

Common University Entrance Test (PG)

CUET PG 2023 Question Paper

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Question Paper Name :	Chemical thermal Polymer Engineering Eng 07th June 2023 Shift 1
Subject Name :	Chemical thermal Polymer Engineering Eng
Creation Date :	2023-06-07 15:01:45
Duration :	120
Total Marks :	400
Display Marks:	Yes

Chemical thermal Polymer Engineering

Group Number :	1
Group Id :	68634066
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 :	686340131
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 :	686340202
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Id : 6863406572 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

LAPLOSHKA was one of the meanest men I have ever met, and quite one of the most entertaining. He said horrid things about other people in such a charming way that one forgave him for the equally horrid things he said about oneself behind one's back. hating anything in the way of ill-natured gossip ourselves, we are always grateful to those who do it for us and do it well . And Laploshka did it really well.

Naturally Laploshka had a large circle of acquaintances, and as he exercised some care in their selection it followed that an appreciable proportion were men whose bank balances enabled them to acquiesce indulgently in his rather one-sided views on hospitality. Thus , although possessed of only moderate means, he was able to live comfortably within his income, and still more comfortably within those of various tolerantly disposed associates.

But towards the poor or to those of the same limited resources as himself his attitude was one of watchful anxiety: he seemed to be haunted by a besetting fear lest some fraction of a shilling or franc, or whatever the prevailing coinage might be, should be diverted from his pocket or service into that of a hard-up companion.

A two-franc cigar would be cheerfully offered to a wealthy patron ,on the principle of doing evil that good may come ,but I have known him indulge in agonies of perjury rather than admit the incriminating possession of a copper coin when change was needed to tip a waiter. The coin would have been duly returned at the earliest opportunity- he would have taken means to ensure against forgetfulness on the part of the borrower - but accidents might happen, and even the temporary estrangement from his penny or sou was a calamity to be avoided .

The knowledge of this amiable weakness offered a perpetual temptation to play upon Laploshka's fears of involuntary generosity. To offer him a lift in a cab and pretend not to have enough money to pay the fare, to fluster him with a request for a sixpence when his hand was full of silver just received in change ,these were a few of the petty torments that ingenuity prompted as occasion afforded. To do justice to Laploshka's resourcefulness it must be admitted that he always emerged somehow or other from the most embarrassing dilemma without in any way compromising his reputation for saying "No". But the gods send opportunities at some time to most men ,and mine came one evening when Laploshka and I were supping together in a cheap boulevard restaurant. (Except when he was the bidden guest of some one with an irreproachable income, Laploshka was wont to curb his appetite for high living ;on such fortunate occasions he let it go on an easy snaffle.) At the conclusion of the meal a somewhat urgent messsage called me away and without heeding my companion's agitated protest, I called back cruelly, "Pay my share; I'll settle with you tomorrow." Early on the morrow Laploshka hunted me down by instinct as I walked along a side street that I hardly ever frequented . He had the air of a man who had not slept.

"You owe me two francs from last night," was his breathless greeting.

Sub questions

Question Number : 1 Question Id : 6863406573 Question Type : MCQ Option Shuffling : No 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 acquaintances of Laploshka accepted his one-sided views on hospitality because :

1. They had great admiration for Laploshka, the charm
2. They had ample bank-balance to indulge an entertainer like Laploshka
3. They had a great sense of sympathy for Laploshka who was not so nice
4. They wanted to flaunt their richness in front of Laploshka

Options :

68634026001. 1

68634026002. 2

68634026003. 3

68634026004. 4

Question Number : 2 Question Id : 6863406574 Question Type : MCQ Option Shuffling : No 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 knowledge of this amicable weakness offered a perpetual temptation to play upon Laploshka's fears of involuntary generosity :

The underlined phrase refers to:

1. Laploshka's inclination to form friendships with affluent men.
2. Laploshka's habit of lying when the borrower asked for money.
3. Laploshka's inability to part with his money and his obsession to secure it.
4. Laploshka's principle of doing evil that good may result .

Options :

68634026005. 1

68634026006. 2

68634026007. 3

68634026008. 4

Question Number : 3 Question Id : 6863406575 Question Type : MCQ Option Shuffling : No 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 inferred from the excerpt.

A. The author wanted to inflict petty torments on Laploshka for fun.

B. Laploshka chose to befriend the affluent and steered clear of the poor.

C. Laploshka curbed his appetite when dining with rich friends.

D. Laploshka was haunted by the fear of losing his two franks of the author.

E. The author was a cruel man who intended to torture Laploshka.

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

Options :

68634026009. 1

68634026010. 2
68634026011. 3
68634026012. 4

Question Number : 4 Question Id : 6863406576 Question Type : MCQ Option Shuffling : No 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 the expressions in list I with their meaning/extension in list II

Match List I with List II

LIST I		LIST II	
A.	haunted by a besetting fear	I.	pursued me till he caught me
B.	Gods send opportunities to most men	II.	to trap Laploshka into involuntary generosity
C.	hunted me down	III.	estrangement from his penny to the advantage of someone poor
D.	perpetual temptation	IV.	the author's chance to sup with Laploshka at a boulevard restaurant.

Choose the correct answer from the options given below:

1. A-III ; B-I ;C-II ; D-IV

2. A-III ; B-IV ; C-I ; D-II

3. A-II ; B-III ; C-IV ; D-I

4. A-I ; B-II ; C-III ; D-IV

Options :
68634026013. 1
68634026014. 2
68634026015. 3
68634026016. 4

Question Number : 5 Question Id : 6863406577 Question Type : MCQ Option Shuffling : No 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 author's tone in the passage is :

1. humorous

2. serious

3. pedautic

4. harsh

Options :
68634026017. 1

68634026018. 2
68634026019. 3
68634026020. 4

Question Id : 6863406572 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

LAPLOSHKA was one of the meanest men I have ever met, and quite one of the most entertaining. He said horrid things about other people in such a charming way that one forgave him for the equally horrid things he said about oneself behind one's back. hating anything in the way of ill-natured gossip ourselves, we are always grateful to those who do it for us and do it well . And Laploshka did it really well.

Naturally Laploshka had a large circle of acquaintances, and as he exercised some care in their selection it followed that an appreciable proportion were men whose bank balances enabled them to acquiesce indulgently in his rather one-sided views on hospitality. Thus , although possessed of only moderate means, he was able to live comfortably within his income, and still more comfortably within those of various tolerantly disposed associates.

But towards the poor or to those of the same limited resources as himself his attitude was one of watchful anxiety: he seemed to be haunted by a besetting fear lest some fraction of a shilling or franc, or whatever the prevailing coinage might be, should be diverted from his pocket or service into that of a hard-up companion.

A two-franc cigar would be cheerfully offered to a wealthy patron ,on the principle of doing evil that good may come ,but I have known him indulge in agonies of perjury rather than admit the incriminating possession of a copper coin when change was needed to tip a waiter. The coin would have been duly returned at the earliest opportunity- he would have taken means to ensure against forgetfulness on the part of the borrower - but accidents might happen, and even the temporary estrangement from his penny or sou was a calamity to be avoided .

The knowledge of this amiable weakness offered a perpetual temptation to play upon Laploshka's fears of involuntary generosity. To offer him a lift in a cab and pretend not to have enough money to pay the fare, to fluster him with a request for a sixpence when his hand was full of silver just received in change ,these were a few of the petty torments that ingenuity prompted as occasion afforded. To do justice to Laploshka's resourcefulness it must be admitted that he always emerged somehow or other from the most embarrassing dilemma without in any way compromising his reputation for saying "No". But the gods send opportunities at some time to most men ,and mine came one evening when Laploshka and I were supping together in a cheap boulevard restaurant. (Except when he was the bidden guest of some one with an irreproachable income. Laploshka was wont to curb his appetite for high living ;on such fortunate occasions he let it go on an easy snaffle.) At the conclusion of the meal a somewhat urgent messsage called me away and without heeding my companion's agitated protest, I called back cruelly, "Pay my share; I'll settle with you tomorrow." Early on the morrow Laploshka hunted me down by instinct as I walked along a side street that I hardly ever frequented . He had the air of a man who had not slept.

"You owe me two francs from last night," was his breathless greeting.

Sub questions

Question Number : 1 Question Id : 6863406573 Question Type : MCQ Option Shuffling : No 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 acquaintances of Laploshka accepted his one-sided views on hospitality because :

1. They had great admiration for Laploshka, the charm
2. They had ample bank-balance to indulge an entertainer like Laploshka
3. They had a great sense of sympathy for Laploshka who was not so nice
4. They wanted to flaunt their richness in front of Laploshka

Options :
68634026001. 1
68634026002. 2
68634026003. 3
68634026004. 4

Question Number : 2 Question Id : 6863406574 Question Type : MCQ Option Shuffling : No 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 knowledge of this amicable weakness offered a perpetual temptation to play upon Laploshka's fears of involuntary generosity :

The underlined phrase refers to:

1. Laploshka's inclination to form friendships with affluent men.
2. Laploshka's habit of lying when the borrower asked for money.
3. Laploshka's inability to part with his money and his obsession to secure it.
4. Laploshka's principle of doing evil that good may result .

Options :
68634026005. 1
68634026006. 2
68634026007. 3
68634026008. 4

Question Number : 3 Question Id : 6863406575 Question Type : MCQ Option Shuffling : No 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 inferred from the excerpt.

A. The author wanted to inflict petty torments on Laploshka for fun.

B. Laploshka chose to befriend the affluent and steered clear of the poor.

C. Laploshka curbed his appetite when dining with rich friends.

D. Laploshka was haunted by the fear of losing his two franks of the author.

E. The author was a cruel man who intended to torture Laploshka.

1. B and C

2. D and E

3. A,C,E only

4. A,B and D only

Options :
68634026009. 1
68634026010. 2
68634026011. 3
68634026012. 4

Question Number : 4 Question Id : 6863406576 Question Type : MCQ Option Shuffling : No 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 the expressions in list I with their meaning/extension in list II

Match List I with List II

LIST I		LIST II	
A.	haunted by a besetting fear	I.	pursued me till he caught me
B.	Gods send opportunities to most men	II.	to trap Laploshka into involuntary generosity
C.	hunted me down	III.	estrangement from his penny to the advantage of someone poor
D.	perpetual temptation	IV.	the author's chance to sup with Laploshka at a boulevard restaurant.

Choose the correct answer from the options given below:

1. A-III ; B-I ;C-II ; D-IV

2. A-III ; B-IV ; C-I ; D-II

3. A-II ; B-III ; C-IV ; D-I

4. A-I ; B-II ; C-III ; D-IV

Options :

68634026013. 1

68634026014. 2

68634026015. 3

68634026016. 4

Question Number : 5 Question Id : 6863406577 Question Type : MCQ Option Shuffling : No 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 author's tone in the passage is :

1. humorous
2. serious
3. pedautic
4. harsh

Options :

68634026017. 1

68634026018. 2

68634026019. 3

68634026020. 4

Sub-Section Number :	2
Sub-Section Id :	686340203
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 6 Question Id : 6863406578 Question Type : MCQ Option Shuffling : No 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.	The bride and groom walked slowly down the_____.	I.	course
B.	She can't abide ____language and stupidity.	II.	coarse
C.	He was pained to see tears ____down her cheeks.	III.	isle
D.	I wish to visit the remote_____of skye.	IV.	aisle

Choose the correct answer from the options given below:

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

Options :

68634026021. 1

68634026022. 2
68634026023. 3
68634026024. 4

Question Number : 6 Question Id : 6863406578 Question Type : MCQ Option Shuffling : No 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.	The bride and groom walked slowly down the_____.	I.	course
B.	She can't abide ____language and stupidity.	II.	coarse
C.	He was pained to see tears ____down her cheeks.	III.	isle
D.	I wish to visit the remote_____of skye.	IV.	aisle

Choose the correct answer from the options given below:

1. A-III ; B-II ; C-I ; D-IV

2. A- III: B- I ; C-II: D- IV

3. A-IV: B-II: C-I ; D-III

4. A-IV: B-I; C-II: D-III

Options :
68634026021. 1
68634026022. 2
68634026023. 3
68634026024. 4

Question Number : 7 Question Id : 6863406579 Question Type : MCQ Option Shuffling : No 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 option to change the following sentence into passive voice:-

It is believed that the thieves got in through the kitchen window.

1. It is believed that the thieves were got in through the kitchen window.

2. The thieves are believed to have got in through the kitchen window.

3. The thieves were believed to have got in through the kitchen window.

4. It was believed that the thieves had got in through the kitchen window.

Options :
68634026025. 1
68634026026. 2
68634026027. 3
68634026028. 4

Question Number : 7 Question Id : 6863406579 Question Type : MCQ Option Shuffling : No 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 option to change the following sentence into passive voice:-

It is believed that the thieves got in through the kitchen window.

1. It is believed that the thieves were got in through the kitchen window.
2. The thieves are believed to have got in through the kitchen window.
3. The thieves were believed to have got in through the kitchen window.
4. It was believed that the thieves had got in through the kitchen window.

Options :
68634026025. 1
68634026026. 2
68634026027. 3
68634026028. 4

Question Number : 8 Question Id : 6863406580 Question Type : MCQ Option Shuffling : No 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 MAVERICK in the publishing world , she blazes her own trail travelling around the world for her book reading events.

Which of the following words is closest in meaning to the word in capital letters:

1. AMATEUR
2. NON-CONFORMIST
3. CAVALIER
4. PEDANTIC

Options :
68634026029. 1
68634026030. 2
68634026031. 3
68634026032. 4

Question Number : 8 Question Id : 6863406580 Question Type : MCQ Option Shuffling : No 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 MAVERICK in the publishing world , she blazes her own trail travelling around the world for her book reading events.

Which of the following words is closest in meaning to the word in capital letters:

1. AMATEUR

2. NON-CONFORMIST

3. CAVALIER

4. PEDANTIC

Options :
68634026029. 1
68634026030. 2
68634026031. 3
68634026032. 4

Question Number : 9 Question Id : 6863406581 Question Type : MCQ Option Shuffling : No 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 container for holding alcoholic drinks, especially wine :-

1. Deja vu

2. Dragent

3. Decanter

4. Drudgery

Options :
68634026033. 1
68634026034. 2
68634026035. 3
68634026036. 4

Question Number : 9 Question Id : 6863406581 Question Type : MCQ Option Shuffling : No 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 container for holding alcoholic drinks, especially wine :-

1. Deja vu

2. Dragent

3. Decanter

4. Drudgery

Options :

68634026033. 1

68634026034. 2

68634026035. 3

68634026036. 4

Question Number : 10 Question Id : 6863406582 Question Type : MCQ Option Shuffling : No 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 correctly spelt word from the options given below :-

1. CARICATURE

2. CARECACHUR

3. CARRICATURE

4. CARIKATURE

Options :

68634026037. 1

68634026038. 2

68634026039. 3

68634026040. 4

Question Number : 10 Question Id : 6863406582 Question Type : MCQ Option Shuffling : No 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 correctly spelt word from the options given below :-

1. CARICATURE

2. CARECACHUR

3. CARRICATURE

4. CARIKATURE

Options :

68634026037. 1

68634026038. 2

68634026039. 3

68634026040. 4

Question Number : 11 Question Id : 6863406583 Question Type : MCQ Option Shuffling : No 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 given proportion

14:10 = X:15 ?

1. 20

2. 21

3. 19

4. 18

Options :

68634026041. 1
68634026042. 2
68634026043. 3
68634026044. 4

Question Number : 11 Question Id : 6863406583 Question Type : MCQ Option Shuffling : No 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 given proportion

14:10 = X:15 ?

1. 20

2. 21

3. 19

4. 18

Options :

68634026041. 1
68634026042. 2
68634026043. 3
68634026044. 4

Question Number : 12 Question Id : 6863406584 Question Type : MCQ Option Shuffling : No 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 speeds of A and B are in the ratio 3:4. A takes 20 minutes more than B to reach the destination . In what time does A reach the distination?

1. $2\frac{2}{3}$ hours

2. $1\frac{2}{3}$ hours

3. 2 hours

4. $1\frac{1}{3}$ hours

Options :

68634026045. 1

68634026046. 2

68634026047. 3

68634026048. 4

Question Number : 12 Question Id : 6863406584 Question Type : MCQ Option Shuffling : No 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 speeds of A and B are in the ratio 3:4. A takes 20 minutes more than B to reach the destination . In what time does A reach the distination?

1. $2\frac{2}{3}$ hours

2. $1\frac{2}{3}$ hours

3. 2 hours

4. $1\frac{1}{3}$ hours

Options :

68634026045. 1

68634026046. 2

68634026047. 3

68634026048. 4

Question Number : 13 Question Id : 6863406585 Question Type : MCQ Option Shuffling : No 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 difference between simple interest and compound interest on a certain sum at 5% per annum for 2 years is ₹25. What is the sum invested ?

1. ₹6,000

2. ₹8,400

3. ₹10,000

4. ₹12,000

Options :

68634026049. 1

68634026050. 2

68634026051. 3

68634026052. 4

Question Number : 13 Question Id : 6863406585 Question Type : MCQ Option Shuffling : No 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 difference between simple interest and compound interest on a certain sum at 5% per annum for 2 years is ₹25. What is the sum invested ?

1. ₹6,000

2. ₹8,400

3. ₹10,000

4. ₹12,000

Options :

68634026049. 1

68634026050. 2

68634026051. 3

68634026052. 4

Question Number : 14 Question Id : 6863406586 Question Type : MCQ Option Shuffling : No 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 vegetable vendor buys 100kg tomatoes at the rate of Rs18 and spent Rs120 as cartage . He sells 80Kg tomatoes at Rs25/kg and 16kg tomatoes at Rs20/kg. Remaining tomatoes got rotten and could not be sold. Find his profit percentage (correct to one decimal place)

1. 15.7%

2. 17.5%

3. 20.8%

4. 21.6%

Options :

68634026053. 1
68634026054. 2
68634026055. 3
68634026056. 4

Question Number : 14 Question Id : 6863406586 Question Type : MCQ Option Shuffling : No 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 vegetable vendor buys 100kg tomatoes at the rate of Rs18 and spent Rs120 as cartage . He sells 80Kg tomatoes at Rs25/kg and 16kg tomatoes at Rs20/kg. Remaining tomatoes got rotten and could not be sold. Find his profit percentage (correct to one decimal place)

1. 15.7%

2. 17.5%

3. 20.8%

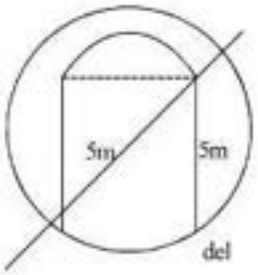
4. 21.6%

Options :

68634026053. 1
68634026054. 2
68634026055. 3
68634026056. 4

Question Number : 15 Question Id : 6863406587 Question Type : MCQ Option Shuffling : No 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 window is in the form of a rectangle surmounted by a semicircle. Perimeter of the window is 4.6m and height of the rectangular portion is 0.5m , then find the radius of the semicircular portion . $\left(\text{Take } \pi = \frac{22}{7}\right)$



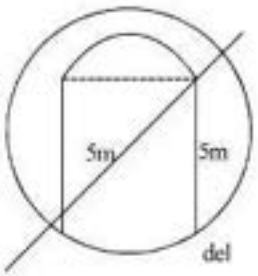
1. 0.6m
2. 0.8m
3. 1.4m
4. 0.7m

Options :

68634026057. 1
68634026058. 2
68634026059. 3
68634026060. 4

Question Number : 15 Question Id : 6863406587 Question Type : MCQ Option Shuffling : No 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 window is in the form of a rectangle surmounted by a semicircle. Perimeter of the window is 4.6m and height of the rectangular portion is 0.5m , then find the radius of the semicircular portion . $\left(\text{Take } \pi = \frac{22}{7}\right)$



1. 0.6m
2. 0.8m
3. 1.4m
4. 0.7m

Options :

68634026057. 1
68634026058. 2

68634026059. 3
68634026060. 4

Question Number : 16 Question Id : 6863406588 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

This question consists of a question and two statements .

How is A related to B ?

I. B is the wife of C . B and D are the only children of E. G is the only daughter of C. A is the grandaughter of E.

II. G is married to H. B is mother-in-law of H. B is the only daughter of E and L . A is the grandchild of E.

1. If the data in statement I alone is sufficient to answer the question

2. If the data in statement II alone is sufficient to answer the question

3. If the data either in statement I alone or in statement II alone is sufficient to answer the question

4. If the data even in both statemnts together are not sufficient to answeer thw question

Options :
68634026061. 1
68634026062. 2
68634026063. 3
68634026064. 4

Question Number : 16 Question Id : 6863406588 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

This question consists of a question and two statements .

How is A related to B ?

I. B is the wife of C . B and D are the only children of E. G is the only daughter of C. A is the grandaughter of E.

II. G is married to H. B is mother-in-law of H. B is the only daughter of E and L . A is the grandchild of E.

1. If the data in statement I alone is sufficient to answer the question

2. If the data in statement II alone is sufficient to answer the question

3. If the data either in statement I alone or in statement II alone is sufficient to answer the question

4. If the data even in both statemnts together are not sufficient to answeer thw question

Options :
68634026061. 1
68634026062. 2
68634026063. 3

68634026064. 4

Question Number : 17 Question Id : 6863406589 Question Type : MCQ Option Shuffling : No 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 next term of the given number series:

1,2,5,8,15,28,51 ?

1. 90

2. 91

3. 93

4. 94

Options :
68634026065. 1
68634026066. 2
68634026067. 3
68634026068. 4

Question Number : 17 Question Id : 6863406589 Question Type : MCQ Option Shuffling : No 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 next term of the given number series:

1,2,5,8,15,28,51 ?

1. 90

2. 91

3. 93

4. 94

Options :
68634026065. 1
68634026066. 2
68634026067. 3
68634026068. 4

Question Number : 18 Question Id : 6863406590 Question Type : MCQ Option Shuffling : No 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 man is facing towards east and turns through 45° clockwise , again 180° clockwise and then turns through 270° anticlockwise. In which direction is he facing now?

1. North-west

2. North-east

3. South-west

4. South-east

Options :

68634026069. 1

68634026070. 2

68634026071. 3

68634026072. 4

Question Number : 18 Question Id : 6863406590 Question Type : MCQ Option Shuffling : No 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 man is facing towards east and turns through 45° clockwise , again 180° clockwise and then turns through 270° anticlockwise. In which direction is he facing now?

1. North-west

2. North-east

3. South-west

4. South-east

Options :

68634026069. 1

68634026070. 2

68634026071. 3

68634026072. 4

Question Number : 19 Question Id : 6863406591 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Find out which of these conclusions definitely follows from the given statement

Statement: Mr. Satbir is one of the probable candidates short - listed for the post of director of P.C.M Institute

Coclusion: I Mr. Satbir will be selected as director of P.C.M Institute

II Mr. Satbir will not be selected as director of P.C.M Institute

1. Only conclusion I follows
2. Only conclusion II follows
3. Either I or II follows
4. Neither I not II follows

Options :
68634026073. 1
68634026074. 2
68634026075. 3
68634026076. 4

Question Number : 19 Question Id : 6863406591 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Find out which of these conclusions definitely follows from the given statement

Statement: Mr. Satbir is one of the probable candidates short - listed for the post of director of P.C.M Institute

Coclusion: I Mr. Satbir will be selected as director of P.C.M Institute

II Mr. Satbir will not be selected as director of P.C.M Institute

1. Only conclusion I follows
2. Only conclusion II follows
3. Either I or II follows
4. Neither I not II follows

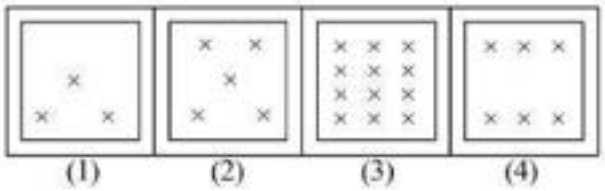
Options :
68634026073. 1
68634026074. 2
68634026075. 3
68634026076. 4

Question Number : 20 Question Id : 6863406592 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Find out which of the answer figure(1).(2).(3) ands (4) complete the figure matrix

PROBLEM FIGURE ANSWER FIGURES





1. 1

2. 2

3. 3

4. 4

Options :

68634026077. 1

68634026078. 2

68634026079. 3

68634026080. 4

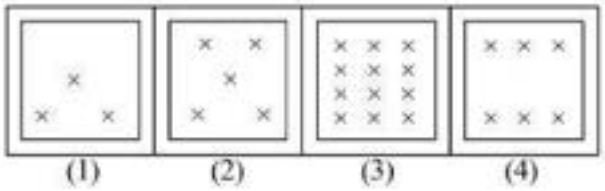
Question Number : 20 Question Id : 6863406592 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Find out which of the answer figure(1).(2).(3) ands (4) complete the figure matrix

PROBLEM FIGURE ANSWER FIGURES





1. 1

2. 2

3. 3

4. 4

Options :

68634026077. 1

68634026078. 2

68634026079. 3

68634026080. 4

Question Number : 21 Question Id : 6863406593 Question Type : MCQ Option Shuffling : No 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 visible yellow face of sun is called ____

1. Corona
2. Ionosphere
3. Stratosphere
4. Photosphere

Options :
68634026081. 1
68634026082. 2
68634026083. 3
68634026084. 4

Question Number : 21 Question Id : 6863406593 Question Type : MCQ Option Shuffling : No 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 visible yellow face of sun is called ____

1. Corona
2. Ionosphere
3. Stratosphere
4. Photosphere

Options :
68634026081. 1
68634026082. 2
68634026083. 3
68634026084. 4

Question Number : 22 Question Id : 6863406594 Question Type : MCQ Option Shuffling : No 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

NATIONAL PARK		STATE	
A.	Corbett National Park	I.	Gujarat
B.	Gir National Park	II.	Karnataka
C.	Shivpuri National Park	III.	Uttarakhand
D.	Bandhipur National park	IV.	Madhya pradesh

Choose the correct answer from the options given below:

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

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

3. A-III, B-IV, B-I, D-II

4. A-IV, B-II, C-I, D-IV

Options :

68634026085. 1

68634026086. 2

68634026087. 3

68634026088. 4

Question Number : 22 Question Id : 6863406594 Question Type : MCQ Option Shuffling : No 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

NATIONAL PARK		STATE	
A.	Corbett National Park	I.	Gujarat
B.	Gir National Park	II.	Karnataka
C.	Shivpuri National Park	III.	Uttarakhand
D.	Bandhipur National park	IV.	Madhya pradesh

Choose the correct answer from the options given below:

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

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

3. A-III, B-IV, B-I, D-II

4. A-IV, B-II, C-I, D-IV

Options :

68634026085. 1

68634026086. 2

68634026087. 3

68634026088. 4

Question Number : 23 Question Id : 6863406595 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Under which article, Parliament has been given powers to amend the constituion ?

1. Article 226
2. Article 274
3. Article 368
4. Article 102

Options :
68634026089. 1
68634026090. 2
68634026091. 3
68634026092. 4

Question Number : 23 Question Id : 6863406595 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Under which article, Parliament has been given powers to amend the constituion ?

1. Article 226
2. Article 274
3. Article 368
4. Article 102

Options :
68634026089. 1
68634026090. 2
68634026091. 3
68634026092. 4

Question Number : 24 Question Id : 6863406596 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Statement I:

On decreasing the temperature of the metal , its resistance increases.

Statement II: On increasing the temperature of semiconductors, its resistance decreases .

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

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

Options :

68634026093. 1
68634026094. 2
68634026095. 3
68634026096. 4

Question Number : 24 Question Id : 6863406596 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Statement I:

On decreasing the temperature of the metal , its resistance increases.

Statement II: On increasing the temperature of semiconductors, its resistance decreases .

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

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

Options :

68634026093. 1
68634026094. 2
68634026095. 3
68634026096. 4

Question Number : 25 Question Id : 6863406597 Question Type : MCQ Option Shuffling : No 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 large Harappan site is located in Haryana ?

1. Dholavira
2. Alamgirpur
3. Kalibangan
4. Rakhigarhi

Options :
68634026097. 1
68634026098. 2
68634026099. 3
68634026100. 4

Question Number : 25 Question Id : 6863406597 Question Type : MCQ Option Shuffling : No 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 large Harappan site is located in Haryana ?

1. Dholavira
2. Alamgirpur
3. Kalibangan
4. Rakhigarhi

Options :
68634026097. 1
68634026098. 2
68634026099. 3
68634026100. 4

Part B: Chemical thermal Polymer Engineering

Section Id :	686340132
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 :	686340204
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 26 Question Id : 6863406598 Question Type : MCQ Option Shuffling : No 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 probability distribution of a random variable x is given by $P(x = r) = kr$ for $r = 1,2,3,4$

$P(x = r)=0$ otherwise

Find the value of the constant k.

1. $k = 0.2$
2. $k = 0.5$
3. $k = 0.1$
4. $k = 1$

Options :
68634026101. 1
68634026102. 2
68634026103. 3
68634026104. 4

Question Number : 26 Question Id : 6863406598 Question Type : MCQ Option Shuffling : No 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 यादृश्चिक चर (रेंडम वैरियेबल) X का प्रायिकता बंटन (प्रोबेबिलिटी डिस्ट्रीब्यूशन) को दिया गया है

$P(x = r) = kr$ $r = 1,2,3,4$

$P(x = r) = 0$ अन्यथा

स्थिरांक k का मान पता लागइए

1. $k = 0.2$
2. $k = 0.5$
3. $k = 0.1$
4. $k = 1$

Options :
68634026101. 1
68634026102. 2
68634026103. 3
68634026104. 4

Question Number : 27 Question Id : 6863406599 Question Type : MCQ Option Shuffling : No 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 general solution of the differential equation $\frac{d^2y}{dx^2} - 3\frac{dy}{dx} + 2y = 0$.

1. $C_1 e^{2x} + C_2 e^{-2x}$

2. $C_1 e^{x} + C_2 e^{2x}$

3. $C_1 e^{-x} + C_2 e^{2x}$

4. $C_1 e^{-x} + C_2 e^{-2x}$

Options :
68634026105. 1
68634026106. 2
68634026107. 3
68634026108. 4

Question Number : 27 Question Id : 6863406599 Question Type : MCQ Option Shuffling : No 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 अवकल समीकरण
$\frac{d^2y}{dx^2} - 3\frac{dy}{dx} + 2y = 0$ का सामान्य हल होगा :

1. $C_1 e^{2x} + C_2 e^{-2x}$

2. $C_1 e^{x} + C_2 e^{2x}$

3. $C_1 e^{-x} + C_2 e^{2x}$

4. $C_1 e^{-x} + C_2 e^{-2x}$

Options :
68634026105. 1
68634026106. 2
68634026107. 3
68634026108. 4

Question Number : 28 Question Id : 6863406600 Question Type : MCQ Option Shuffling : No 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 function $f(z)=\sqrt{|xy|}$ satisfies cauchy-rienann equation at the origin but it is not analytic at origin.
Statement II: The function $f(z)=\frac{1}{z}$ is analytic everywhere.
In the light of the above statements, choose the most appropriate answer from the options given below.

1. Both Statement I and Statement II are correct

2. Both Statement I and Statement II are incorrect

3. Statement I is correct but Statement II is incorrect

4. Statement I is incorrect but Statement II is correct

Options :
68634026109. 1
68634026110. 2
68634026111. 3
68634026112. 4

Question Number : 28 Question Id : 6863406600 Question Type : MCQ Option Shuffling : No 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: फलन $f(z)=\sqrt{|xy|}$ उत्पत्ति / मूल में कौशी रीमान समीकरण की पुष्टि करता है लेकिन ये उत्पत्ति / मूल में विश्लेषिक नहीं है।

कथन II: फलन $f(z)=\frac{1}{z}$ सर्वत्र विश्लेषिक है।

उपर्युक्त कथनों के आलोक में, नीचे दिए गए विकल्पों में से सबसे उपयुक्त 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, लेकिन कथन II गलत है

4. कथन I गलत है, लेकिन कथन II सही है

Options :
68634026109. 1
68634026110. 2
68634026111. 3
68634026112. 4

Question Number : 29 Question Id : 6863406601 Question Type : MCQ Option Shuffling : No 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 rank of a matrix is said to be r.gf

A. It has at least one non-zero minor of order r
B. It has at most one non-zero minor of order r
C. Every minor of A of order higher than r is zero
D. Every minor of A of order (r-1) is zero
E. There exist non-singular matrices P and Q such that $PAQ = \begin{bmatrix} I_r & 0 \\ 0 & 0 \end{bmatrix}$

Choose the correct answer from the options given below:

1. A, B, C only

2. A, C, E only

3. A, D, C only

4. B, D, E only

Options :
68634026113. 1
68634026114. 2
68634026115. 3
68634026116. 4

Question Number : 29 Question Id : 6863406601 Question Type : MCQ Option Shuffling : No 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 मैट्रिक्स (आव्यूह) की जाति r.gf कही जाती है

A. इसमें कम से कम एक ऑर्डर क्रम r का शून्येतर (नॉन जीरो) माइनर होता है
B. इसमें अधिक से अधिक एक ऑर्डर r का शून्येतर (नॉन जीरो) माइनर होता है
C. r से उच्चतर ऑर्डर (क्रम) का A प्रत्येक माइनर शून्य होता है
D. ऑर्डर (r-1) का A का प्रत्येक माइनर शून्य होता है
E. व्युत्क्रमणीय आव्यूहों (नॉन सिंगुलर मैट्रिक्स) P और Q इस प्रकार पाए जाते हैं कि $PAQ = \begin{bmatrix} I_r & 0 \\ 0 & 0 \end{bmatrix}$

नीचे दिए गए विकल्पों में से सबसे उपयुक्त उत्तर का चयन कीजिए:

1. केवल A, B, C

2. केवल A, C, E

3. केवल A, D, C

4. केवल B, D, E

Options :
68634026113. 1
68634026114. 2
68634026115. 3
68634026116. 4

Question Number : 30 Question Id : 6863406602 Question Type : MCQ Option Shuffling : No 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

A second order P.D.E in the function 'U' of two independent variables X,Y given with usual symbol $AU_{xx} + BU_{xy} + CU_{yy} + F(U) = 0$, then

LIST I		LIST II	
A.	Hyperbolic	I.	$B^2 - 4AC = 0$
B.	Parabolic	II.	$B^2 - 4AC > 0$
C.	Elliptic	III.	$B^2 - 4AC < 0$
D.	Not classifies	IV.	$A = B = C = 0$

Choose the correct answer from the options given below:

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

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

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

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

Options :

68634026117. 1
68634026118. 2
68634026119. 3
68634026120. 4

Question Number : 30 Question Id : 6863406602 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

सूची I का सूची II से मिलान कीजिए:
दो स्वतन्त्र चरों x, y के फलन 'u' में द्वितीय क्रम P. D. E को सामान्य प्रतीक $AU_{xx} + BU_{xy} + CU_{yy} + F(U) = 0$, से दिया गया है तो

सूची I		सूची II	
A.	अतिपरवलयिक (हाइपरनोलिक)	I.	$B^2 - 4AC = 0$
B.	परवलयिक (पैरानोलिक)	II.	$B^2 - 4AC > 0$
C.	दीर्घायित (इलिप्टिक)	III.	$B^2 - 4AC < 0$
D.	वर्गीकृत नहीं है	IV.	$A = B = C = 0$

निम्नलिखित विकल्पों में से सही उत्तर का चयन कीजिए :

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

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

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

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

Options :
68634026117. 1
68634026118. 2
68634026119. 3
68634026120. 4

Question Number : 31 Question Id : 6863406603 Question Type : MCQ Option Shuffling : No 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 thermodynamic function?

1. Internal energy

2. Enthalpy

3. Entropy

4. Frictional energy

Options :
68634026121. 1
68634026122. 2

68634026123. 3
68634026124. 4

Question Number : 31 Question Id : 6863406603 Question Type : MCQ Option Shuffling : No 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 मे से कौन सा ऊष्मागतिक फलन (थर्मोडायनेमिक फंक्शन) नहीं हैं?

1. आतंरिक ऊर्जा
2. एन्थैल्पी / पूर्ण ऊर्जा
3. एंट्रोपी
4. घर्षणिक ऊर्जा

Options :
68634026121. 1
68634026122. 2
68634026123. 3
68634026124. 4

Question Number : 32 Question Id : 6863406604 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

For liquids, the volume expansivity (β) is equal to

1. $\left(\frac{\partial V}{\partial T}\right)_P$
2. $-\frac{1}{V}\left(\frac{\partial V}{\partial T}\right)_P$
3. $\frac{1}{V}\left(\frac{\partial V}{\partial T}\right)_P$
4. $-\frac{1}{P}\left(\frac{\partial V}{\partial T}\right)_P$

Options :
68634026125. 1
68634026126. 2
68634026127. 3
68634026128. 4

Question Number : 32 Question Id : 6863406604 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

द्रव्यों के लिए प्रबलता विस्तारणशीलता (वोल्यूम एक्सपान्सिविटी) (β) - के बराबर है

1. $\left(\frac{\partial V}{\partial T}\right)_p$

2. $-\frac{1}{V}\left(\frac{\partial V}{\partial T}\right)_p$

3. $\frac{1}{V}\left(\frac{\partial V}{\partial T}\right)_p$

4. $-\frac{1}{P}\left(\frac{\partial V}{\partial T}\right)_p$

Options :
68634026125. 1
68634026126. 2
68634026127. 3
68634026128. 4

Question Number : 33 Question Id : 6863406605 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Two specific heats (Cp and Cv) are equal, when $\left(\frac{\partial V}{\partial T}\right)_p$ is

1. ∞

2. P/R

3. R/P

4. 0

Options :
68634026129. 1
68634026130. 2
68634026131. 3
68634026132. 4

Question Number : 33 Question Id : 6863406605 Question Type : MCQ Option Shuffling : No 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 विशिष्ट ऊश्माएं (Cp और Cv) बराबर होती हैं जब $\left(\frac{\partial V}{\partial T}\right)_P$ होता है

1. ∞

2. P/R

3. R/P

4. 0

Options :
68634026129. 1
68634026130. 2
68634026131. 3
68634026132. 4

Question Number : 34 Question Id : 6863406606 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Under what condition an isothermal curve will coincide with an adiabatic curve through a point on a p-v diagram of an ideal gas?

1. Cp > Cv

2. Cp = Cv

3. Cp < Cv

4. Cp ≥ Cv

Options :
68634026133. 1
68634026134. 2
68634026135. 3
68634026136. 4

Question Number : 34 Question Id : 6863406606 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

किस परिस्थिति में किसी आदर्श गैस के p-v आरेख पर कोई समतापी वक्र किसी रूद्धोष्म वक्र पर संपाती होगा?

1. $C_p > C_v$

2. $C_p = C_v$

3. $C_p < C_v$

4. $C_p \geq C_v$

Options :
68634026133. 1
68634026134. 2
68634026135. 3
68634026136. 4

Question Number : 35 Question Id : 6863406607 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Heat of combustion is always

1. Positive
2. Negative
3. Zero
4. Infinity

Options :
68634026137. 1
68634026138. 2
68634026139. 3
68634026140. 4

Question Number : 35 Question Id : 6863406607 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

दहन की ऊष्मा सदैव _____ होती है :

1. धनात्मक
2. ऋणात्मक
3. शून्य
4. अनंत

Options :
68634026137. 1
68634026138. 2
68634026139. 3
68634026140. 4

Question Number : 36 Question Id : 6863406608 Question Type : MCQ Option Shuffling : No 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 has maximum calorific value in Kcal/m^3?

1. Producer gas

2. Water gas

3. Natural gas

4. Coke oven gas

Options :
68634026141. 1
68634026142. 2
68634026143. 3
68634026144. 4

Question Number : 36 Question Id : 6863406608 Question Type : MCQ Option Shuffling : No 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 Kcal/m^3 में कैलोरी मान सबसे अधिक होता है?

1. प्रोड्यूसर गैस

2. वाटर गैस

3. प्राकृतिक गैस

4. कोक ओवन गैस

Options :
68634026141. 1
68634026142. 2
68634026143. 3
68634026144. 4

Question Number : 37 Question Id : 6863406609 Question Type : MCQ Option Shuffling : No 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 would yield more energy when completely burned?

1. Methane

2. Ethane

3. Propane

4. Butane

Options :
68634026145. 1

68634026146. 2
68634026147. 3
68634026148. 4

Question Number : 37 Question Id : 6863406609 Question Type : MCQ Option Shuffling : No 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 किस में पूर्णत: जल जाने पर अधिक ऊर्जा की प्राप्ति होती है ?

1. मीथेन
2. एथेन
3. प्रोपेन
4. ब्युटेन

Options :
68634026145. 1
68634026146. 2
68634026147. 3
68634026148. 4

Question Number : 38 Question Id : 6863406610 Question Type : MCQ Option Shuffling : No 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 compressibility factor (z) of an ideal gas is always

1. 0
2. 1
3. -1
4. >1

Options :
68634026149. 1
68634026150. 2
68634026151. 3
68634026152. 4

Question Number : 38 Question Id : 6863406610 Question Type : MCQ Option Shuffling : No 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 आदर्श गैस का संपीड्यता गुणांक (z) सदैव _____ होता है :

1. 0

2. 1

3. –1

4. >1

Options :

68634026149. 1
68634026150. 2
68634026151. 3
68634026152. 4

Question Number : 39 Question Id : 6863406611 Question Type : MCQ Option Shuffling : No 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.	Chemical potential	I.	$y_i P / x_i P_i^{Sat}$
B.	Raoult's law	II.	$y_i P = x_i P_i^{Sat}$
C.	Activity coefficient	III.	$\hat{f}_i^{id} = x_i f_i$
D.	Lewis/ Rondall rule	IV.	$\left[\frac{\partial nG}{\partial n_i}\right]_{T,\ P,\ N_j}$

Choose the correct answer from the options given below:

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

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

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

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

Options :

68634026153. 1
68634026154. 2
68634026155. 3
68634026156. 4

Question Number : 39 Question Id : 6863406611 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

सूची I का सूची II से मिलान कीजिए

सूची I		सूची II	
A.	रासायनिक विभव	I.	$y_i P / x_i P_i^{Sat}$
B.	राउल्ट नियम	II.	$y_i P = x_i P_i^{Sat}$
C.	सक्रियता गुणांक	III.	$\hat{f}_i^{id} = x_i f_i$
D.	लुइस / रैन्डाल नियम	IV.	$\left[\frac{\partial nG}{\partial n_i}\right]_{T,\ P,\ N_J}$

निम्नलिखित विकल्पों में से सही उत्तर का चयन कीजिए :

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

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

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

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

Options :

68634026153. 1
68634026154. 2
68634026155. 3
68634026156. 4

Question Number : 40 Question Id : 6863406612 Question Type : MCQ Option Shuffling : No 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 Joule-Thomson coefficient (μ_{JT}) is defined as $\mu_{JT} = \left(\frac{\partial P}{\partial T}\right)_H$

Statement II: The Joule-Thomson coefficient (μ_{JT}) for an ideal gas is zero

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

1. Both Statement I and Statement II are correct

2. Both Statement I and Statement II are incorrect

3. Statement I is correct but Statement II is incorrect

4. Statement I is incorrect but Statement II is correct

Options :

68634026157. 1
68634026158. 2
68634026159. 3
68634026160. 4

Question Number : 40 Question Id : 6863406612 Question Type : MCQ Option Shuffling : No 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: जूल-थॉमस गुणांक (μ_{JT}) को $\mu_{JT} = \left(\frac{\partial P}{\partial T}\right)_H$ के रूप में परिभाषित किया जाता है।

कथन II: किसी आदर्श गैस के लिए जूल-थॉमस गुणांक (μ_{JT}) शून्य होता है।

उपर्युक्त कथनों के आलोक में, नीचे दिए गए विकल्पों में से सबसे उपयुक्त उतर 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, लेकिन कथन II गलत है

4. कथन I गलत है, लेकिन कथन II सही है

Options :
68634026157. 1
68634026158. 2
68634026159. 3
68634026160. 4

Question Number : 41 Question Id : 6863406613 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

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

Assertion A: The number of degrees of freedom at the triple point of water is zero.

Reason R: The phase rule applicable to non reacting system is [F= 2-π +N]
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 :
68634026161. 1
68634026162. 2

68634026163. 3
68634026164. 4

Question Number : 41 Question Id : 6863406613 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

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

अभिकथन A: जल के त्रिक बिंदु पर स्वतंत्रता की कोटियों (degree of freedom) की संख्या शून्य है।

कारण R: अनभिक्रियाशील तंत्र (नॉन रिएक्टिव सिस्टम) के लिए लागू होने वाला प्रावस्था नियम है

$[F = 2 - \pi + N]$

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

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

Options :
68634026161. 1
68634026162. 2
68634026163. 3
68634026164. 4

Question Number : 42 Question Id : 6863406614 Question Type : MCQ Option Shuffling : No 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. Volume is an extensive property
B. For a closed system, first law of thermodynamics is $du=dQ+dW$
C. Density is an intensive property

Choose the correct answer from the options given below:

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

Options :
68634026165. 1
68634026166. 2

68634026167. 3
68634026168. 4

Question Number : 42 Question Id : 6863406614 Question Type : MCQ Option Shuffling : No 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. आयतन एक मात्रात्मक गुण है
B. एक संवृत्त तंत्र (क्लोस्ड सिस्टम), ऊष्मागतिक का पहला नियम है $du=dQ+dW$
C. घनत्व एक मात्रा स्वतंत्र गुण है

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

1. केवल B और C

2. केवल B

3. केवल A और C

4. केवल A, B और C

Options :
68634026165. 1
68634026166. 2
68634026167. 3
68634026168. 4

Question Number : 43 Question Id : 6863406615 Question Type : MCQ Option Shuffling : No 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.	$\log P = A[1-(B/T)]$	I.	Duhring rule
B.	$T_A = K\,T_B + c$	II.	Cox equation
C.	$\log P = A - \frac{B}{T+C}$	III.	Vander waals equation
D.	$Z = \frac{v}{v-b} - \frac{a}{RTv}$	IV.	Antoine equation

Choose the correct answer from the options given below:

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

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

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

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

Options :
68634026169. 1

68634026170. 2
68634026171. 3
68634026172. 4

Question Number : 43 Question Id : 6863406615 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

सूची I का सूची II से मिलान कीजिए

	सूची I		सूची II
A.	$\log P = A[1-(B/T)]$	I.	ट्रूहरिंग नियम
B.	$T_A = K\,T_B{}^{+c}$	II.	कॉक्स समीकरण
C.	$\log P = A - \frac{B}{T+C}$	III.	व्हांडर वाल्स समीकरण
D.	$Z = \frac{v}{v-b} - \frac{a}{RTv}$	IV.	ऐंटोइन (आन्तार्वा) समीकरण

निम्नलिखित विकल्पों में से सही उत्तर का चयन कीजिए :

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

Options :
68634026169. 1
68634026170. 2
68634026171. 3
68634026172. 4

Question Number : 44 Question Id : 6863406616 Question Type : MCQ Option Shuffling : No 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 statement regarding natural rubber

A. Natural rubber is linear polymer of isoprene (2-methyl-1,3-butadiene)
B. Natural Rubber becomes soft at high temperature (>335k) and brittle at low temperature (<283k)
C. Vulcanisation is a process of heating a mixture of raw rubber with sulphur at a temperature between 373 k to 415 k
D. In the manufacturing of tyre, 5% of sulphur is used as a crosslinking agent.

Choose the correct answer from the options given below:

1. A, B & C

2. A, B & D

3. A, C & D

4. A, B, C & D

Options :
68634026173. 1
68634026174. 2
68634026175. 3
68634026176. 4

Question Number : 44 Question Id : 6863406616 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

प्राकृतिक रबड़ के संदर्भ में निम्नलिखित कथनों पर विचार कीजिए

A. प्राकृतिक रबड़ आइसोप्रीन (2-मेथिला-1,3-न्यूटाडाइडीन) का एक रैखिक बहुलक (लीनियर पोलिमर) है।
B. प्राकृतिक रबड़ उच्च तापमान (>335k)पर मृदु और निम्न तापमान पर (<283k) पर भंगुर हो जाता है।
C. वल्कनीकरण अपरिष्कृत रबड़ के सल्फर के साथ मिश्रण को 373 k से 415 k तक के तापमान पर गर्म करने की प्रक्रिया है।
D. टायर के निर्माण में क्रॉसलिंकिंग (तिर्यक बंधन) कर्मक के रूप में 5% सल्फर का प्रयोग किया जाता है।

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

1. A, B और C

2. A, B और D

3. A, C और D

4. A, B, C और D

Options :
68634026173. 1
68634026174. 2
68634026175. 3
68634026176. 4

Question Number : 45 Question Id : 6863406617 Question Type : MCQ Option Shuffling : No 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.	Elastomer	I.	Buna-s
B.	Fibres	II.	Nylon.6,6
C.	Thermoplastic polymer	III.	Polythene
D.	Thermosetting polymer	IV.	Bakelite

Choose the correct answer from the options given below:

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

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

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

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

Options :
68634026177. 1
68634026178. 2
68634026179. 3
68634026180. 4

Question Number : 45 Question Id : 6863406617 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

सूची I का सूची II से मिलान कीजिए

सूची I		सूची II	
A.	एलेस्टोमेर	I.	बूना (Buna-s)
B.	फाइबर	II.	नाइलोन 6,6
C.	थर्मोप्लास्टिक पोलिमर (ताप सुनम्य बहुलक)	III.	पोलीथीन
D.	थर्मोसेटिंग पोलिमर (ताप सुदृढ बहुलक)	IV.	बेकेलाइट

निम्नलिखित विकल्पों में से सही उत्तर का चयन कीजिए :

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

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

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

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

Options :
68634026177. 1
68634026178. 2

68634026179. 3
68634026180. 4

Question Number : 46 Question Id : 6863406618 Question Type : MCQ Option Shuffling : No 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: Novalac on heating with formaldehyde undergoes cross- linking to form an infusible solid mass called "Bakelite"
Statement II: Bakelite is used to make electrical switches and handles of various intensils
In the light of the above statements, choose the most appropriate answer from the options given below.

1. Both Statement I and Statement II are 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 :
68634026181. 1
68634026182. 2
68634026183. 3
68634026184. 4

Question Number : 46 Question Id : 6863406618 Question Type : MCQ Option Shuffling : No 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: नोवालेक को फोर्मेल्डिहाइड के साथ गर्म करने पर इसमें क्रॉस लिंकिंग (तिर्यक बंधन) होकर एक दुर्गलनीय (इंफ्यूसिबल) बेस पिंड बनाता है जिसे बेकेलाइट कहते हैं।

कथन II: बेकेलाइट का उपयोग इलैक्ट्रिक्ल स्विच और विभिन्न बर्तनों के हत्थे बनाने के लिये किया जाता है।

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

1. कथन I और II दोनों सत्य हैं

2. कथन I और II दोनों असत्य हैं

3. कथन I सत्य है, लेकिन कथन II असत्य है

4. कथन I असत्य है, लेकिन कथन II सत्य है

Options :
68634026181. 1
68634026182. 2
68634026183. 3
68634026184. 4

Question Number : 47 Question Id : 6863406619 Question Type : MCQ Option Shuffling : No 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 species which can be used as best initiator for the cationic polymerisation is

1. HNO_3
2. $LiAlH_4$
3. $AlCl_3$
4. H_2SO4

Options :
68634026185. 1
68634026186. 2
68634026187. 3
68634026188. 4

Question Number : 47 Question Id : 6863406619 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

धनायनी बहुलकीकरण (कैटायनिक पोलीमराइजेशन) के लिये सबसे अच्छे आरंभक के रूप में जिस स्पीशीज का उपयोग किया जा सकत है वह है:

1. HNO_3
2. $LiAlH_4$
3. $AlCl_3$
4. H_2SO4

Options :
68634026185. 1
68634026186. 2
68634026187. 3
68634026188. 4

Question Number : 48 Question Id : 6863406620 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Poly Dispersity index (PDI) is defined as

1. $PDI = \frac{\bar{M}_w^2}{\bar{M}_n^2}$

2. $PDI = \frac{\bar{M}_w^2}{\bar{M}_n}$

3. $PDI = \frac{\bar{M}_w}{\bar{M}_n^2}$

4. $PDI = \frac{\bar{M}_w}{\bar{M}_n}$

Options :

68634026189. 1

68634026190. 2

68634026191. 3

68634026192. 4

Question Number : 48 Question Id : 6863406620 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

बहुपरिक्षेपिता सूचकांक (PDI, पोलीडिस्पर्सिटी इंडेक्स) को निम्न के रूप में परिभाषित किया जाता है :

1. $PDI = \frac{\bar{M}_w^2}{\bar{M}_n^2}$

2. $PDI = \frac{\bar{M}_w^2}{\bar{M}_n}$

3. $PDI = \frac{\bar{M}_w}{\bar{M}_n^2}$

4. $PDI = \frac{\bar{M}_w}{\bar{M}_n}$

Options :

68634026189. 1

68634026190. 2

68634026191. 3

68634026192. 4

Question Number : 49 Question Id : 6863406621 Question Type : MCQ Option Shuffling : No 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 polymer contains 10 molecules with molecular mass 10,000 and 10 molecules with molecular mass 1,00,000. Calculate number average molecular mass:

1. 5500

2. 50,00

3. 50,000

4. 55,000

Options :
68634026193. 1
68634026194. 2
68634026195. 3
68634026196. 4

Question Number : 49 Question Id : 6863406621 Question Type : MCQ Option Shuffling : No 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 बहुलक (पोलिमर) में 10 अणु 10,000 ग्राम अणु द्रव्यमान के और 10 अणु 1,00,000 ग्राम अणु द्रव्यमान के हैं। इसकी औसत अणु द्रव्यमान संख्या का परिकलन कीजिए :

1. 5500

2. 50,00

3. 50,000

4. 55,000

Options :
68634026193. 1
68634026194. 2
68634026195. 3
68634026196. 4

Question Number : 50 Question Id : 6863406622 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Which one of the following is a natural polymer?

1. Polythene

2. Nylon 6,6

3. Rubber

4. Buna-S

Options :

68634026197. 1
68634026198. 2
68634026199. 3
68634026200. 4

Question Number : 50 Question Id : 6863406622 Question Type : MCQ Option Shuffling : No 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 प्राकृतिक बहुलक है?

1. पोलीथीन
2. नाइलोन 6.6
3. रबड
4. बूना -S (Buna-S)

Options :
68634026197. 1
68634026198. 2
68634026199. 3
68634026200. 4

Question Number : 51 Question Id : 6863406623 Question Type : MCQ Option Shuffling : No 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 polymer is obtained by heating caprolactum with water at high temperature. That polymer is called:

1. Nylon 6,6
2. Terylene
3. Teflon
4. Nylon 6

Options :
68634026201. 1
68634026202. 2
68634026203. 3
68634026204. 4

Question Number : 51 Question Id : 6863406623 Question Type : MCQ Option Shuffling : No 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 बहुलक (पोलीमर) जिसे कैप्रोलैक्टम को जल के साथ उच्च ताप्मान पर ग्राम करके प्राप्त किया जाता है, वह कहलाता :

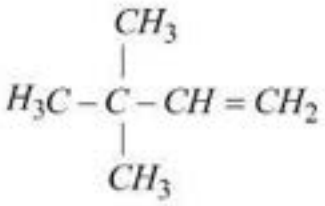
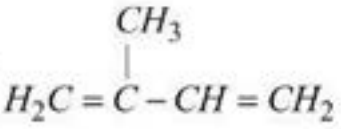
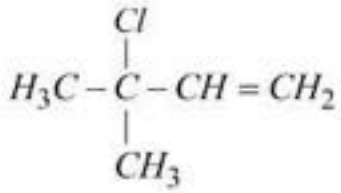
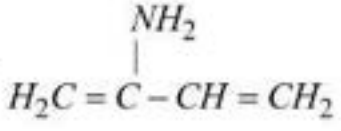
1. नाइलोन 6,6
2. टैरिलीन
3. टैफ्लोन
4. नाइलोन 6

Options :

68634026201. 1
68634026202. 2
68634026203. 3
68634026204. 4

Question Number : 52 Question Id : 6863406624 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Natural rubber is a linear polymer of isoprene. Isoprene has the following chemical structure:

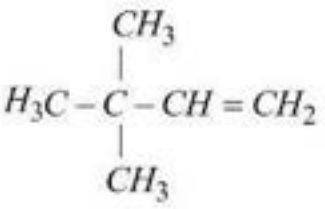
1. 
2. 
3. 
4. 

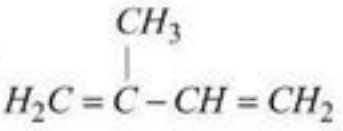
Options :

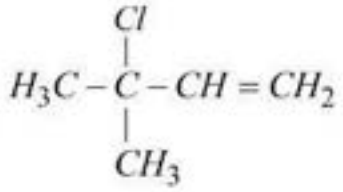
68634026205. 1
68634026206. 2
68634026207. 3
68634026208. 4

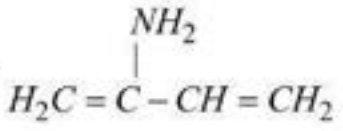
Question Number : 52 Question Id : 6863406624 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

प्राकृतिक रबड़ आइसोप्रीन का रैखिक बहुलक (लीनियर पोलिमर) है। आइसोप्रीन की रासायनिक संरचना निम्नलिखित है :

1. 

2. 

3. 

4. 

Options :
68634026205. 1
68634026206. 2
68634026207. 3
68634026208. 4

Question Number : 53 Question Id : 6863406625 Question Type : MCQ Option Shuffling : No 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 increasing order of head loss caused by the following flow measuring devices is:

A. Orifice meter
B. Venturi meter
C. Flow Nozzle

Choose the correct answer from the options given below:

1. A, B, C

2. B, A, C

3. C, A, B

4. C, B, A

Options :
68634026209. 1
68634026210. 2
68634026211. 3
68634026212. 4

Question Number : 53 Question Id : 6863406625 Question Type : MCQ Option Shuffling : No 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 प्रवाह मापन युक्तियों द्वारा होने वाली शीर्ष हानि (हेड लोस) का बढ़ता क्रम है :

A. ऑरीफाइस मीटर
B. वेंचुरी मीटर
C. फ्लो नॉजल

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

1. A, B, C

2. B, A, C

3. C, A, B

4. C, B, A

Options :
68634026209. 1
68634026210. 2
68634026211. 3
68634026212. 4

Question Number : 54 Question Id : 6863406626 Question Type : MCQ Option Shuffling : No 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.	Sewage sludge	I.	Pseudoplastic
B.	Rubber latex	II.	Dilatent
C.	Quicksand	III.	Newtonian
D.	Water	IV.	Bingham plastic

Choose the correct answer from the options given below:

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-II, C-III, D-I

Options :

68634026213. 1
68634026214. 2
68634026215. 3
68634026216. 4

Question Number : 54 Question Id : 6863406626 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

सूची I का सूची II से मिलान कीजिए

सूची I		सूची II	
A.	सीवेज स्लज (वाहितमल आपंक)	I.	सूडोप्लाटिक
B.	रबड लेटेक्स	II.	डाइलेटेन्ट (विस्फारी)
C.	क्विक सैंड (बालू पंक)	III.	न्यूटनी
D.	जल	IV.	विन्घम प्लास्टिक

निम्नलिखित विकल्पों में से सही उत्तर का चयन कीजिए :

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-II, C-III, D-I

Options :

68634026213. 1
68634026214. 2
68634026215. 3
68634026216. 4

Question Number : 55 Question Id : 6863406627 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

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

Assertion A: A throttling process does not change the temperature of ideal gases.

Reason R: Bernoulli equation applies to a non-viscous fluid, which does not exchange shaft work with the surroundings.

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 :
68634026217. 1
68634026218. 2
68634026219. 3
68634026220. 4

Question Number : 55 Question Id : 6863406627 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं, एक को अभिकथन (A) और दूसरे को कारण (R) कहा गया है।

अभिकथन A: उपरोधी प्रक्रम (थ्रोटिंग प्रोसेस) आदर्श गैसों के तापमान को परिवर्तित नहीं करता है।
कारण R: बरनौली समीकरण श्यानता हीन (नॉन विस्कस) द्रव पर लागू नहीं होता है, जो परिवेश से शैफ्ट कार्य का विनिमय नहीं करता है।

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

1. A और R दोनों सही हैं और R, A की सही व्याख्या है

2. A और R दोनों सही हैं और R, A की सही व्याख्या नहीं है

3. A सही है लेकिन R सही नहीं है

4. A सही नहीं है लेकिन R सही है

Options :
68634026217. 1
68634026218. 2
68634026219. 3

68634026220. 4

Question Number : 56 Question Id : 6863406628 Question Type : MCQ Option Shuffling : No 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.	$\frac{P}{m}=K\left(\frac{1}{Dsb}-\frac{1}{Dsa}\right)$	I.	Kick's Law
B.	$\frac{P}{m}=K\ln\left(\frac{Dsa}{Dsb}\right)$	II.	Bond Crushing Law
C.	$\frac{P}{m}=\frac{K}{\sqrt{DP}}$	III.	Rittingers Law
D.	$\ln\alpha=\frac{4V_m\sigma}{vRTL}$	IV.	Kelvin equation

Choose the correct answer from the options given below:

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

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

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

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

Options :
68634026221. 1
68634026222. 2
68634026223. 3
68634026224. 4

Question Number : 56 Question Id : 6863406628 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

सूची I का सूची II से मिलान कीजिए

सूची I		सूची II	
A.	$\frac{P}{m} = K\left(\frac{1}{Dsb} - \frac{1}{Dsa}\right)$	I.	किक नियम
B.	$\frac{P}{m} = K \ln\left(\frac{Dsa}{Dsb}\right)$	II.	आबंध दलन (बांड क्रशिंग) नियम
C.	$\frac{P}{m} = \frac{K}{\sqrt{DP}}$	III.	रिटिन्जर नियम
D.	$\ln\alpha = \frac{4V_m\sigma}{vRTL}$	IV.	केल्विन समीकरण

निम्नलिखित विकल्पों में से सही उत्तर का चयन कीजिए :

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

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

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

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

Options :
68634026221. 1
68634026222. 2
68634026223. 3
68634026224. 4

Question Number : 57 Question Id : 6863406629 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Fibrous material can be broken by

1. Crushing rolls

2. Squirrel-cage disintegrator

3. Tube mill

4. Ball mill

Options :
68634026225. 1
68634026226. 2
68634026227. 3
68634026228. 4

Question Number : 57 Question Id : 6863406629 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

फाइब्रस (रेशेदार) पदार्थ को खंडित किया जा सकता है :

1. क्रशिंग रोल्स (दलन बेलन)

2. स्किवरल केज (पिंजर) विघटन

3. ट्यूब मिल

4. बॉल मिल

Options :
68634026225. 1
68634026226. 2
68634026227. 3
68634026228. 4

Question Number : 58 Question Id : 6863406630 Question Type : MCQ Option Shuffling : No 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 fluid energy mill used for

1. Cutting

2. Grinding

3. Ultragrinding

4. Crushing

Options :
68634026229. 1
68634026230. 2
68634026231. 3
68634026232. 4

Question Number : 58 Question Id : 6863406630 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

फ्लुइड इनर्जी मिल (तरल ऊर्जा मिल) का उपयोग _____ के लिए किया जाता है

1. कर्तन (कटिंग)

2. पिसाई (ग्राइंडिंग)

3. परापेषण (अल्ट्रा ग्राइंडिंग)

4. दलन (क्रशिंग)

Options :

68634026229. 1
68634026230. 2
68634026231. 3
68634026232. 4

Question Number : 59 Question Id : 6863406631 Question Type : MCQ Option Shuffling : No 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 sphericity for a cylindrical particle whose length equals the diameter is

1. 1
2. <1
3. 2
4. $\sqrt{2}$

Options :
68634026233. 1
68634026234. 2
68634026235. 3
68634026236. 4

Question Number : 59 Question Id : 6863406631 Question Type : MCQ Option Shuffling : No 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 बेलनाकार कण जिसकी लम्बाई उसके व्यास के बराबर है का गोलात्व (स्फेरिसिटी) होता है:

1. 1
2. <1
3. 2
4. $\sqrt{2}$

Options :
68634026233. 1
68634026234. 2
68634026235. 3
68634026236. 4

Question Number : 60 Question Id : 6863406632 Question Type : MCQ Option Shuffling : No 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 radius of ball mill is R and radius of ball is r, then critical speed of the mill is:

1. $\frac{1}{2\pi}\sqrt{\frac{g}{(R-r)}}$
2. $\frac{1}{2}\sqrt{\frac{g}{(R-r)}}$
3. $\frac{1}{\pi}\sqrt{\frac{g}{(R-r)}}$
4. $\frac{1}{g}\sqrt{\frac{2\pi}{(R-r)}}$

Options :

68634026237. 1
68634026238. 2
68634026239. 3
68634026240. 4

Question Number : 60 Question Id : 6863406632 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

मान लीजिये कि किसी बॉल मिल की त्रिज्या R है और बॉल की r है , तो मिल का क्रांतिक चाल (क्रिटिकल स्पीड) होगी:

1. $\frac{1}{2\pi}\sqrt{\frac{g}{(R-r)}}$
2. $\frac{1}{2}\sqrt{\frac{g}{(R-r)}}$
3. $\frac{1}{\pi}\sqrt{\frac{g}{(R-r)}}$
4. $\frac{1}{g}\sqrt{\frac{2\pi}{(R-r)}}$

Options :

68634026237. 1
68634026238. 2
68634026239. 3
68634026240. 4

Question Number : 61 Question Id : 6863406633 Question Type : MCQ Option Shuffling : No 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 plate and frame filter press, which of the following is valid for flow of filterate through cake

1. Hagen- Poiseuille equation

2. Nikuradse equation

3. Kozeny -Carman Eq^{n}

4. Kremser equation

Options :
68634026241. 1
68634026242. 2
68634026243. 3
68634026244. 4

Question Number : 61 Question Id : 6863406633 Question Type : MCQ Option Shuffling : No 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 प्लेट फिल्टर प्रेस में केक से होकर निस्यंद (फिल्ट्रेट) के प्रवाह के लिये निम्नलिखित में से कौन सा सही / वैध है :

1. हैगेन -पजोई समीकरण

2. निकुरेड्से समीकरण

3. कोजैनी कार्मन समीकरण

4. क्रेमसर समीकरण

Options :
68634026241. 1
68634026242. 2
68634026243. 3
68634026244. 4

Question Number : 62 Question Id : 6863406634 Question Type : MCQ Option Shuffling : No 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 two pipes have same nominal size then they have

1. Same inside diameter

2. Same outside diameter

3. Same inside & outside diameter

4. Same thickness

Options :
68634026245. 1

68634026246. 2
68634026247. 3
68634026248. 4

Question Number : 62 Question Id : 6863406634 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

यदि दो पाइपों का समान अभिहित आमाप (नोमिनल साइज) है तो उनका :

1. अंदर का ब्यास सामान होगा
2. बाहर का ब्यास सामान होगा
3. अंदर और बाहर का ब्यास सामान होगा
4. मोटाई सामान होगी

Options :
68634026245. 1
68634026246. 2
68634026247. 3
68634026248. 4

Question Number : 63 Question Id : 6863406635 Question Type : MCQ Option Shuffling : No 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 orifice meter with the increase of the ratio of orifice diameter to pipe diameter (β), the overall pressure loss

1. Increases
2. Decreases
3. Remain constant
4. First decreases, then increases

Options :
68634026249. 1
68634026250. 2
68634026251. 3
68634026252. 4

Question Number : 63 Question Id : 6863406635 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

ऑरीफाइस मीटर में ऑरीफाइस के व्यास और पाइप व्यास (β) के नौपात में वृद्धि के साथ समग्र दाब हानि :

1. बढ़ जाती है

2. कम हो जाती है

3. स्थिर रहती है

4. पहले कम होती है ओर फिर बढ़ती है

Options :
68634026249. 1
68634026250. 2
68634026251. 3
68634026252. 4

Question Number : 64 Question Id : 6863406636 Question Type : MCQ Option Shuffling : No 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 value of fanning friction factor for smooth pipes for $N_{Re} = 10^6$ is approximately:

1. 0.1

2. 0.003

3. 0.01

4. 0.0001

Options :
68634026253. 1
68634026254. 2
68634026255. 3
68634026256. 4

Question Number : 64 Question Id : 6863406636 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

$N_{Re} = 10^6$ के चिकने पाइपों के लिए फेनिंग फ्रिक्शन फैक्टर (घर्षण कारक) का मान लगभग_____ होता है :

1. 0.1

2. 0.003

3. 0.01

4. 0.0001

Options :
68634026253. 1

68634026254. 2
68634026255. 3
68634026256. 4

Question Number : 65 Question Id : 6863406637 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Viscosity has the dimensions

1. $ML^{-1}T^{-3}$
2. $ML^{-1}T^{-1}$
3. $M^{-1}LT$
4. MLT^{-3}

Options :
68634026257. 1
68634026258. 2
68634026259. 3
68634026260. 4

Question Number : 65 Question Id : 6863406637 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

श्यानता की विमाएं (डाइमेन्शन्स) हैं :

1. $ML^{-1}T^{-3}$
2. $ML^{-1}T^{-1}$
3. $M^{-1}LT$
4. MLT^{-3}

Options :
68634026257. 1
68634026258. 2
68634026259. 3
68634026260. 4

Question Number : 66 Question Id : 6863406638 Question Type : MCQ Option Shuffling : No 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 simple pitot-tube measures

1. The density
2. The static pressure
3. The dynamic pressure
4. The total pressure

Options :
68634026261. 1
68634026262. 2
68634026263. 3
68634026264. 4

Question Number : 66 Question Id : 6863406638 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

सिम्पल पीटॉट ट्यूब _____ को मापती है :

1. घनत्व
2. स्थैतिक दाब
3. गतिक दाब
4. कुल दाब

Options :
68634026261. 1
68634026262. 2
68634026263. 3
68634026264. 4

Question Number : 67 Question Id : 6863406639 Question Type : MCQ Option Shuffling : No 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. Unit of heat transfer coefficient is $W/(m^2.k)$
B. Prandtl number is defined as $C_p\mu/k$
C. Prandtl number for liquid metals is of the order of 10^3

Choose the correct answer from the options given below:

1. A and C only

2. C only

3. A and B only

4. B and C only

Options :
68634026265. 1
68634026266. 2
68634026267. 3
68634026268. 4

Question Number : 67 Question Id : 6863406639 Question Type : MCQ Option Shuffling : No 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. ऊष्मा स्थानांतरण गुणांक की इकाई $W/(m^2.k)$ है
B. प्रांडल संख्या को $C_p\mu/k$ के रूप में परिभाषित किया जाता है
C. Pतरल धातुओं के लिए प्रांडल संख्या 10^3 के क्रम में होती है

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

1. केवल A और C

2. केवल C

3. केवल A और B

4. केवल B और C

Options :
68634026265. 1
68634026266. 2
68634026267. 3
68634026268. 4

Question Number : 68 Question Id : 6863406640 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

When heat (in the form of radiation) from sun falls on the steel container (filled with water), water of whole container become hot. Conduction, convection and radiation are involved

A. Heat from outer surface to inner surface of steel container reaches through conduction.
B. Heat transfer through convection also plays an important role
C. Energy from sun to surface of steel container reaches in the form of Radiation

Choose the correct answer from the options given below:

1. C, B, A

2. C, A, B

3. A, B, C

4. B, A, C

Options :
68634026269. 1
68634026270. 2
68634026271. 3
68634026272. 4

Question Number : 68 Question Id : 6863406640 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

जब ऊष्मा (विकिरण के रूप में) सूर्य से एक स्टील के पात्र (जल से भरे) पर पड़ती है, तो पूरे पात्र का जल गर्म हो जाता है। इसमें संवहन, चालन और विकिरण सम्मिलित हैं।

A. स्टील के पात्र की बाहरी सतह से भीतरी सतह तक ऊष्मा चालन (कंडक्शन)के कारण पहुँचती है
B. संवहन के द्वारा ऊष्मा का स्थानांतरण भी महत्वपूर्ण भूमिका निभाता है
C. सूर्य से स्टील के पात्र की सतह तक ऊर्जा विकिरण के रूप में पहुंचती है।

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

1. C, B, A

2. C, A, B

3. A, B, C

4. B, A, C

Options :
68634026269. 1
68634026270. 2
68634026271. 3
68634026272. 4

Question Number : 69 Question Id : 6863406641 Question Type : MCQ Option Shuffling : No 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. The slope of the stripping operating line is always less than one.
B. At the azeotrope , liquid composition equals the vapor composition
C. Adsorption is an endothermic process

Choose the correct answer from the options given below:

1. A only

2. B only

3. C only

4. A and B only

Options :
68634026273. 1
68634026274. 2
68634026275. 3
68634026276. 4

Question Number : 69 Question Id : 6863406641 Question Type : MCQ Option Shuffling : No 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. स्ट्रिपिंग ऑपरेटिंग लाइन का ढाल सदैव एक से कम होता हैं
B. एजियोट्रोप (स्थिरक्वाथी) पर द्रव का संयोजन वाष्प के संयोजन के बराबर होता है।
C. अधिशोषण एक ऊष्मा शोषाणी प्रक्रिया है।

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

1. केवल A

2. केवल B

3. केवल C

4. केवल A और B

Options :
68634026273. 1
68634026274. 2
68634026275. 3
68634026276. 4

Question Number : 70 Question Id : 6863406642 Question Type : MCQ Option Shuffling : No 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: Fourier's law in heat transfer operation is used for conduction.

Reason R: Newton's law of cooling in heat transfer operation is used for Radiation.

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

1. Both A and R are true and R is the correct explanation of A

2. Both A and R are true but R is NOT the correct explanation of A

3. A is true but R is false

4. A is false but R is true

Options :
68634026277. 1
68634026278. 2
68634026279. 3
68634026280. 4

Question Number : 70 Question Id : 6863406642 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

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

अभिकथन A: ऊष्मा स्थानांतरण प्रचालन (हीट ट्रांसफर ऑपरेशन) में फॉरियर नियम का प्रयोग चालन के लिए किया जाता है।

कारण R: ऊष्मा स्थानांतरण प्रचालन (हीट ट्रांसफर ऑपरेशन) में न्यूटन के शीतन का नियम का उपयोग विकिरण के लिये किया जाता है।
उपर्युक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सबसे उपयुक्त उत्तर का चयन कीजिए:

1. A और R दोनों सही हैं और R, A की सही व्याख्या है

2. A और R दोनों सही हैं और R, A की सही व्याख्या नहीं है

3. A सही है लेकिन R सही नहीं है

4. A सही नहीं है लेकिन R सही है

Options :
68634026277. 1
68634026278. 2
68634026279. 3
68634026280. 4

Question Number : 71 Question Id : 6863406643 Question Type : MCQ Option Shuffling : No 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.	$\frac{y^*(1-y^*)}{x(1-x)}$	I.	Reflux ratio
B.	L/D	II.	q
C.	$\frac{H_V - H_F}{H_V - H_L}$	III.	k-value
D.	y^*/x	IV.	Relative volatility

Choose the correct answer from the options given below:

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

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

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

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

Options :
68634026281. 1
68634026282. 2
68634026283. 3
68634026284. 4

Question Number : 71 Question Id : 6863406643 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

सूची I का सूची II से मिलान कीजिए

सूची I		सूची II	
A.	$\frac{y^*(1-y^*)}{x(1-x)}$	I.	पक्षवाही (रीफ्लक्स) अनुपात
B.	L/D	II.	q
C.	$\frac{H_V - H_F}{H_V - H_L}$	III.	k-मान
D.	y^*/x	IV.	सापेक्ष वाष्पशीलता

निम्नलिखित विकल्पों में से सही उत्तर का चयन कीजिए :

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

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

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

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

Options :

68634026281. 1

68634026282. 2

68634026283. 3

68634026284. 4

Question Number : 72 Question Id : 6863406644 Question Type : MCQ Option Shuffling : No 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.	Steam Nozzle	I.	Mach Number
B.	Compressible flow	II.	Biot Number
C.	Surface tension	III.	Super saturation
D.	Heat conduction	IV.	Webes Number

Choose the correct answer from the options given below:

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

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

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

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

Options :
68634026285. 1
68634026286. 2
68634026287. 3
68634026288. 4

Question Number : 72 Question Id : 6863406644 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

सूची I का सूची II से मिलान कीजिए

	सूची I		सूची II
A.	वाष्प नोंजल	I.	माख संख्या
B.	संपीडनीय प्रभाव	II.	बायोट संख्या
C.	पृष्ट तनाव	III.	अति संतृप्त
D.	ऊष्मा चालन	IV.	वेब्स संख्या

निम्नलिखित विकल्पों में से सही उत्तर का चयन कीजिए :

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

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

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

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

Options :
68634026285. 1
68634026286. 2
68634026287. 3
68634026288. 4

Question Number : 73 Question Id : 6863406645 Question Type : MCQ Option Shuffling : No 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 usually not used as the heat exchange fluid in a flat plate solar collector?

1. Air

2. Water

3. Fuel oil

4. Ethylene glycol and water

Options :
68634026289. 1
68634026290. 2
68634026291. 3
68634026292. 4

Question Number : 73 Question Id : 6863406645 Question Type : MCQ Option Shuffling : No 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 किसका उपयोग सामान्यत: फ़्लैट प्लेट सोलर कलैक्टर में ऊष्मा विनिमय तरल रूप में नहीं किया जाता है?

1. वायु
2. जल
3. ईंधन तेल
4. एथिलीन ग्लाइकॉल और जल

Options :
68634026289. 1
68634026290. 2
68634026291. 3
68634026292. 4

Question Number : 74 Question Id : 6863406646 Question Type : MCQ Option Shuffling : No 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 heat flux in the free convection regime of pool boiling varies as the

1. ΔT^3
2. $\Delta T^{5/4}$
3. ΔT^2
4. $\Delta T^{1/4}$

Options :
68634026293. 1
68634026294. 2
68634026295. 3
68634026296. 4

Question Number : 74 Question Id : 6863406646 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

पूल बॉइलिंग (कुंड क्वथन) के मुक्त संवहन क्षेत्र में ऊष्माभिवाह हीट फ्लक्स प्रवृत्ति _____ के अनुसार परिवर्ती होती है :

1. ΔT^3

2. $\Delta T^{5/4}$

3. ΔT^2

4. $\Delta T^{1/4}$

Options :
68634026293. 1
68634026294. 2
68634026295. 3
68634026296. 4

Question Number : 75 Question Id : 6863406647 Question Type : MCQ Option Shuffling : No 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 unit of heat transfer coefficient is

1. W/(m.k)

2. $W/(m^2.k)$

3. $J/(m^2.k)$

4. J/(m.k)

Options :
68634026297. 1
68634026298. 2
68634026299. 3
68634026300. 4

Question Number : 75 Question Id : 6863406647 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

ऊष्मा स्थानांतरण गुणांक की इकाई है :

1. $W/(m \cdot k)$

2. $W/(m^2 \cdot k)$

3. $J/(m^2 \cdot k)$

4. $J/(m \cdot k)$

Options :

68634026297. 1
68634026298. 2
68634026299. 3
68634026300. 4

Question Number : 76 Question Id : 6863406648 Question Type : MCQ Option Shuffling : No 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 film type condensation over a vertical tube s local heat transfer coefficient is

1. Inversely proportional to local film thickness
2. Directly proportional to local film thickness
3. Equal to local film thickness
4. Independent of local film thickness

Options :
68634026301. 1
68634026302. 2
68634026303. 3
68634026304. 4

Question Number : 76 Question Id : 6863406648 Question Type : MCQ Option Shuffling : No 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 ऊर्ध्व नलिका (वर्टिकल ड्यूब) से होकर फिल्म प्रकार के संघनन में स्थानीय ऊष्मा स्थानांतरण गुणांक होता है :

1. स्थानीय फिल्म की मोटाई के व्युत्क्रमानुपाती
2. स्थानीय फिल्म की मोटाई के सीधे आनुपातिक
3. स्थानीय फिल्म की मोटाई के बराबर
4. स्थानीय फिल्म की मोटाई से स्वतंत्र / निरपेक्ष

Options :
68634026301. 1
68634026302. 2
68634026303. 3
68634026304. 4

Question Number : 77 Question Id : 6863406649 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Species A is diffusing at steady state from surface of a sphere (radius =1cm) into a stagnant fluid. If the diffusive flux at a distance r=3 cm from the center of the sphere is 27 mol/cm^{2}s, the diffusive flux (in mol/cm^{2}s) at a distance r=9 cm is

1. 1

2. 9

3. 3

4. 27

Options :

68634026305. 1
68634026306. 2
68634026307. 3
68634026308. 4

Question Number : 77 Question Id : 6863406649 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

स्पीशीज A एक गोल (त्रिज्या =1cm) की सतह से स्थायी दशा (स्टेडी स्टेट) में एक रुद्ध तरल (स्टैग्नेंट) में विसरित हो रहा है। यदि गोले के केंद्र से r =3 cm की दूरी पर विसारी प्रवाह (डिफ्यूसिन फ्लक्स) 27 mol/cm^{2}s है, तो दूरी r=9 cm पर विसारी प्रवाह (mol/cm^{2}s में) होगा :

1. 1

2. 9

3. 3

4. 27

Options :

68634026305. 1
68634026306. 2
68634026307. 3
68634026308. 4

Question Number : 78 Question Id : 6863406650 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

At total reflux, the capacity of a distillation column is

1. Zero
2. Maximum
3. Minimum
4. Optimum

Options :
68634026309. 1
68634026310. 2
68634026311. 3
68634026312. 4

Question Number : 78 Question Id : 6863406650 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

पूर्ण पश्चवाह (टोटल रीफ्लक्स) पर आसवन कॉलम की क्षमता होती है :

1. शून्य
2. अधिकतम
3. न्यूनतम
4. इष्टतम

Options :
68634026309. 1
68634026310. 2
68634026311. 3
68634026312. 4

Question Number : 79 Question Id : 6863406651 Question Type : MCQ Option Shuffling : No 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 flooding velocity in a plate column, operating at 1 atm pressure is 3m/s. If the column is operated at 2 atm pressure, under otherwise identical conditions, the flooding velocity will be

1. $\frac{3}{\sqrt{2}}$
2. $\frac{\sqrt{3}}{2}$
3. $\frac{3}{2}$
4. $\frac{2}{3}$

Options :

68634026313. 1
68634026314. 2
68634026315. 3
68634026316. 4

Question Number : 79 Question Id : 6863406651 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

1 वायुमंडलीय डाव पर प्रचालन कर रह प्लेट के कॉलम का आप्लावन वेग (फ्लाडिंग वेलोसिटी) 3m/s है। यदि कॉलम को
2 वायुमंडल दाब पर अन्यथा समान स्थतियों में प्रचालित किया जाता है, तो आप्लावन वेग होगा :

1. $\frac{3}{\sqrt{2}}$
2. $\frac{\sqrt{3}}{2}$
3. $\frac{3}{2}$
4. $\frac{2}{3}$

Options :

68634026313. 1
68634026314. 2
68634026315. 3
68634026316. 4

Question Number : 80 Question Id : 6863406652 Question Type : MCQ Option Shuffling : No 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 slope of operating line in the rectifying section of a distillation column is unity if the reflux ratio is

1. 0

2. ∞

3. 1

4. R_{min}

Options :
68634026317. 1
68634026318. 2
68634026319. 3
68634026320. 4

Question Number : 80 Question Id : 6863406652 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

आसवन कॉलम के रेक्टीफाइंग / परिशोधन भाग में ऑपरेटिंग लाइन (प्रचालन रेखा) का ढाल एक होता है, यदि पश्चवाही अनुपात है :

1. 0

2. ∞

3. 1

4. R_{min}

Options :
68634026317. 1
68634026318. 2
68634026319. 3
68634026320. 4

Question Number : 81 Question Id : 6863406653 Question Type : MCQ Option Shuffling : No 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: An acidic solution has a pH value less than 7.
Statement II: The functioning of radiation pyrometer is based on the stefan-Boltzmann law.
In the light of the above statements, choose the most appropriate answer from the options given below.

1. Both Statement I and Statement II are 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 :
68634026321. 1
68634026322. 2
68634026323. 3
68634026324. 4

Question Number : 81 Question Id : 6863406653 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं:

कथन I: एक अम्लीय विलयन का pH मान 7 से कम होता है।

कथन II: रेडियेशन पाइरोमीटर की कार्यप्रणाली स्टीफन-बोल्ट्जमेन नियम पर आधारित है।

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

1. कथन I और II दोनों सत्य हैं

2. कथन I और II दोनों असत्य हैं

3. कथन I सत्य है, लेकिन कथन II असत्य है

4. कथन I असत्य है, लेकिन कथन II सत्य है

Options :
68634026321. 1
68634026322. 2
68634026323. 3
68634026324. 4

Question Number : 82 Question Id : 6863406654 Question Type : MCQ Option Shuffling : No 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: If the transfer function of the two non- interacting first order systems connected in series are $G_1(S)$ and $G_2(S)$, the overall function is $G_1(S)$, $G_2(S)$

Reason R: When damping coefficient become zero, the system is called undamped.

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 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 :

68634026325. 1
68634026326. 2
68634026327. 3
68634026328. 4

Question Number : 82 Question Id : 6863406654 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

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

अभिकथन A: यदि दो सीरीज में जुड़े अन्योन्य क्रियाहीन (नॉन इन्टरैक्टिंग) प्रथम क्रम के सिस्टमों प्रणालियों का आंतरिक फलन $G_1(S)$ और $G_2(S)$ है, तो समग्र आंतरिक फलन $G_1(S)$, $G_2(S)$ होता है।

कारण R: जब अवमंदक गुणांक शून्य हो जाता हैं, तोसिस्टम अवमंदित कहलाता है।
उपर्युक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सबसे उपयुक्त उत्तर का चयन कीजिए:

1. A और R दोनों सहीं हैं और R, A की सही व्याख्या है

2. A और R दोनों सहीं हैं और R, A की सही व्याख्या नहीं है

3. A सही है लेकिन R सही नहीं है

4. A सही नहीं है लेकिन R सही है

Options :

68634026325. 1
68634026326. 2
68634026327. 3
68634026328. 4

Question Number : 83 Question Id : 6863406655 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Tachometer is used to measure

1. Velocity
2. Pressure
3. Speed
4. Composition

Options :
68634026329. 1
68634026330. 2
68634026331. 3
68634026332. 4

Question Number : 83 Question Id : 6863406655 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

टैकोमीटर का उपयोग _____ को मापने के लिए किया जाता है :

1. वेग
2. दाब
3. चाल
4. संयोजन

Options :
68634026329. 1
68634026330. 2
68634026331. 3
68634026332. 4

Question Number : 84 Question Id : 6863406656 Question Type : MCQ Option Shuffling : No 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 manometer liquid has maximum capillary rise relative to mercury?

1. Water

2. Mercury

3. Carbon tetrachloride

4. Ethyl alcohol

Options :
68634026333. 1
68634026334. 2
68634026335. 3
68634026336. 4

Question Number : 84 Question Id : 6863406656 Question Type : MCQ Option Shuffling : No 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 किस मैनोमीटर द्रव का पारे के सापेक्ष अधिकतम केशिका उत्थान होता है?

1. जल

2. पारा

3. कार्बन टेट्रा क्लोराइड

4. एथिल एल्कोहॉल

Options :
68634026333. 1
68634026334. 2
68634026335. 3
68634026336. 4

Question Number : 85 Question Id : 6863406657 Question Type : MCQ Option Shuffling : No 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 Bourden tube of a vapor pressure thermometer is a

1. Primary element

2. Secondary element

3. Manipulating element

4. Functioning element

Options :
68634026337. 1

68634026338. 2
68634026339. 3
68634026340. 4

Question Number : 85 Question Id : 6863406657 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

वाष्प दाब (वेपर प्रेशर) थर्मामीटर की बूरदो नली एक _____ है।

1. प्राथमिक अवयव (एलिमेंट)
2. द्वितीयक अवयव (एलिमेंट)
3. हेरफेर अवयव (मेनीपुलेटिंग एलिमेंट)
4. क्रियाशील अवयव (एलिमेंट)

Options :
68634026337. 1
68634026338. 2
68634026339. 3
68634026340. 4

Question Number : 86 Question Id : 6863406658 Question Type : MCQ Option Shuffling : No 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 phase lag of a second order system is always

1. $\leq 180^{o}$
2. $\leq 90^{o}$
3. 45^{o}
4. 135^{o}

Options :
68634026341. 1
68634026342. 2
68634026343. 3
68634026344. 4

Question Number : 86 Question Id : 6863406658 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

द्वितीयक क्रम प्रणाली / सेकिंड ऑर्डर सिस्टम की प्रावस्था पश्चता (फ़ेज लेग) सदैव _____ होती है :

1. $\leq 180^{\circ}$

2. $\leq 90^{\circ}$

3. 45°

4. 135°

Options :

68634026341. 1
68634026342. 2
68634026343. 3
68634026344. 4

Question Number : 87 Question Id : 6863406659 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Phase angle (Ø) of the sinusoidal response of a first order system is given by:

1. $\emptyset = \tan(w\tau)$

2. $\emptyset = \tan^{-1}(-w\tau)$

3. $\emptyset = \tan^{-1}(w\tau)$

4. $\emptyset = \mathrm{Sin}^{-1}(-w\tau)$

Options :

68634026345. 1
68634026346. 2
68634026347. 3
68634026348. 4

Question Number : 87 Question Id : 6863406659 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

प्रथम कर्म प्रणाली / फर्स्ट ऑर्डर सिस्टम की ज्यावक्रीय अनुक्रिया के लिए प्रावस्था कोण (ø) को _____ द्वारा दिया जाता है:

1. $\emptyset = \tan(w\tau)$
2. $\emptyset = \tan^{-1}(-w\tau)$
3. $\emptyset = \tan^{-1}(w\tau)$
4. $\emptyset = \text{Sin}^{-1}(-w\tau)$

Options :
68634026345. 1
68634026346. 2
68634026347. 3
68634026348. 4

Question Number : 88 Question Id : 6863406660 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Dynamic error for a ramp input (At) in a critically damped second order instrument is

1. At
2. 2At
3. 3At
4. 4At

Options :
68634026349. 1
68634026350. 2
68634026351. 3
68634026352. 4

Question Number : 88 Question Id : 6863406660 Question Type : MCQ Option Shuffling : No 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 क्रांतिक रूप से अवमंदित द्वितीयक कोटि यंत्र में रैम्प इनपुट (At) के लिए गतिक त्रुटि (डाइनेमिक ऐरर) होती है :

1. At
2. 2At
3. 3At
4. 4At

Options :

68634026349. 1
68634026350. 2
68634026351. 3
68634026352. 4

Question Number : 89 Question Id : 6863406661 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Overdamping in a process control system

1. Is too bad
2. Is acceptable
3. Is highly desirable
4. Decrease dynamic error

Options :
68634026353. 1
68634026354. 2
68634026355. 3
68634026356. 4

Question Number : 89 Question Id : 6863406661 Question Type : MCQ Option Shuffling : No 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 प्रोसेस कंट्रोल सिस्टम (प्रक्रम नियंत्रण तंत्र) में ओवरडंपिंग / अतिअवमंदन

1. बहुत बुरा है
2. स्वीकार्य है
3. अत्यधिक वांछनीय है
4. गतिक त्रुटि को कम कर देता है

Options :
68634026353. 1
68634026354. 2
68634026355. 3
68634026356. 4

Question Number : 90 Question Id : 6863406662 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

At a corner frequency, the phase angle for the sinusoidal response of a first order system is

1. -90°
2. -45°
3. 0°
4. -60°

Options :
68634026357. 1
68634026358. 2
68634026359. 3
68634026360. 4

Question Number : 90 Question Id : 6863406662 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

विच्छेदक आवृत्ति / कॉर्नर फ्रीक्वेंसी पर, प्रथम क्रम प्रणाली / फर्स्ट ऑर्डर सिस्टम की ज्यावक्रीय अनुक्रिया के लिए प्रावस्था कोण होता है :

1. -90°
2. -45°
3. 0°
4. -60°

Options :
68634026357. 1
68634026358. 2
68634026359. 3
68634026360. 4

Question Number : 91 Question Id : 6863406663 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Alcohol content in freshly prepared natural and fortified wine may be respectively around

A. 7- 15%
B. 14-30 %
C. 30-40 %
D. 40-50%
E. 50-60%

Choose the correct answer from the options given below:

1. A and C only

2. B and D only

3. A and B only

4. C and D only

Options :
68634026361. 1
68634026362. 2
68634026363. 3
68634026364. 4

Question Number : 91 Question Id : 6863406663 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

ताजी बनी प्राकृतिक और प्रबलीकृत (फोर्टीफाइड) लाइन में एल्कोहॉल की मात्रा क्रमश: लगबग

A. 7- 15%
B. 14-30 %
C. 30-40 %
D. 40-50%
E. 50-60%

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

1. केवल A और C

2. केवल B और D

3. केवल A और B

4. केवल C और D

Options :
68634026361. 1
68634026362. 2
68634026363. 3
68634026364. 4

Question Number : 92 Question Id : 6863406664 Question Type : MCQ Option Shuffling : No 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.	Current Viability	I.	Prime cost
B.	Current Asset	II.	Acid test
C.	Direct material and labour	III.	Account receivable
D.	Liquidity	IV.	Bank overdraft

Choose the correct answer from the options given below:

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

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

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

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

Options :
68634026365. 1
68634026366. 2
68634026367. 3
68634026368. 4

Question Number : 92 Question Id : 6863406664 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

सूची I का सूची II से मिलान कीजिए

सूची I		सूची II	
A.	वर्तमान व्यवहार्यता (करेंट वाए निलिटी)	I.	मुख्य लागत
B.	वर्तमान संपत्ति	II.	अम्ल परीक्षण
C.	प्रत्यक्ष सामग्री (डायरेक्ट मैटीरियल)	III.	लेनदारी खाते
D.	तरलता	IV.	बैंक ओवरड्राफ्ट

निम्नलिखित विकल्पों में से सही उत्तर का चयन कीजिए :

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

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

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

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

Options :

68634026365. 1

68634026366. 2

68634026367. 3

68634026368. 4

Question Number : 93 Question Id : 6863406665 Question Type : MCQ Option Shuffling : No 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.	Aniline from benzene	I.	Nitration
B.	Acetonitrile from propylene	II.	Oxidation
C.	Benzoic acid from toluene	III.	Ammoxidation
D.	Styrene from ethylbenzene	IV.	Dehydrogenation

Choose the correct answer from the options given below:

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

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

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

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

Options :

68634026369. 1

68634026370. 2

68634026371. 3

68634026372. 4

Question Number : 93 Question Id : 6863406665 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

सूची I का सूची II से मिलान कीजिए

सूची I		सूची II	
A.	बेन्जीन से एनिलीन	I.	नाइट्रीकरण
B.	प्रोपीलीन से एसीटोनाइट्राइल	II.	ऑक्सीकरण
C.	टोलुइन से बेन्जोइक अम्ल	III.	एमोऑक्सीडेशन /अमो
D.	एथिल बेन्जीन से स्टाइरीन	IV.	विहाइड्रोजनीकरण

निम्नलिखित विकल्पों में से सही उत्तर का चयन कीजिए :

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

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

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

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

Options :
68634026369. 1
68634026370. 2
68634026371. 3
68634026372. 4

Question Number : 94 Question Id : 6863406666 Question Type : MCQ Option Shuffling : No 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 manufacturer produced 15000 consumer product which are sold at Rs 300/ each. At this volume, fixed costs were Rs. 15.2 lakhs and variable costs were Rs. 21 lakhs. What is the break even quantity ?

1. 4000

2. 7800

3. 8400

4. 9500

Options :
68634026373. 1
68634026374. 2
68634026375. 3
68634026376. 4

Question Number : 94 Question Id : 6863406666 Question Type : MCQ Option Shuffling : No 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 निर्माता ने 15000 उपभोक्ता बनाए, जो 300 रु. प्रति नग की दर से बेचे गए। इस मात्रा में, स्थायी लागत 15.2 लाख रुपये और परिवर्ती लागत 21 लाख थी। इसकी लाभ-अलाभ मात्रा क्या होगी?

1. 4000
2. 7800
3. 8400
4. 9500

Options :
68634026373. 1
68634026374. 2
68634026375. 3
68634026376. 4

Question Number : 95 Question Id : 6863406667 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Manufacturing cost in a chemical company does not include

1. Administrative cost
2. Plant overheads
3. Fixed charges
4. Direct production cost

Options :
68634026377. 1
68634026378. 2
68634026379. 3
68634026380. 4

Question Number : 95 Question Id : 6863406667 Question Type : MCQ Option Shuffling : No 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 रसायन कंपनी में निर्माण लागत में सम्मिलित नहीं होती है:

1. प्रशासनिक लागत
2. संयंत्र के नियमित खर्चे
3. स्थायी खर्चे / भाड़े
4. प्रत्यक्ष उत्पादन लागत

Options :

68634026377. 1

68634026378. 2

68634026379. 3

68634026380. 4

Question Number : 96 Question Id : 6863406668 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The most flexible criteria for analysing an economic investment is

1. Present value method
2. Future value method
3. Salvage value
4. Rate of return criteria

Options :

68634026381. 1

68634026382. 2

68634026383. 3

68634026384. 4

Question Number : 96 Question Id : 6863406668 Question Type : MCQ Option Shuffling : No 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 आर्थिक निवेश के विश्लेषण के लिए सबसे लचीला मानक है :

1. वर्तमान मूल्य विधि
2. भावी मूल्य विधि
3. बचाव मान
4. लाभ की दर मानक

Options :

68634026381. 1

68634026382. 2

68634026383. 3

68634026384. 4

Question Number : 97 Question Id : 6863406669 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Diameter of the distillation column is set by

1. Number of theoretical plates
2. Allowable vapour velocity
3. Static sub mergence
4. Length of straight rectangular weir

Options :
68634026385. 1
68634026386. 2
68634026387. 3
68634026388. 4

Question Number : 97 Question Id : 6863406669 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

आसवन कॉलम के व्यास का निर्धारण

1. सैद्धांतिक प्लेटों की संख्या
2. स्वीकार्य वाष्पवेग
3. स्थैतिक निमाज्जन
4. खड़े आयताकार तार की लम्बाई

Options :
68634026385. 1
68634026386. 2
68634026387. 3
68634026388. 4

Question Number : 98 Question Id : 6863406670 Question Type : MCQ Option Shuffling : No 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 an example of an analgesic medicine?

1. Phenacetine
2. Paracetamol
3. Chloramphenicol
4. Morphine

Options :
68634026389. 1

68634026390. 2
68634026391. 3
68634026392. 4

Question Number : 98 Question Id : 6863406670 Question Type : MCQ Option Shuffling : No 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 एक पीदाहारी ओषधी का उदाहरण नहीं है ?

1. फेनेसिटीन
2. पैरासिटामोल
3. क्लोरेमफेनीकोल
4. मोर्फीन

Options :
68634026389. 1
68634026390. 2
68634026391. 3
68634026392. 4

Question Number : 99 Question Id : 6863406671 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Essential oils are usually obtained using

1. Steam distillation
2. Extractive distillation
3. Solvent extraction
4. Leaching

Options :
68634026393. 1
68634026394. 2
68634026395. 3
68634026396. 4

Question Number : 99 Question Id : 6863406671 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

वाष्पशील तेलों को सामान्यत: _____ के उपयोग द्वारा प्राप्त किया जाता है :

1. वाष्प आसवन

2. निष्कर्षी आसवन

3. विलायक निष्कर्षण

4. निक्षालन

Options :
68634026393. 1
68634026394. 2
68634026395. 3
68634026396. 4

Question Number : 100 Question Id : 6863406672 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Which one of the following process sequences is used in the sugar industry?

1. Ca_2HPO_4/ Lime treatment → Crystallization → Crushing

2. Ca_2HPO_4/ Lime treatment → Multiple stage evaporation→ Crystallization

3. Crushing → Crystallization → Ca_2HPO_4/ Lime treatment

4. Multiple stage evaporation→ Crystallization → Ca_2HPO_4/ Lime treatment

Options :
68634026397. 1
68634026398. 2
68634026399. 3
68634026400. 4

Question Number : 100 Question Id : 6863406672 Question Type : MCQ Option Shuffling : No 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 किस प्रक्रम अनुक्रम का शर्करा उद्योग में उपयोग किया जाता है?

1. Ca_2HPO_4/ चूना से उपचार → क्रिस्टलीकरण → दलन

2. Ca_2HPO_4/ चूना से उपचार → बहुचरण वाष्पन→ क्रिस्टलीकरण

3. Crushing → क्रिस्टलीकरण → Ca_2HPO_4/ चूना से उपचार

4. बहुचरण वाष्पन→ क्रिस्टलीकरण → Ca_2HPO_4/ चूना से उपचार

Options :

68634026397. 1

68634026398. 2

68634026399. 3

68634026400. 4