सेक्टर साइज 512 बाइट के क्षमता की गणना करें।

1. 17.85 GB

2. 18.85 GB

3. 16.58 GB

4. 15.58 GB

Options :

92090699777. 1

92090699778. 2

92090699779. 3

92090699780. 4

Question Number : 46 Question Id : 92090625252 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

Disk cache is a _____.

1. HDD
2. ROM
3. Random Access Memory
4. Nonvolatile memory

Options :

92090699781. 1
92090699782. 2
92090699783. 3
92090699784. 4

Question Number : 46 Question Id : 92090625252 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

डिस्क कैचे होता है _____

1. HDD
2. ROM
3. रैंडम एक्सेस मेमोरी
4. नॉन वोलेटाइल मेमोरी

Options :

92090699781. 1
92090699782. 2
92090699783. 3
92090699784. 4

Question Number : 47 Question Id : 92090625253 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 memory system with 32-bit virtual addresses uses 4KB pages and a 128MB byte-addressable main memory. What is the size of physical address space in pages?

1. 16 K
2. 8 K
3. 32 K
4. 64 K

Options :

- 92090699785. 1
- 92090699786. 2
- 92090699787. 3
- 92090699788. 4

Question Number : 47 Question Id : 92090625253 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 मेमोरी सिस्टम 32 बिट वर्चुअल एड्रेस जो 4KB पेजों का उपयोग करता है और 128MB बाइट एड्रेसेबल मेन मेमोरी का भी उपयोग करता है। पेजों के संदर्भ में फिजिकल एड्रेस स्पेस का साइज क्या होगा?

- 1. 16 K
- 2. 8 K
- 3. 32 K
- 4. 64 K

Options :

- 92090699785. 1
- 92090699786. 2
- 92090699787. 3
- 92090699788. 4

Question Number : 48 Question Id : 92090625254 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 role of Input / output controller?

- 1. Isolate the CPU and memory from details of I/O device operation
- 2. Converts data formats
- 3. Facilitates expansion in capabilities in I/O devices but impacts CPU design
- 4. Manages the speed mismatch between I/O devices

Options :

- 92090699789. 1
- 92090699790. 2
- 92090699791. 3
- 92090699792. 4

Question Number : 48 Question Id : 92090625254 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 कौन-सा इनपुट/आउटपुट कंट्रोलर का भूमिका है?

1. सीपीयू और मेमोरी को आइ/ओ यंत्र ऑपरेसन के विवरण से अलग रखना।
2. डेटा फॉरमेट्स रूपांतरण
3. आइ/ओ यंत्रों में कपाबीलिटी वृद्धि को फेसिलिटेड करता है लेकिन सीपीयू डिजाइन पर असर करता है।
4. आइ/ओ यंत्रों के प्रति गति असमानता को प्रबंधित करता है।

Options :

92090699789. 1
92090699790. 2
92090699791. 3
92090699792. 4

Question Number : 49 Question Id : 92090625255 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.	Implied Addressing Mode	I.	Operand is taken from a specified register
B.	Base Addressing Mode	II.	Adding an offset to the contents of a specified register
C.	Register Mode	III.	operand comes from a predefined place
D.	Immediate Mode	IV.	operand is in instruction itself

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

Options :

92090699793. 1
92090699794. 2
92090699795. 3
92090699796. 4

Question Number : 49 Question Id : 92090625255 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 मिलान करें ।

लिस्ट I	लिस्ट II
A. इम्प्लाइड एड्रेसिंग मोड	I. ऑपरेंड स्पेसिफाइड रजिस्टर से लिया जाता है।
B. बेस एड्रेसिंग मोड	II. स्पेसिफाइड रजिस्टर के कंटेंट्स में ऑफसेट जोड़ना
C. रजिस्टर मोड	III. पहले से निर्धारित स्थान से ऑपरेंड आता है।
D. इमिडिएट मोड	IV. ऑपरेंड इन्स्ट्रक्सन में ही निहित होता है।

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

Options :

92090699793. 1
92090699794. 2
92090699795. 3
92090699796. 4

Question Number : 50 Question Id : 92090625256 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 write-through policy for cache memory, modified cache blocks are copied back to main memory in their entirety if and when they must be replaced in the cache.

Statement II: In writeback policy, cache words are immediately forwarded to main memory

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 :

- 92090699797. 1
- 92090699798. 2
- 92090699799. 3
- 92090699800. 4

Question Number : 50 Question Id : 92090625256 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 वाक्य दिए गए हैं :

वाक्य I: राइट थ्रू पॉलिसी में कैचे मेमोरी के लिए मोडिफाइड कैचे ब्लाक्स पुनः मेन मेमोरी में कॉपी होते यदि जब वो जरूर कैचे में स्थानांतरित होते हैं।

वाक्य II: राइट बैक पॉलिसी में कैचे शब्द तुरंत मेन मेमोरी में फॉरवर्ड करते हैं। सबसे सही उत्तर चुनें।

1. दोनों वाक्य I और वाक्य II सही हैं।
2. वाक्य I और वाक्य II गलत है।
3. वाक्य I सही है लेकिन वाक्य II सही है।
4. वाक्य I गलत है लेकिन वाक्य II सही है।

Options :

- 92090699797. 1
- 92090699798. 2
- 92090699799. 3
- 92090699800. 4

Question Number : 51 Question Id : 92090625257 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 mode permits relocation without any change in the code

1. Indirect addressing
2. Indexed addressing
3. PC relative addressing
4. base register addressing

Options :

- 92090699801. 1
- 92090699802. 2
- 92090699803. 3
- 92090699804. 4

Question Number : 51 Question Id : 92090625257 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

कोड में कोइ सुधार किए बिना कौन-सा मोड पूनर्वास (रीलोकेसन) की अनुमति देता है।

1. इनडाइरेक्ट एड्रेसिंग
2. इनडेक्स एड्रेसिंग
3. पीसी रीलेटिव एड्रेसिंग
4. बेस रजिस्टर एड्रेसिंग

Options :

92090699801. 1

92090699802. 2

92090699803. 3

92090699804. 4

Question Number : 52 Question Id : 92090625258 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 facilitates transfer of bulk data from hard disk to main memory with the highest throughput?

1. DMA based I/o transfer
2. Polling based I/o transfer
3. Interrupt driven I/o transfer
4. Programmed I/o transfer

Options :

92090699805. 1

92090699806. 2

92090699807. 3

92090699808. 4

Question Number : 52 Question Id : 92090625258 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

हार्ड डिस्क से मेमोरी में उच्चतम ध्रुपुट से बल्क डेटा स्थानांतरण करने के लिए निम्नलिखित में से कौन-सा स्थानांतरण विधि उपयोग होता?

1. डीएमए आधारित आइ/ऑ स्थानांतरण
2. पॉलिंग आधारित आइ/ओ स्थानांतरण
3. इनटरप्ट ड्रिवेन आइ/ओ स्थानांतरण
4. प्रोग्राम्ड आइ/ओ स्थानांतरण

Options :

- 92090699805. 1
- 92090699806. 2
- 92090699807. 3
- 92090699808. 4

Question Number : 53 Question Id : 92090625259 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 stack pointer in a microprocessor is a

1. 16 bit register that point to stack
2. 32 bit accumulator
3. Memory address is the stack
4. Flag register used for the stack

Options :

- 92090699809. 1
- 92090699810. 2
- 92090699811. 3
- 92090699812. 4

Question Number : 53 Question Id : 92090625259 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

स्टैक प्वाइन्टर माइक्रोप्रोसेसर में क्या होता है?

1. 16 बिट रजिस्टर जो स्टैक को प्वाइन्ट करता है।
2. 32 बिट एक्क्यूमलेटर
3. मेमोरी एड्रेस स्टैक है।
4. फ्लैग रजिस्टर स्टैक के लिए उपयोग किया जाता ।

Options :

- 92090699809. 1

92090699810. 2

92090699811. 3

92090699812. 4

Question Number : 54 Question Id : 92090625260 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 interrupts is non-maskable in 8085 microprocessor?

1. RST6.5
2. TRAP
3. RST 5.5
4. INTR

Options :

92090699813. 1

92090699814. 2

92090699815. 3

92090699816. 4

Question Number : 54 Question Id : 92090625260 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

इनमें से कौन सा रुकावट (इन्टरप्ट) नॉन मास्केबल 8085 माइक्रोप्रोसेसर में होता है।

1. RST6.5
2. TRAP
3. RST 5.5
4. INTR

Options :

92090699813. 1

92090699814. 2

92090699815. 3

92090699816. 4

Question Number : 55 Question Id : 92090625261 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 processor provide 1 MB memory

1. 16 bit 8086 and 8088
2. 32 bit 8086 and 8088
3. 64 bit 8086 and 8088
4. 8 bit 8086 and 8088

Options :

92090699817. 1
92090699818. 2
92090699819. 3
92090699820. 4

Question Number : 55 Question Id : 92090625261 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

कौन-सा प्रोसेसर 1 MB मेमोरी उपलब्ध कराता है।

1. 16 bit 8086 और 8088
2. 32 bit 8086 और 8088
3. 64 bit 8086 और 8088
4. 8 bit 8086 और 8088

Options :

92090699817. 1
92090699818. 2
92090699819. 3
92090699820. 4

Question Number : 56 Question Id : 92090625262 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.	Stack overflow	I.	Software interrupt
B.	Timer	II.	Internal interrupt
C.	Invalid opcode	III.	External interrupt
D.	Superior call	IV.	Machine Check interrupt

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

Options :

92090699821. 1
92090699822. 2
92090699823. 3
92090699824. 4

Question Number : 56 Question Id : 92090625262 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

लिस्ट I से लिस्ट II का मिलान करें -

लिस्ट I		लिस्ट II	
A.	स्टैक ओवरफ्लो	I.	साफ्टवेयर इनटरप्ट
B.	टाइमर	II.	इनटर्नल इनटरप्ट
C.	इनवैलिड ऑपकोड	III.	एक्सटर्नल इनटरप्ट
D.	सूपीरीयर कॉल	IV.	मशिन चेक इनटरप्ट

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

Options :

92090699821. 1
92090699822. 2
92090699823. 3
92090699824. 4

Question Number : 57 Question Id : 92090625263 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 will be the output of the following program assuming that the array begins at location 1002?

```
#include<stdio.h>
void main()
{int a[2] [3] [4] ={
{1,2,3,4,5,6,7,8,9,1,1,2},
{2,1,4,7,6,7,8,9,0,0,0,0}} ;
printf("/n%u%u%u%u%d", a, *a, **a, ***a);
```

1. 1002 1002 1004 1
2. 1002 1004 1006 1
3. 1002 1004 1004 1
4. 1002 1002 1002 1

Options :

92090699825. 1

92090699826. 2

92090699827. 3

92090699828. 4

Question Number : 57 Question Id : 92090625263 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 प्रोग्राम का आउटपुट क्या होगा ?
ऐसे 1002 जगह से शुरू होता है।

```
#include<stdio.h>
void main()
{int a[2] [3] [4] ={
{1,2,3,4,5,6,7,8,9,1,1,2},
{2,1,4,7,6,7,8,9,0,0,0,0}} ;
printf("/n%u%u%u%u%d", a, *a, **a, ***a);
```

1. 1002 1002 1004 1
2. 1002 1004 1006 1
3. 1002 1004 1004 1
4. 1002 1002 1002 1

Options :

92090699825. 1

92090699826. 2

92090699827. 3

92090699828. 4

Question Number : 58 Question Id : 92090625264 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 technique using which a computer periodically collects all the deleted space onto the free storage list is called

1. Garbage collection
2. Garbage compaction
3. Linked list
4. Free storage

Options :

92090699829. 1

92090699830. 2

92090699831. 3

92090699832. 4

Question Number : 58 Question Id : 92090625264 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 तकनिक जिसमें संगणक (कंप्यूटर) समय समय पर डिलिटेड स्पेस को संग्रहित करता है फ्री स्टोरेज लिस्ट में उसको क्या कहते हैं?

1. गारबेज कलेक्सन
2. गारबेज कमपैक्सन
3. लिक्ड लिस्ट
4. फ्री स्टोरेज

Options :

92090699829. 1

92090699830. 2

92090699831. 3

92090699832. 4

Question Number : 59 Question Id : 92090625265 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 a linked list, a pointer of the last node contains a special value, called

1. NULL Pointer
2. ZERO Pointer
3. Link Pointer
4. Next Pointer

Options :

92090699833. 1
92090699834. 2
92090699835. 3
92090699836. 4

Question Number : 59 Question Id : 92090625265 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

लिन्कड लिस्ट में आखीरी नोड का प्वाइंटर स्पेशल वैल्यु रखता है उसे क्या कहते हैं?

1. नल प्वाइंटर
2. जीरो प्वाइंटर
3. लिंक प्वाइंटर
4. नेक्स्ट प्वाइंटर

Options :

92090699833. 1
92090699834. 2
92090699835. 3
92090699836. 4

Question Number : 60 Question Id : 92090625266 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 other is labelled as **Reason R**

Assertion A: Figure 1 depicts the initial AVL tree, while figure 2 shows the balanced AVL tree after inserting 36

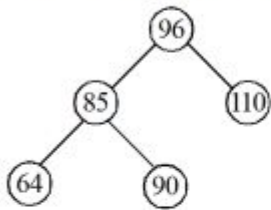


Figure 1

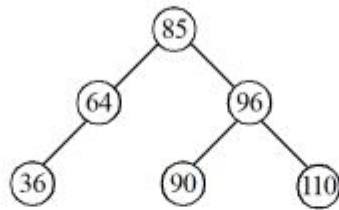


Figure 2

Reason R: After inserting 36 in the AVL tree of figure 1, LL rotation is required to balance the AVL tree.

Note: LL rotation represent inserted node is in the left subtree of left subtree of reference node 96

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 and **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 :

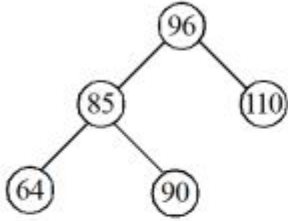
- 92090699837. 1
- 92090699838. 2
- 92090699839. 3
- 92090699840. 4

Question Number : 60 Question Id : 92090625266 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

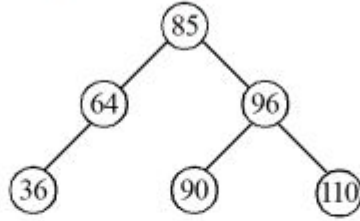
Correct Marks : 4 Wrong Marks : 1

निचे दो वाक्य दिए गए हैं : जहाँ **A** अभिकथन और **R** कारण है ।

अभिकथन A: चित्र 1 प्रारंभिक AVL ट्री दर्शाता है जबकि चित्र 2 36 को समाहित करने के बाद का बैलेन्सड AVL ट्री दर्शाता है।



चित्र 1



चित्र 2

कारण R: 36 को AVL ट्री में समाहित करने के बाद LL रोटेशन की जरूरत पड़ती है AVL ट्री की बैलेन्स करने के लिए ।

नोट: LL रोटेशन रिफरेंस नोड 96 के बाएँ सबट्री के बाएँ सबट्री में समाहित नोड को दर्शाता है।

सबसे सही उत्तर को चुनें।

1. दोनों **A** और **R** सही है और **R** सही व्याख्या है।
2. दोनों **A** और **R** सही है लेकिन **R** सही व्याख्या नहीं है।
3. **A** सही है लेकिन **R** सही नहीं है।
4. **A** सही नहीं है लेकिन **R** सही है।

Options :

92090699837. 1
92090699838. 2
92090699839. 3
92090699840. 4

Question Number : 61 Question Id : 92090625267 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. All AVL trees are binary search trees, but not vice-versa
- B. There are four types of rotations to balance the AVL trees.
- C. Four types of traversals are possible on tree data structure
- D. The smallest elements in binary search is the right most element.
- E. The time complexity of binary sort algorithm is $O(\log n)$

choose the correct answer from the options given below:

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

Options :

- 92090699841. 1
- 92090699842. 2
- 92090699843. 3
- 92090699844. 4

Question Number : 61 Question Id : 92090625267 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. सारे AVL ट्री बाइनरी सर्च ट्री होते हैं लेकिन इसका विपरीत सही नहीं है।
- B. AVL ट्री बैलेंस करने के लिए चार प्रकार के रोटेशन होते हैं।
- C. ट्री डेटा स्ट्रक्चर में चार प्रकार के ट्रैवर्सल संभव है।
- D. बाइनरी सर्च में सबसे छोटा एलिमेंट सबसे दाएँ एलिमेंट होता है।
- E. बाइनरी सॉर्ट एल्गोरिदम का समय जटिलता $O(\log n)$ होता है।

सही उत्तर चुनें:

- 1. A,B,C,D और E सही हैं।
- 2. A,B और C सही हैं।
- 3. B,C और D सही हैं।
- 4. B,C,D और E सही हैं।

Options :

- 92090699841. 1
- 92090699842. 2
- 92090699843. 3
- 92090699844. 4

Question Number : 62 Question Id : 92090625268 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.	printf("%d", size of (3.14));	I.	5
B.	Union A {intx, float y,} printf("%d", size (of (A)));	II.	4
C.	struct B {char x; double y;}; printf("%d", size of (B));	III.	2
D.	printf("%d", size of ('1'));	IV.	8

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

Options :

92090699845. 1
92090699846. 2
92090699847. 3
92090699848. 4

Question Number : 62 Question Id : 92090625268 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

लिस्ट I से लिस्ट II का मिलान करें ।

लिस्ट I		लिस्ट II	
A.	printf("%d", size of (3.14));	I.	5
B.	Union A {intx, float y,} printf("%d", size (of (A)));	II.	4
C.	struct B {char x; double y;}; printf("%d", size of (B));	III.	2
D.	printf("%d", size of ('1'));	IV.	8

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

Options :

92090699845. 1
92090699846. 2
92090699847. 3

Question Number : 63 Question Id : 92090625269 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 other is labelled as **Reason R**

Assertion A: Memory to the array elements can be allocated statically.

Reason R: Memory to the linked list is allocated dynamically but its size can't be increased or decreased

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 and **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 :

92090699849. 1

92090699850. 2

92090699851. 3

92090699852. 4

Question Number : 63 Question Id : 92090625269 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 वाक्य दिए गए हैं : **A अभिकथन** है और **R कारण** है।

अभिकथन A: ऐरे एलिमेंट्स को मेमोरी स्थैतिक आबंटन कर सकते हैं।

कारण R: लिंकड लिस्ट को मेमोरी गतिशिल (डायनेमिकली) आबंटन कर सकते लेकिन इसका आकार घटाया या बढ़ाया जा सकता।

सही उत्तर को चुनें।

1. दोनों **A** और **R** सही है और **R** सही व्याख्या है।
2. दोनों **A** और **R** सही है लेकिन **R** सही व्याख्या **नहीं** है।
3. **A** सही है लेकिन **R** सही नहीं है।
4. **A** सही नहीं है लेकिन **R** सही है।

Options :

92090699849. 1

92090699850. 2

92090699851. 3

92090699852. 4

Question Number : 64 Question Id : 92090625270 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 correct solution of given recurrence.

$$T(n) = 9T\left(\frac{n}{3}\right) + n$$

1. $\theta(n^2)$
2. $\theta(n^3)$
3. $\theta(n \log n)$
4. $\theta(n \log n^2)$

Options :

92090699853. 1

92090699854. 2

92090699855. 3

92090699856. 4

Question Number : 64 Question Id : 92090625270 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 रीकरेन्स समीकरण का सही समाधान है।

$$T(n) = 9T\left(\frac{n}{3}\right) + n$$

1. $\theta(n^2)$
2. $\theta(n^3)$
3. $\theta(n \log n)$
4. $\theta(n \log n^2)$

Options :

92090699853. 1

92090699854. 2

92090699855. 3

92090699856. 4

Question Number : 65 Question Id : 92090625271 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

Consider table with 100 slots. collision are resolved using chaining, assuming simple uniform hashing what is the probability that the first 3 slots are unfilled after first 3 insertion

1. $(97 \times 97 \times 97)/100^3$
2. $(99 \times 98 \times 97)/100^3$
3. $(97 \times 96 \times 95)/100^3$
4. $(97 \times 96 \times 95) / \lfloor 3 \times 100^3$

Options :

92090699857. 1
92090699858. 2
92090699859. 3
92090699860. 4

Question Number : 65 Question Id : 92090625271 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 टेबल 100 स्लॉट का विचार कीजिए। साधारण यूनिफॉर्म हैसिंग को मानते हुए कॉलिजन को सुलझाते है। पहले 3 स्लाट्स के नहीं भरने के क्या संभावना होगी जब हम तीन (3) इनसरसन करते हैं?

1. $(97 \times 97 \times 97) / 100^3$
2. $(99 \times 98 \times 97) / 100^3$
3. $(97 \times 96 \times 95) / 100^3$
4. $(97 \times 96 \times 95) / \lfloor 3 \times 100^3$

Options :

92090699857. 1
92090699858. 2
92090699859. 3
92090699860. 4

Question Number : 66 Question Id : 92090625272 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 maximum height of any AVL tree with 7 nodes? assume that the height of a tree with single node is 0

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

Options :

92090699861. 1
92090699862. 2
92090699863. 3
92090699864. 4

Question Number : 66 Question Id : 92090625272 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 7 नोड वाले AVL ट्री की सर्वाधिक ऊँचाई क्या होगी? मानों की एक नोड के ट्री की ऊँचाई 0 है ?

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

Options :

92090699861. 1
92090699862. 2
92090699863. 3
92090699864. 4

Question Number : 67 Question Id : 92090625273 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.	2^{n+1}	I.	$\omega(\lfloor n \rfloor)$
B.	2^{2n}	II.	$O(2^n)$
C.	$2^{n/2}$	III.	$\omega(2^n)$
D.	n^n	IV.	$O(2^n)$

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

Options :

92090699865. 1
92090699866. 2
92090699867. 3
92090699868. 4

Question Number : 67 Question Id : 92090625273 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

लिस्ट I की लिस्ट II से मिलान करें।

लिस्ट I		लिस्ट II	
A.	2^{n+1}	I.	$\omega(\lfloor n \rfloor)$
B.	2^{2n}	II.	$O(2^n)$
C.	$2^{n/2}$	III.	$\omega(2^n)$
D.	n^n	IV.	$O(2^n)$

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

Options :

92090699865. 1
92090699866. 2
92090699867. 3
92090699868. 4

Question Number : 68 Question Id : 92090625274 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 a file allocation system, which of the following allocation scheme (s) can be used if no external fragmentation is allowed ?

- A. Contiguous
- B. Linked
- C. Indexed
- D. Stack
- E. Hash

Choose the correct answer from the options given below:

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

Options :

92090699869. 1

92090699870. 2

92090699871. 3

92090699872. 4

Question Number : 68 Question Id : 92090625274 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

अगर एक्सटर्नल फ्रेगमेंटेशन की अनुमति ना हो तो फाइल सिस्टम में कौन-सा एलोकेशन स्किम उपयोग होगा ?

- A. कंटिगुअस
- B. लिंकड
- C. इंडेक्स्ड
- D. स्टैक
- E. हैस

सही उत्तर चुनें।

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

Options :

92090699869. 1

92090699870. 2

92090699871. 3

92090699872. 4

Question Number : 69 Question Id : 92090625275 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 number of bits in the tag field of an address is

1. 11
2. 14
3. 16
4. 27

Options :

92090699873. 1

92090699874. 2

92090699875. 3

92090699876. 4

Question Number : 69 Question Id : 92090625275 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 एड्रेस के टैग फिल्ड में बिट्स की संख्या कितनी होती है?

1. 11
2. 14
3. 16
4. 27

Options :

92090699873. 1

92090699874. 2

92090699875. 3

92090699876. 4

Question Number : 70 Question Id : 92090625276 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

Consider the following table of arrival time and burst time for three process

P_0 , P_1 and P_2

Process	Arrival Time	Burst Time
P_0	0 ms	9 ms
P_1	1 ms	4 ms
P_2	2 ms	9 ms

The preemptive shortest job first scheduling algorithm is used. Scheduling is carried out only at arrival or completion of process. What is the average waiting time for the three process

1. 5.0 ms
2. 4.33 ms
3. 6.33 ms
4. 7.33 ms

Options :

92090699877. 1
92090699878. 2
92090699879. 3
92090699880. 4

Question Number : 70 Question Id : 92090625276 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

तीन प्रोसेस P_0 , P_1 और P_2 के एराइवल समय और बर्स्ट समय के तालिका पर विचार कीजिए ।

प्रोसेस	एराइवल समय	बर्स्ट समय
P_0	0 ms	9 ms
P_1	1 ms	4 ms
P_2	2 ms	9 ms

प्रोसेस के आगमन या समापन पर प्रियम्पटिव सारटेस्ट जाँब फर्स्ट सेडूलिंग अलगोरिधम उपयोग किया जाता है तो तीनों प्रोसेसों के लिए ऐवरेज वेटिंग टाइम क्या होगा ?

1. 5.0 ms
2. 4.33 ms
3. 6.33 ms
4. 7.33 ms

Options :

92090699877. 1
92090699878. 2

92090699879. 3

92090699880. 4

Question Number : 71 Question Id : 92090625277 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 the page fault service time be 10 ms in a computer with average memory access time being 20 ns. If one page fault is generated for every 10^6 memory access, what is the effective access time for the memory?

1. 21 ns
2. 30 ns
3. 23 ns
4. 35 ns

Options :

92090699881. 1

92090699882. 2

92090699883. 3

92090699884. 4

Question Number : 71 Question Id : 92090625277 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 किसी कंप्यूटर में पेज फॉल्ट सर्विस टाइम 10 ms और उसका एवरेज मेमोरी एक्सेस टाइम 20 ns है। अगर हर 10^6 मेमोरी एक्सेस के बाद एक पेज जेनेरेट होता है तो इफेक्टिव मेमोरी एक्सेस टाइम क्या होगा?

1. 21 ns
2. 30 ns
3. 23 ns
4. 35 ns

Options :

92090699881. 1

92090699882. 2

92090699883. 3

92090699884. 4

Question Number : 72 Question Id : 92090625278 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.	Page replacement Policy	I.	Circular wait
B.	Deadlock	II.	Page fault
C.	Scheduling	III.	Shortest job first
D.	Dijkstra is banking algorithm	IV.	Deadlock avoidance

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

Options :

92090699885. 1
92090699886. 2
92090699887. 3
92090699888. 4

Question Number : 72 Question Id : 92090625278 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

लिस्ट I से लिस्ट II का मिलान करें।

लिस्ट I		लिस्ट II	
A.	पेज रिप्लेसमेंट पॉलिसी	I.	सर्कूलर वेट
B.	डेडलॉक	II.	पेज फॉल्ट
C.	सेड्यूलिंग	III.	सोर्टेस्ट जॉब फर्स्ट
D.	डिजकास्ता बैंकिंग अलोगरिधम	IV.	डेडलॉक अवोइडेंटस

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

Options :

92090699885. 1
92090699886. 2
92090699887. 3
92090699888. 4

Question Number : 73 Question Id : 92090625279 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/ are shared by all threads in a process.

- A. Program Counter
- B. Stack
- C. Address space
- D. Registers
- E. Queue

Choose the correct answer from the options given below:

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

Options :

- 92090699889. 1
- 92090699890. 2
- 92090699891. 3
- 92090699892. 4

Question Number : 73 Question Id : 92090625279 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

प्रोसेस में सभी थ्रेड्स द्वारा साझा निम्नलिखित में से कौन करता/करते हैं?

- A. प्रोग्राम काउंटर
- B. स्टैक
- C. एड्रेस स्पेस
- D. रजिस्टर
- E. क्यू

सही उत्तर चुनें।

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

Options :

- 92090699889. 1
- 92090699890. 2

92090699891. 3

92090699892. 4

Question Number : 74 Question Id : 92090625280 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 size of the window for host A if the value of rwnd (Receiver Window) is 3000 bytes and the value of Cwnd (Congestion Window) is 3500 bytes?

1. 3000 bytes
2. 3500 bytes
3. 500 bytes
4. 6500 bytes

Options :

92090699893. 1

92090699894. 2

92090699895. 3

92090699896. 4

Question Number : 74 Question Id : 92090625280 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

विंडो का साइज होस्ट A के लिए क्या है? अगर रीसीवर विंडो (rwnd) का मान 3000 बाइट्स है और कनजेशन विंडो (Cwnd) का मान 3500 बाइट्स है?

1. 3000 बाइट्स
2. 3500 बाइट्स
3. 500 बाइट्स
4. 6500 बाइट्स

Options :

92090699893. 1

92090699894. 2

92090699895. 3

92090699896. 4

Question Number : 75 Question Id : 92090625281 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 sub network address if the destination address is 200.45.34.56 and the sub net mask is 255. 255. 240. 0?

1. 200.45.34.0
2. 255.255.0.0
3. 200.45.32.0
4. 255.255.192.0

Options :

92090699897. 1
92090699898. 2
92090699899. 3
92090699900. 4

Question Number : 75 Question Id : 92090625281 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

अगर डेस्टिनेसन एड्रेस 200.45.34.56 है और सबनेट मास्क 255. 255. 240. 0 है तो संबनेटवर्क एड्रेस क्या होगा?

1. 200.45.34.0
2. 255.255.0.0
3. 200.45.32.0
4. 255.255.192.0

Options :

92090699897. 1
92090699898. 2
92090699899. 3
92090699900. 4

Question Number : 76 Question Id : 92090625282 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 true about RARP

1. RARP finds the physical address for a machine that only knows only its logical address
2. RARP finds the logical address for a machine that only knows its physical address
3. RARP request packets are unicast
4. RARP reply packets are broadcast

Options :

- 92090699901. 1
- 92090699902. 2
- 92090699903. 3
- 92090699904. 4

Question Number : 76 Question Id : 92090625282 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 कौन सा RARP के लिए सही है।

- 1. RARP किसी मशीन की फीजिकल एड्रेस पता लगाता है जो मशीन सिर्फ लॉजिकल एड्रेस जानती है।
- 2. RARP किसी मशीन की लॉजिकल एड्रेस पता लगाता है जो मशीन सिर्फ फिजीकल एड्रेस जानती है।
- 3. RARP पैकेट्स के यूनीकास्ट का अनुरोध करता है।
- 4. RARP पैकेट्स के ब्रॉडकास्ट का जवाब देता है।

Options :

- 92090699901. 1
- 92090699902. 2
- 92090699903. 3
- 92090699904. 4

Question Number : 77 Question Id : 92090625283 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

Gigabit ethernet has a data rate of

- 1. 100 Mbps
- 2. 10 Mbps
- 3. 1000 Mbps
- 4. 1 Mbps

Options :

- 92090699905. 1
- 92090699906. 2
- 92090699907. 3
- 92090699908. 4

Question Number : 77 Question Id : 92090625283 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

गीगाबाइट इथरनेट के डाटा रेट क्या होता है?

1. 100 Mbps
2. 10 Mbps
3. 1000 Mbps
4. 1 Mbps

Options :

92090699905. 1

92090699906. 2

92090699907. 3

92090699908. 4

Question Number : 78 Question Id : 92090625284 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 other is labelled as **Reason R**

Assertion A: A packet has arrived with an M bit value of 1. This fragment can be the first one or a middle one but not the last one.

Reason R: If we know the offset value, we can easily find out whether it is in first one or middle one.

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 and **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 :

92090699909. 1

92090699910. 2

92090699911. 3

92090699912. 4

Question Number : 78 Question Id : 92090625284 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 वाक्य दिए गए हैं। जहाँ **A अभिकथन** और **R कारण** है।

अभिकथन A: एक पैकेट M बिट और मान 1 के साथ पहुँचा है।

कारण R: अगर हमलोग ऑफसेट वेल्यु जानते हैं तो हमलोग आसानी से पता लगा सकते हैं कि यह पहला है या बीच का ।

सही उत्तर लिखें।

1. दोनों **A** और **R** सही है और **R** सही व्याख्या है।
2. दोनों **A** और **R** सही है लेकिन **R** सही व्याख्या नहीं है।
3. **A** सही है लेकिन **R** गलत है।
4. **A** गलत है लेकिन **R** सही है।

Options :

- 92090699909. 1
- 92090699910. 2
- 92090699911. 3
- 92090699912. 4

Question Number : 79 Question Id : 92090625285 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

Identify the correct statements (s)

- A. The window scale factor is a multiplier that increases the window size.
- B. TCP provides process-to-process, full duplex and connection oriented service
- C. DVMRP is a unicast routing protocol that uses the link state routing.
- D. Anonymous FTP provides a method for the general public to access filps on remote site

Choose the correct answer from the options given below:

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

Options :

- 92090699913. 1
- 92090699914. 2
- 92090699915. 3
- 92090699916. 4

Question Number : 79 Question Id : 92090625285 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 वाक्यों को पहचानें।

- A. विंडो स्केल फैक्टर एक मल्टिप्लायर है जो विंडो साइज बढ़ाता है।
- B. TCP प्रोसेस से प्रोसेस फुल डुपलेक्स और कनेक्सन ओरिएन्टेड सेवा प्रदान करता है।
- C. DVMRP एक यूनीकास्ट राउटिंग प्रोटोकॉल है जो की लिंक स्टेट राउटिंग उपयोग करता है।
- D. अज्ञात FTP सामान्य लोग के लिए रिमोट साइट पर फाइल एक्सेस करने का तरीका प्रदान करता है।

सही उत्तर चुनें ।

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

Options :

92090699913. 1

92090699914. 2

92090699915. 3

92090699916. 4

Question Number : 80 Question Id : 92090625286 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 test which was designed to provide a satisfactory operational definition of intelligence is called

- 1. Machine Test
- 2. Computer Test
- 3. Turing Test
- 4. Robotics Test

Options :

92090699917. 1

92090699918. 2

92090699919. 3

92090699920. 4

Question Number : 80 Question Id : 92090625286 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 परिक्षण जिसे बुद्धि की एक सतोषजनक संचालनात्मक परिभाषा प्रदान करने के लिए डिजाइन किया गया था, कहलाता है।

1. मशीन टेस्ट
2. कम्प्यूटर टेस्ट
3. ट्यूरिंग टेस्ट
4. रोबोटिक्स टेस्ट

Options :

92090699917. 1
92090699918. 2
92090699919. 3
92090699920. 4

Question Number : 81 Question Id : 92090625287 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 $f(x) = x$ is my friend, and $P(x) = x$ is perfect, then the correct logical translation of the statement, "Some of my friends are not perfect" is

1. $\forall x (f(x) \wedge \neg p(x))$
2. $\exists x (f(x) \wedge \neg p(x))$
3. $\neg (f(x) \wedge \neg p(x))$
4. $\exists x (\neg f(x) \wedge \neg p(x))$

Options :

92090699921. 1
92090699922. 2
92090699923. 3
92090699924. 4

Question Number : 81 Question Id : 92090625287 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 $f(x) = x$ मेरा दोस्त है, और $P(x) = x$ पूर्ण है। तब सही तार्किक अनुवाद इस वाक्य का क्या होगा? "कुछ मेरे दोस्त पूर्ण नहीं है"।

1. $\forall x (f(x) \wedge \neg p(x))$
2. $\exists x (f(x) \wedge \neg p(x))$
3. $\neg (f(x) \wedge \neg p(x))$
4. $\exists x (\neg f(x) \wedge \neg p(x))$

Options :

92090699921. 1
92090699922. 2
92090699923. 3
92090699924. 4

Question Number : 82 Question Id : 92090625288 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 AI technique enables the computer to understand the associations and relationships between objects and events?

1. Heuristic processing
2. Cognitive Science
3. Relative Symbolism
4. Pattern matching

Options :

92090699925. 1
92090699926. 2
92090699927. 3
92090699928. 4

Question Number : 82 Question Id : 92090625288 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

कौन सा AI तकनिक कंप्यूटर को ऑब्जेक्ट्स और घटनाओं के संगठन और रिलेशन को समझने की क्षमता प्रदान करता है?

1. ह्यूरिस्टिक प्रोसेसिंग
2. कॉग्निटिव साईंस
3. रिलेटिव सिम्बालिज्म
4. पैटर्न मैचिंग

Options :

- 92090699925. 1
- 92090699926. 2
- 92090699927. 3
- 92090699928. 4

Question Number : 83 Question Id : 92090625289 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 are the two types of search used to solve a problem in AI.

1. Un-informed Search and Informed Search
2. Linear Search and Binary search
3. Depth-first Search and Breadth-first Search
4. Heuristic Search and Iterative Search

Options :

- 92090699929. 1
- 92090699930. 2
- 92090699931. 3
- 92090699932. 4

Question Number : 83 Question Id : 92090625289 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

AI में प्रॉब्लम को हल करने के लिए कौन से दो खोज उपयोग किए जाते हैं?

1. अनइनफार्मड सर्च और इनफार्मड सर्च।
2. लिनियर सर्च और बाइनरी सर्च।
3. डेपथ फर्स्ट सर्च और ब्रेडथ फर्स्ट सर्च।
4. ह्यूरीस्टिक सर्च और इटरेटिव सर्च।

Options :

- 92090699929. 1

92090699930. 2

92090699931. 3

92090699932. 4

Question Number : 84 Question Id : 92090625290 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 are the components of an intelligent agent?

1. Perception, Environment, Agent and Goals
2. Sensors, Actuators, Environment and Goals
3. Sensors, Effectors , Environment and Goals
4. Perception, Actuators, Environment and Goals

Options :

92090699933. 1

92090699934. 2

92090699935. 3

92090699936. 4

Question Number : 84 Question Id : 92090625290 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

इन्टेलिजेंट एजेंट के अवयव (कॉम्पोनेन्ट्स) क्या हैं?

1. परसेप्शन, इनवायरमेंट, एजेंट और गोल्स।
2. सेंसर, एक्ज्यूटेटरस, इनवायरमेंट और गोल्स।
3. सेंसर, इफेक्टर, इनवायरमेंट और गोल्स।
4. परसेप्शन, एक्ज्यूटेटरस, इनवायरमेंट और गोल्स।

Options :

92090699933. 1

92090699934. 2

92090699935. 3

92090699936. 4

Question Number : 85 Question Id : 92090625291 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 Artificial Intelligence, knowledge can be represented as

- A. Predicate Logic
- B. Propositional Logic
- C. Compound Logic
- D. Machine Logic

Choose the correct answer from the options given below:

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

Options :

- 92090699937. 1
- 92090699938. 2
- 92090699939. 3
- 92090699940. 4

Question Number : 85 Question Id : 92090625291 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

आर्टिफिसियल इंटेलिजेन्स में ज्ञान (नॉलेज) दर्शाता है –

- A. प्रीडिकेट लॉजिक
- B. प्रोपोजिसनल लॉजिक
- C. कम्पाउंड लॉजिक
- D. मशिन लॉजिक

सही उत्तर चुनें।

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

Options :

- 92090699937. 1
- 92090699938. 2
- 92090699939. 3
- 92090699940. 4

Question Number : 86 Question Id : 92090625292 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.	Expert System	I.	Pragmatics
B.	Planning	II.	Resolution
C.	Prolog	III.	Mean-end- analysis
D.	Natural language Processing	IV.	Explanation Facility

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

Options :

92090699941. 1
92090699942. 2
92090699943. 3
92090699944. 4

Question Number : 86 Question Id : 92090625292 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

लिस्ट I का लिस्ट II से मिलान -

लिस्ट I		लिस्ट II	
A.	विशेषज्ञ प्रणाली	I.	प्रेगमेटिग
B.	योजना	II.	रिजॉलुयशन
C.	प्रोलोग	III.	एनालिसिस
D.	नेचुरल लेंगवेज प्रोसेसिंग	IV.	व्याख्या सुविधा

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

Options :

92090699941. 1
92090699942. 2
92090699943. 3
92090699944. 4

Question Number : 87 Question Id : 92090625293 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 symmetric cipher model?

1. Caesar Cipher
2. Playfair Cipher
3. Hill Cipher
4. Transposition Cipher

Options :

- 92090699945. 1
- 92090699946. 2
- 92090699947. 3
- 92090699948. 4

Question Number : 87 Question Id : 92090625293 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 सममित सिफर मॉडल नहीं है?

1. सिजर सिफर
2. प्लेफेयर सिफर
3. हिल सिफर
4. ट्रांसपोजिसन सिफर

Options :

- 92090699945. 1
- 92090699946. 2
- 92090699947. 3
- 92090699948. 4

Question Number : 88 Question Id : 92090625294 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 a classical encryption technique

1. AES
2. RSA
3. Caesar Cipher
4. Twofish

Options :

- 92090699949. 1

92090699950. 2

92090699951. 3

92090699952. 4

Question Number : 88 Question Id : 92090625294 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 क्लासिकल एन्क्रिप्शन प्रक्रिया है

1. AES
2. RSA
3. सिजर सिफर
4. टूफिश

Options :

92090699949. 1

92090699950. 2

92090699951. 3

92090699952. 4

Question Number : 89 Question Id : 92090625295 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 feature of playfair Cipher

1. Substitution of plain text letters with Cipher text letters pair
2. Keyboard based encryption
3. No character repetition
4. Transposition of the plain text letter

Options :

92090699953. 1

92090699954. 2

92090699955. 3

92090699956. 4

Question Number : 89 Question Id : 92090625295 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 प्लेफ्येर सिफर का फिचर नहीं है

1. सिफर टेक्स्ट अक्षर का सिफर टेक्स्ट अक्षर के जोड़ों के साथ प्रतिस्थापन
2. कीबोर्ड बेस्ड एन्क्रिप्शन
3. कोई वर्ण दोहराव नहीं
4. प्लेन टेक्स्ट अक्षर का स्थानांतरण

Options :

- 92090699953. 1
- 92090699954. 2
- 92090699955. 3
- 92090699956. 4

Question Number : 90 Question Id : 92090625296 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: The playfair cipher uses 7×7 matrix of letters to encrypt messages.

Statement II: Hill cipher is a type of block cipher

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 :

- 92090699957. 1
- 92090699958. 2
- 92090699959. 3
- 92090699960. 4

Question Number : 90 Question Id : 92090625296 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: प्लेफेयर सिफर 7×7 मैट्रिक्स के अक्षरों।

कथन II: हिल सिफर ब्लॉक सिफर का प्रकार है।

उपरोक्त कथनों के आलोक में, सही उत्तर का चयन कीजिए।

1. **कथन I** और **कथन II** दोनों सही हैं।
2. **कथन I** और **कथन II** दोनों गलत हैं।
3. **कथन I** सही है पर **कथन II** गलत है।
4. **कथन I** गलत है पर **कथन II** सही है।

Options :

92090699957. 1

92090699958. 2

92090699959. 3

92090699960. 4

Question Number : 91 Question Id : 92090625297 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 an example of a classification problem

1. Predicting the price of a house
2. Detecting spam emails
3. Forecasting the stock market
4. Analyzing customer churn

Options :

92090699961. 1

92090699962. 2

92090699963. 3

92090699964. 4

Question Number : 91 Question Id : 92090625297 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 क्लासीफिकेशन समस्या का उदाहरण है

1. घर के मूल्य का अनुमान लगाना
2. स्पैम emails का पता लगाना
3. शेयर बाजार की भविष्यवाणी
4. ग्राहक मंथन का विश्लेषण

Options :

- 92090699961. 1
- 92090699962. 2
- 92090699963. 3
- 92090699964. 4

Question Number : 92 Question Id : 92090625298 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 correct about F1-score

1. It is 1.0 for perfect classifier and 0.5 for worst case
2. It is 1.0 for perfect classifier and 0.0 for worst case
3. It is 0.5 for perfect classifier and 0.5 for worst case
4. It is 0.0 for perfect classifier and 1.0 for worst case

Options :

- 92090699965. 1
- 92090699966. 2
- 92090699967. 3
- 92090699968. 4

Question Number : 92 Question Id : 92090625298 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

F1 स्कोर के बारे में निम्नलिखित में से कौन सही है

1. यह सही वर्गीकारक के लिए 1.0 और खराब केस (case) के लिए 0.5 है।
2. यह सही वर्गीकारक के लिए 1.0 और खराब केस (case) के लिए 0.0 है।
3. यह सही वर्गीकारक के लिए 0.5 और खराब केस (case) के लिए 0.5 है।
4. यह सही वर्गीकारक के लिए 0.0 और खराब केस (case) के लिए 1.0 है।

Options :

- 92090699965. 1

92090699966. 2

92090699967. 3

92090699968. 4

Question Number : 93 Question Id : 92090625299 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

F1- score is used in binary classifiers. F1 can be defined as

1. $F_1 = \frac{precision+recall}{2 \times precision \times recall}$

2. $F_1 = (precision+recall) \times 2$

3. $F_1 = \frac{2 \times precision \times recall}{precision+recall}$

4. $F_1 = \frac{4 \times precision+recall}{precision \times recall}$

Options :

92090699969. 1

92090699970. 2

92090699971. 3

92090699972. 4

Question Number : 93 Question Id : 92090625299 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

F1- स्कोर बाइनरी क्लासीफायरस में उपयोग होता है।

1. $F_1 = \frac{precision+recall}{2 \times precision \times recall}$

2. $F_1 = (precision+recall) \times 2$

3. $F_1 = \frac{2 \times precision \times recall}{precision+recall}$

4. $F_1 = \frac{4 \times precision+recall}{precision \times recall}$

Options :

- 92090699969. 1
- 92090699970. 2
- 92090699971. 3
- 92090699972. 4

Question Number : 94 Question Id : 92090625300 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

Geometric means to compute G-score is

1. $G = \sqrt{precision+recall}$
2. $G = \sqrt{\frac{2 \times precision \times recall}{precision+recall}}$
3. $G = \sqrt{2 \times precision \times recall}$
4. $G = \sqrt{precision \times recall}$

Options :

- 92090699973. 1
- 92090699974. 2
- 92090699975. 3
- 92090699976. 4

Question Number : 94 Question Id : 92090625300 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

ज्यामितिक माध्य G-स्कोर की गणना के लिए है

1. $G = \sqrt{precision+recall}$
2. $G = \sqrt{\frac{2 \times precision \times recall}{precision+recall}}$
3. $G = \sqrt{2 \times precision \times recall}$
4. $G = \sqrt{precision \times recall}$

Options :

- 92090699973. 1

92090699974. 2

92090699975. 3

92090699976. 4

Question Number : 95 Question Id : 92090625301 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 other is labelled as **Reason R**

Assertion A: Advantage of hierarchical clustering over k-means clustering is that your clusters can be of any size or shape.

Reason R: Disadvantage of hierarchical clustering is that there is no natural way to assign a new point to an existing cluster.

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 correct but **R** is not correct
4. **A** is not correct but **R** is correct

Options :

92090699977. 1

92090699978. 2

92090699979. 3

92090699980. 4

Question Number : 95 Question Id : 92090625301 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 गे हैं : एक **अभिकथन A** से अंकित है और दूसरा **तर्क R** से **अभिकथन A**: हिरारिकल क्लसटरिंग का लाभ k -मिन्स की तुलना में यह है आपका क्लस्टर किसी भी आकार का हो सकता है।

तर्क R: हिरारिकल क्लसटरिंग का नुकसान यह है कि मौजूदा क्लस्टर को नया बिंदु निर्दिष्ट करने का कोई तरीका नहीं है।

उपरोक्त कथनों के आलोक में सही उत्तर का चयन कीजिए।

1. **A** और **R** दोनों सही है और **R, A** की सही व्याख्या है।
2. **A** और **R** दोनों सही है और **R, A** की सही व्याख्या नहीं है।
3. **A** सही है पर **R** सही नहीं है।
4. **A** सही नहीं है पर **R** सही है।

Options :

92090699977. 1
92090699978. 2
92090699979. 3
92090699980. 4

Question Number : 96 Question Id : 92090625302 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 other is labelled as **Reason R**

Assertion A: Hierarchical clustering is a general class of algorithms sharing a common structure.

Reason R: Hierarchical clustering is not Agglomerative clustering

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 correct but **R** is not correct
4. **A** is not correct but **R** is correct

Options :

92090699981. 1
92090699982. 2
92090699983. 3
92090699984. 4

Question Number : 96 Question Id : 92090625302 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 वाक्य दिए गए हैं : **A** अभिकथन है और **R** कारण है।

अभिकथन A: हाइरारकियल क्लसटरिंग अलगोरिधम का एक सामान्य प्रकार है जो सार्वजनिक संरचना को साझा करता है।

कारण R: हाइरारकियल क्लसटरिंग एग्लोमरेटिव क्लसटरिंग नहीं है।
सही उत्तर चुनें।

1. दोनों **A** और **R** सही है और **R** सही व्याख्या है **A** का ।
2. दोनों **A** और **R** सही है लेकिन **R** सही व्याख्या नहीं है **A** का ।
3. **A** सही है लेकिन **R** सही नहीं है।
4. **A** सही नहीं है लेकिन **R** सही है।

Options :

92090699981. 1
92090699982. 2
92090699983. 3
92090699984. 4

Question Number : 97 Question Id : 92090625303 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 other is labelled as **Reason R**

Assertion A: K- means clustering starts with d- dimensional space.

Reason R: It partitions them into compact and overlapping clusters.

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 :

92090699985. 1
92090699986. 2
92090699987. 3
92090699988. 4

Question Number : 97 Question Id : 92090625303 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 वाक्य दिए गए हैं : **A** अभिकथन है और **R** कारण है।

अभिकथन A: K- मिनस क्लस्टरिंग d-डाइमेन्सनल स्पेस से शुरू होता है।

कारण R: यह उनको कामपैक्ट और ओवरलैपिंग क्लस्टरों में विभाजित करता है।
सही उत्तर चुनें ।

1. दोनों **A** और **R** सही है और **R, A** का सही व्याख्या है।
2. दोनों **A** और **R** सही है लेकिन **R, A** का सही व्याख्या नहीं है।
3. **A** सही है लेकिन **R** गलत है।
4. **A** लगत है लेकिन **R** सही है।

Options :

- 92090699985. 1
- 92090699986. 2
- 92090699987. 3
- 92090699988. 4

Question Number : 98 Question Id : 92090625304 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 other is labelled as **Reason R**

Assertion A: There is difference between clustering and dimensionality reduction.

Reason R: Clustering is generally done in order to reveal the structure of the data, but dimensionality reduction is often motivated mostly by computational concerns.

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 :

- 92090699989. 1
- 92090699990. 2
- 92090699991. 3

Question Number : 98 Question Id : 92090625304 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 वाक्य दिए गए हैं : **A अभिकथन** है और **R कारण** है।

अभिकथन A: क्लस्टरिंग और डाइमेंसलिटी रिडक्सन में अंतर होता है।

कारण R: क्लस्टरिंग एक क्रम में सामान्यतः किया जाता है, लेकिन डाइमेंसलिटी संगणकिय सोच से प्रायः प्राप्ति होता है।

सही उत्तर चुनें ।

1. दोनों **A** और **R** सही हैं और **R, A** का सही व्याख्या है।
2. दोनों **A** और **R** सही हैं लेकिन **R, A** का सही व्याख्या नहीं है।
3. **A** सही है, **R** गलत है।
4. **A** गलत है, **R** सही है।

Options :

92090699989. 1

92090699990. 2

92090699991. 3

92090699992. 4

Question Number : 99 Question Id : 92090625305 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 average case complexity of Selection sort, Quick sort and Radix sort is respectively;

1. $O(n^2)$, $O(n^2)$, $O(n \log_2 n)$
2. $O(n^2)$, $O(n \log_2 n)$, $O(n \log_2 n)$
3. $O(n \log_2 n)$, $O(n^2)$, $O(n^2)$
4. $O(n \log_2 n)$, $O(n \log_2 n)$, $O(n \log_2 n)$

Options :

92090699993. 1

92090699994. 2

92090699995. 3

92090699996. 4

Question Number : 99 Question Id : 92090625305 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

औसत केस जटिलता सेलेक्सन सॉर्ट, क्रिक सॉर्ट और रैडिक्स सॉर्ट का क्रमशः है -

1. $O(n^2)$, $O(n^2)$, $O(n \log_2 n)$
2. $O(n^2)$, $O(n \log_2 n)$, $O(n \log_2 n)$
3. $O(n \log_2 n)$, $O(n^2)$, $O(n^2)$
4. $O(n \log_2 n)$, $O(n \log_2 n)$, $O(n \log_2 n)$

Options :

92090699993. 1

92090699994. 2

92090699995. 3

92090699996. 4

Question Number : 100 Question Id : 92090625306 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

Apply the master theorem on $T(n) = 8T\left(\frac{n}{2}\right) + n^3$

1. $O(n^2)$
2. $O(n^3)$
3. $O(n^3 \log_2 n)$,
4. $O(n \log_2 n)$

Options :

92090699997. 1

92090699998. 2

92090699999. 3

920906100000. 4

Question Number : 100 Question Id : 92090625306 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

मास्टर थियोरम लागू करें

$$T(n) = 8T\left(\frac{n}{2}\right) + n^3$$

1. $O(n^2)$
2. $O(n^3)$
3. $O(n^3 \log_2 n)$,
4. $O(n \log_2 n)$

Options :

92090699997. 1
92090699998. 2
92090699999. 3
920906100000. 4