

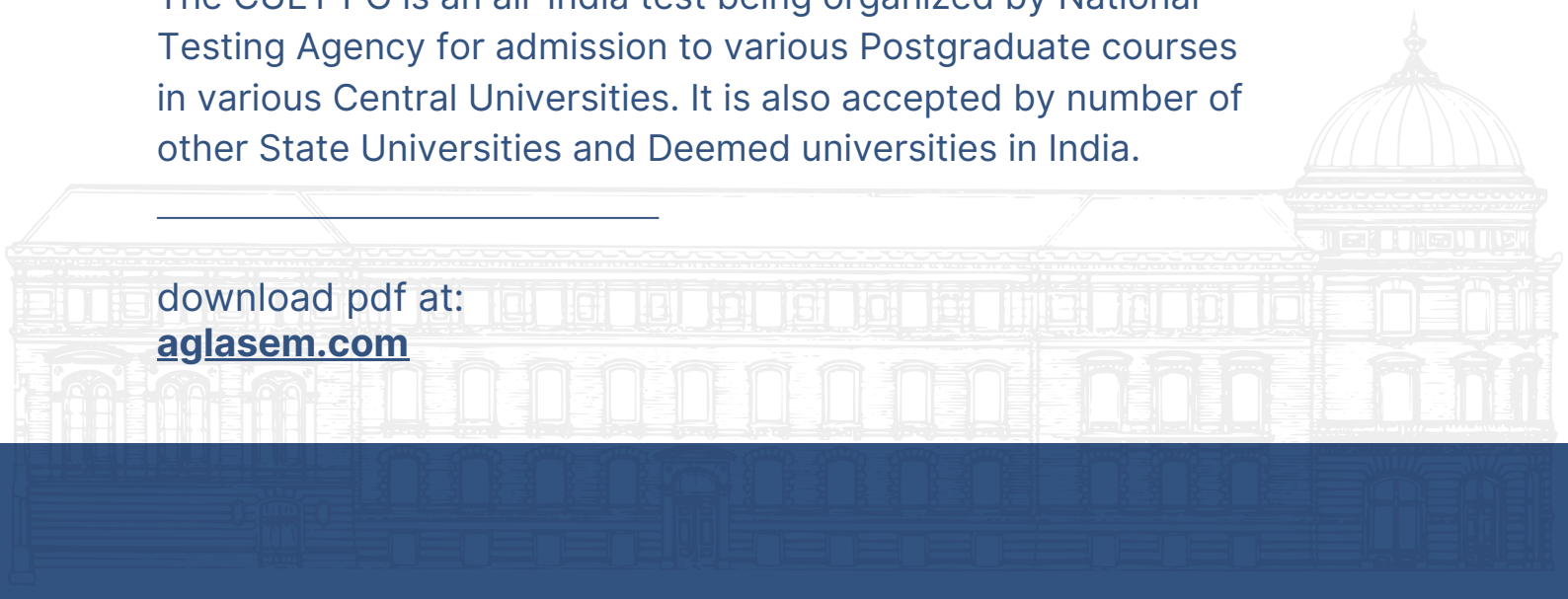


Common University Entrance Test (PG)

CUET PG 2023 Question Paper

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Question Paper Name :	Chemistry Eng 25th June 2023 Shift 2
Subject Name :	Chemistry Eng
Creation Date :	2023-06-25 18:05:06
Duration :	120
Total Marks :	400
Display Marks:	Yes

Chemistry

Group Number :	1
Group Id :	686340378
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 :	686340751
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 :	6863401255
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Id : 68634038183 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (1 to 5)

Question Label : Comprehension

Read the passage carefully and answer the questions that follows:

The reformer must know that what moves people is the authentic life, not mere writing. The newspapers and journals that Lokmanya Tilak and Gandhiji ran the books they wrote, sold little, but had enormous effect. Their writing was known to reflect and be just an extension of their exemplary lives. It was the authenticity of their lives which lent weight to their message, to their example. All knew that their lives were an integral whole - they were not moral in public life and lax in private, nor vice versa. They were not full of pious thoughts and sacred resolutions within the walls of a temple and cheats outside.

A writer who is merely entertaining his readers, even one who is merely informing them, can do what he wants with the rest of his life. But the writer who sets out to use his pen to reform public life cannot afford such dualities.

Here is the testimony of one great man – Gandhiji – about the influence of another, Lokmanya Tilak: “I believe that an editor who has anything worth saying and who commands a clientele cannot be easily hushed. He delivers his finished message as soon as he is put under duress. The Lokmanya Spoke more eloquently from the Mandalay fortress than through the columns of the printed *Kesari*. His influence was multiplied thousandfold by his imprisonment and his speech, and his pen had acquired much greater power after he was discharged than before his imprisonment. By his death we have been editing his paper without pen and speech through the sacred resolution of the people to realise his life’s dream. He could possibly have done more if he were today in the flesh preaching his view. Critics like me would perhaps be still finding fault in this expression of his or that. Today his message rules millions of hearts which are determined to raise a permanent living memorial by the fulfilment of his ambition in their lives.”

Sub questions

Question Number : 1 Question Id : 68634038184 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Lokmanya spoke more eloquently from the Mandalay fortress than through the columns of the printed *Kesari*.

What is the meaning of ‘eloquently’ in the above sentence?

1. announce solemnly
2. Convert in the intelligible language
3. Language understood by the uneducated mass
4. Clearly expressive

Options :

- 686340150801. 1
- 686340150802. 2
- 686340150803. 3
- 686340150804. 4

Question Number : 2 Question Id : 68634038185 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Which of the following is the result of Lokmanya Tilak's exemplary life ?

1. People resolved to fulfil his life's dreams
2. The newspapers edited by him did not incur money loss
3. The books written by him were useful
4. Critics still find fault with his views

Options :

686340150805. 1
686340150806. 2
686340150807. 3
686340150808. 4

Question Number : 3 Question Id : 68634038186 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

In the context of the passage, which of the following statement about Lokmanya Tilak and Mahatma Gandhi is true?

1. Their influence on people was negligible
2. Very few people used to read the newspapers edited by them
3. They were moral in private life but lax in public life
4. They were allowed to edit their newspapers even from inside the jail

Options :

686340150809. 1
686340150810. 2
686340150811. 3
686340150812. 4

Question Number : 4 Question Id : 68634038187 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the following is the general tendency of critics, according to the passage?

1. To find fault with one or the other expression of a writer
2. To praise only those writers whom they like
3. To suggest new ideas to the public
4. To justify their criticism

Options :

686340150813. 1
686340150814. 2

686340150815. 3

686340150816. 4

Question Number : 5 Question Id : 68634038188 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

Lokmanya Tilak's messages were most effective:

1. when he delivered through his editorials
2. before his imprisonment
3. when he became an informer
4. when he delivered speeches

Options :

686340150817. 1

686340150818. 2

686340150819. 3

686340150820. 4

Question Id : 68634038183 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (1 to 5)

Question Label : Comprehension

Read the passage carefully and answer the questions that follows:

The reformer must know that what moves people is the authentic life, not mere writing. The newspapers and journals that Lokmanya Tilak and Gandhiji ran the books they wrote, sold little, but had enormous effect. Their writing was known to reflect and be just an extension of their exemplary lives. It was the authenticity of their lives which lent weight to their message, to their example. All knew that their lives were an integral whole - they were not moral in public life and lax in private, nor vice versa. They were not full of pious thoughts and sacred resolutions within the walls of a temple and cheats outside.

A writer who is merely entertaining his readers, even one who is merely informing them, can do what he wants with the rest of his life. But the writer who sets out to use his pen to reform public life cannot afford such dualities.

Here is the testimony of one great man – Gandhiji – about the influence of another, Lokmanya Tilak: "I believe that an editor who has anything worth saying and who commands a clientele cannot be easily hushed. He delivers his finished message as soon as he is put under duress. The Lokmanya Spoke more eloquently from the Mandalay fortress than through the columns of the printed *Kesari*. His influence was multiplied thousandfold by his imprisonment and his speech, and his pen had acquired much greater power after he was discharged than before his imprisonment. By his death we have been editing his paper without pen and speech through the sacred resolution of the people to realise his life's dream. He could possibly have done more if he were today in the flesh preaching his view. Critics like me would perhaps be still finding fault in this expression of his or that. Today his message rules millions of hearts which are determined to raise a permanent living memorial by the fulfilment of his ambition in their lives."

Sub questions

Question Number : 1 Question Id : 68634038184 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

Lokmanya spoke more eloquently from the Mandalay fortress than through the columns of the printed *Kesari*.

What is the meaning of 'eloquently' in the above sentence?

1. announce solemnly
2. Convert in the intelligible language
3. Language understood by the uneducated mass
4. Clearly expressive

Options :

686340150801. 1
686340150802. 2
686340150803. 3
686340150804. 4

Question Number : 2 Question Id : 68634038185 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

Which of the following is the result of Lokmanya Tilak's exemplary life ?

1. People resolved to fulfil his life's dreams
2. The newspapers edited by him did not incur money loss
3. The books written by him were useful
4. Critics still find fault with his views

Options :

686340150805. 1
686340150806. 2
686340150807. 3
686340150808. 4

Question Number : 3 Question Id : 68634038186 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

In the context of the passage, which of the following statement about Lokmanya Tilak and Mahatma Gandhi is true?

1. Their influence on people was negligible
2. Very few people used to read the newspapers edited by them
3. They were moral in private life but lax in public life
4. They were allowed to edit their newspapers even from inside the jail

Options :

- 686340150809. 1
- 686340150810. 2
- 686340150811. 3
- 686340150812. 4

Question Number : 4 Question Id : 68634038187 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

Which of the following is the general tendency of critics, according to the passage?

1. To find fault with one or the other expression of a writer
2. To prize only those writers whom they like
3. To suggest new ideas to the public
4. To justify their criticism

Options :

- 686340150813. 1
- 686340150814. 2
- 686340150815. 3
- 686340150816. 4

Question Number : 5 Question Id : 68634038188 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

Lokmanya Tilak's messages were most effective:

1. when he delivered through his editorials
2. before his imprisonment
3. when he became an informer
4. when he delivered speeches

Options :

- 686340150817. 1

686340150818. 2

686340150819. 3

686340150820. 4

Sub-Section Number :

2

Sub-Section Id :

6863401256

Question Shuffling Allowed :

Yes

Is Section Default? :

null

Question Number : 6 Question Id : 68634038189 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

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

Rennet casein is produced _____ skin milk by coagulation _____ rennet. Soluble calcium ions are required _____ this reaction. Sufficient quantities _____ calcium is already present in milk.

1. from, with, for, of

2. from, with, of, for

3. from, in, with, for

4. from, of, for, with

Options :

686340150821. 1

686340150822. 2

686340150823. 3

686340150824. 4

Question Number : 6 Question Id : 68634038189 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

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

Rennet casein is produced _____ skin milk by coagulation _____ rennet. Soluble calcium ions are required _____ this reaction. Sufficient quantities _____ calcium is already present in milk.

1. from, with, for, of

2. from, with, of, for

3. from, in, with, for

4. from, of, for, with

Options :

686340150821. 1

686340150822. 2

686340150823. 3

686340150824. 4

Question Number : 7 Question Id : 68634038190 Question Type : MCQ Option Shuffling : No 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.	Plagiarize	I.	Disrespectful
B.	Dubious	II.	Gift
C.	Contemptuous	III.	Uncertain
D.	Hamper	IV.	Copy

Choose the correct answer from the options given below:

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

Options :

- 686340150825. 1
- 686340150826. 2
- 686340150827. 3
- 686340150828. 4

Question Number : 7 Question Id : 68634038190 Question Type : MCQ Option Shuffling : No 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.	Plagiarize	I.	Disrespectful
B.	Dubious	II.	Gift
C.	Contemptuous	III.	Uncertain
D.	Hamper	IV.	Copy

Choose the correct answer from the options given below:

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

Options :

- 686340150825. 1
- 686340150826. 2
- 686340150827. 3
- 686340150828. 4

Question Number : 8 Question Id : 68634038191 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

Select the suitable grammatically correct sentence from the given options.

1. The team is confident to win the match
2. The team is confident of winning the match
3. The team is confident of win the match
4. The team is confident for winning the match

Options :

686340150829. 1
686340150830. 2
686340150831. 3
686340150832. 4

Question Number : 8 Question Id : 68634038191 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

Select the suitable grammatically correct sentence from the given options.

1. The team is confident to win the match
2. The team is confident of winning the match
3. The team is confident of win the match
4. The team is confident for winning the match

Options :

686340150829. 1
686340150830. 2
686340150831. 3
686340150832. 4

Question Number : 9 Question Id : 68634038192 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

Fill in the blank with appropriate word from the options given below:

The foodgrains stocks in India are at all time _____

1. highest
2. high
3. lowest
4. cost

Options :

686340150833. 1
686340150834. 2
686340150835. 3
686340150836. 4

Question Number : 9 Question Id : 68634038192 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

Fill in the blank with appropriate word from the options given below:

The foodgrains stocks in India are at all time _____

1. highest
2. high
3. lowest
4. cost

Options :

686340150833. 1
686340150834. 2
686340150835. 3
686340150836. 4

Question Number : 10 Question Id : 68634038193 Question Type : MCQ Option Shuffling : No 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 spelling word for:

"A board game in which players buildup words from small size lettered tiles."

1. Scrablle
2. Scrabble
3. Skrable
4. Scrablee

Options :

686340150837. 1
686340150838. 2
686340150839. 3
686340150840. 4

Question Number : 10 Question Id : 68634038193 Question Type : MCQ Option Shuffling : No 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 spelling word for:

"A board game in which players buildup words from small size lettered tiles."

1. Scrablle
2. Scrabble
3. Skrable
4. Scrablee

Options :

686340150837. 1
686340150838. 2
686340150839. 3
686340150840. 4

Question Number : 11 Question Id : 68634038194 Question Type : MCQ Option Shuffling : No 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 $5x+4y = 83$ and $\frac{2x}{3y} = 1\frac{1}{21}$, then the value of x^2-y^2 is:

1. 83

2. 72

3. 18

4. 4

Options :

686340150841. 1

686340150842. 2

686340150843. 3

686340150844. 4

Question Number : 11 Question Id : 68634038194 Question Type : MCQ Option Shuffling : No 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 $5x+4y = 83$ and $\frac{2x}{3y} = 1\frac{1}{21}$, then the value of x^2-y^2 is:

1. 83

2. 72

3. 18

4. 4

Options :

686340150841. 1

686340150842. 2

686340150843. 3

686340150844. 4

Question Number : 12 Question Id : 68634038195 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Find the greatest possible length which can be used to measure exactly the lengths 16 m 65 cm, 9 m and 4 m 95 cm.

1. 16 m

2. 95 cm

3. 65 cm

4. 45 cm

Options :

686340150845. 1
686340150846. 2
686340150847. 3
686340150848. 4

Question Number : 12 Question Id : 68634038195 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Find the greatest possible length which can be used to measure exactly the lengths 16 m 65 cm, 9 m and 4 m 95 cm.

- 1. 16 m
- 2. 95 cm
- 3. 65 cm
- 4. 45 cm

Options :

686340150845. 1
686340150846. 2
686340150847. 3
686340150848. 4

Question Number : 13 Question Id : 68634038196 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The average of marks of 15 papers is 42. The average of marks of first 8 papers is 45 and that of the last 8 papers is 36. The marks of 8th paper are:

- 1. 15
- 2. 16
- 3. 17
- 4. 18

Options :

686340150849. 1
686340150850. 2
686340150851. 3
686340150852. 4

Question Number : 13 Question Id : 68634038196 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The average of marks of 15 papers is 42. The average of marks of first 8 papers is 45 and that of the last 8 papers is 36. The marks of 8th paper are:

- 1. 15
- 2. 16
- 3. 17
- 4. 18

Options :

686340150849. 1
686340150850. 2
686340150851. 3
686340150852. 4

Question Number : 14 Question Id : 68634038197 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

10 years ago, the ratio of ages of Vikas and Amish was 1:3. If the ratio of their present ages is 3:5, then after five years the ratio of their ages will be:

- 1. 2:5
- 2. 2:3
- 3. 3:4
- 4. 5:7

Options :

686340150853. 1
686340150854. 2
686340150855. 3
686340150856. 4

Question Number : 14 Question Id : 68634038197 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

10 years ago, the ratio of ages of Vikas and Amish was 1:3. If the ratio of their present ages is 3:5, then after five years the ratio of their ages will be:

- 1. 2:5
- 2. 2:3
- 3. 3:4
- 4. 5:7

Options :

- 686340150853. 1
- 686340150854. 2
- 686340150855. 3
- 686340150856. 4

Question Number : 15 Question Id : 68634038198 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Sonu and Monu undertake to do a piece of work for ₹ 3,600. Sonu along can do it in 6 days while Monu alone can do it in 8 days. With the help of Ramu, they finish it in 3 days. The share of Ramu (in ₹) will be :

- 1. 1350
- 2. 900
- 3. 1200
- 4. 450

Options :

- 686340150857. 1
- 686340150858. 2
- 686340150859. 3
- 686340150860. 4

Question Number : 15 Question Id : 68634038198 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Sonu and Monu undertake to do a piece of work for ₹ 3,600. Sonu along can do it in 6 days while Monu alone can do it in 8 days. With the help of Ramu, they finish it in 3 days. The share of Ramu (in ₹) will be :

- 1. 1350
- 2. 900
- 3. 1200
- 4. 450

Options :

- 686340150857. 1
- 686340150858. 2
- 686340150859. 3
- 686340150860. 4

Question Number : 16 Question Id : 68634038199 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

There are 40 girls in a row. Muskan shifted her position 5 places to her left so that there are 10 girls to her left in the row. If Nisha was 4 places right to Muskan's original position, what is the Nisha's position from the Muskan's left side row end?

1. 18

2. 20

3. 22

4. 24

Options :

686340150861. 1

686340150862. 2

686340150863. 3

686340150864. 4

Question Number : 16 Question Id : 68634038199 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

There are 40 girls in a row. Muskan shifted her position 5 places to her left so that there are 10 girls to her left in the row. If Nisha was 4 places right to Muskan's original position, what is the Nisha's position from the Muskan's left side row end?

1. 18

2. 20

3. 22

4. 24

Options :

686340150861. 1

686340150862. 2

686340150863. 3

686340150864. 4

Question Number : 17 Question Id : 68634038200 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If in a certain code, 15789 is written as EGKPT and 2436 is written as ALUR, how is 24539 written in that code?

1. ALGTU
2. ALEUT
3. ALGUT
4. ALGRT

Options :

686340150865. 1
686340150866. 2
686340150867. 3
686340150868. 4

Question Number : 17 Question Id : 68634038200 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

If in a certain code, 15789 is written as EGKPT and 2436 is written as ALUR, how is 24539 written in that code?

1. ALGTU
2. ALEUT
3. ALGUT
4. ALGRT

Options :

686340150865. 1
686340150866. 2
686340150867. 3
686340150868. 4

Question Number : 18 Question Id : 68634038201 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

Statements : (i) All leaves are dim.

(ii) No dim is brush.

(iii) All tops are brushes.

Conclusions : I. Some tops are leaves.

II. Some dim is top.

III. Some dim is leaf.

IV. Some tops are brushes.

Choose the correct option from the following:

1. Only I and II follow

2. Only II and III follow

3. Only III and IV follow

4. Only I and IV follow

Options :

686340150869. 1

686340150870. 2

686340150871. 3

686340150872. 4

Question Number : 18 Question Id : 68634038201 Question Type : MCQ Option Shuffling : No Is Question Mandatory :

No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Statements : (i) All leaves are dim.

(ii) No dim is brush.

(iii) All tops are brushes.

Conclusions : I. Some tops are leaves.

II. Some dim is top.

III. Some dim is leaf.

IV. Some tops are brushes.

Choose the correct option from the following:

1. Only I and II follow

2. Only II and III follow

3. Only III and IV follow

4. Only I and IV follow

Options :

686340150869. 1

686340150870. 2

686340150871. 3

686340150872. 4

Question Number : 19 Question Id : 68634038202 Question Type : MCQ Option Shuffling : No 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 letter from there matrices can be represented first by its row and then the column number.

Matrix-I

	0	1	2	3	4
0	F	A	N	O	I
1	I	O	F	A	N
2	A	N	O	I	F
3	O	F	I	N	A
4	N	I	A	F	O

Matrix-II

	5	6	7	8	9
5	S	E	J	B	T
6	H	S	E	T	B
7	B	T	S	E	H
8	E	H	T	B	S
9	T	S	E	H	B

Identify the correct set for the word FAITH :

1. 43, 42, 41, 78, 89
2. 31, 34, 23, 76, 79
3. 24, 31, 10, 59, 57
4. 12, 20, 40, 68, 65

Options :

686340150873. 1
686340150874. 2
686340150875. 3
686340150876. 4

Question Number : 19 Question Id : 68634038202 Question Type : MCQ Option Shuffling : No 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 letter from there matrices can be represented first by its row and then the column number.

Matrix-I

	0	1	2	3	4
0	F	A	N	O	I
1	I	O	F	A	N
2	A	N	O	I	F
3	O	F	I	N	A
4	N	I	A	F	O

Matrix-II

	5	6	7	8	9
5	S	E	J	B	T
6	H	S	E	T	B
7	B	T	S	E	H
8	E	H	T	B	S
9	T	S	E	H	B

Identify the correct set for the word FAITH :

1. 43, 42, 41, 78, 89
2. 31, 34, 23, 76, 79
3. 24, 31, 10, 59, 57
4. 12, 20, 40, 68, 65

Options :

686340150873. 1
686340150874. 2
686340150875. 3
686340150876. 4

Question Number : 20 Question Id : 68634038203 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

Select the pair that has the same relationship as the original pair of words given below :

Egg : Omelette

1. Dam : River
2. Student : Classroom
3. Onion : Jam
4. Clay : Pottery

Options :

686340150877. 1
686340150878. 2
686340150879. 3
686340150880. 4

**Question Number : 20 Question Id : 68634038203 Question Type : MCQ Option Shuffling : No Is Question Mandatory :
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1**

Select the pair that has the same relationship as the original pair of words given below :

Egg : Omelette

1. Dam : River
2. Student : Classroom
3. Onion : Jam
4. Clay : Pottery

Options :

686340150877. 1
686340150878. 2
686340150879. 3
686340150880. 4

**Question Number : 21 Question Id : 68634038204 Question Type : MCQ Option Shuffling : No 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 article of the Indian constitution provides for the institution of Panchayati Raj?

1. Article 36
2. Article 39
3. Article 40
4. Article 48

Options :

686340150881. 1
686340150882. 2
686340150883. 3
686340150884. 4

**Question Number : 21 Question Id : 68634038204 Question Type : MCQ Option Shuffling : No 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 article of the Indian constitution provides for the institution of Panchayati Raj?

1. Article 36
2. Article 39
3. Article 40
4. Article 48

Options :

686340150881. 1
686340150882. 2
686340150883. 3
686340150884. 4

Question Number : 22 Question Id : 68634038205 Question Type : MCQ Option Shuffling : No 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 (Book Name)		LIST II (Author Name)	
A.	My Truth	I.	Mahatma Gandhi
B.	The Broken Wings	II.	Indira Gandhi
C.	My Experiments with Truth	III.	Sarojini Naidu
D.	Exam Warriors	IV.	Narendra Modi

Choose the correct answer from the options given below:

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

Options :

686340150885. 1
686340150886. 2
686340150887. 3
686340150888. 4

Question Number : 22 Question Id : 68634038205 Question Type : MCQ Option Shuffling : No 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 (Book Name)		LIST II (Author Name)	
A.	My Truth	I.	Mahatma Gandhi
B.	The Broken Wings	II.	Indira Gandhi
C.	My Experiments with Truth	III.	Sarojini Naidu
D.	Exam Warriors	IV.	Narendra Modi

Choose the correct answer from the options given below:

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

Options :

686340150885. 1
686340150886. 2
686340150887. 3
686340150888. 4

Question Number : 23 Question Id : 68634038206 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

Who was the first Indian women to win gold in Asian games ?

1. P.T. Usha
2. Shing Wilson
3. Kamaljeet Sandhu
4. Shweta Chaudhary

Options :

686340150889. 1
686340150890. 2
686340150891. 3
686340150892. 4

Question Number : 23 Question Id : 68634038206 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

Who was the first Indian women to win gold in Asian games ?

1. P.T. Usha
2. Shing Wilson
3. Kamaljeet Sandhu
4. Shweta Chaudhary

Options :

686340150889. 1
686340150890. 2
686340150891. 3
686340150892. 4

Question Number : 24 Question Id : 68634038207 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

Give below are two statements : One is labelled as **Assertion A** and the other is labelled as **Reason R**:

Assertion A : Radio waves bend in a magnetic field.

Reason R : Radio waves are electromagnetic in nature.

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 not false
4. A is not false but R is true

Options :

686340150893. 1
686340150894. 2
686340150895. 3
686340150896. 4

Question Number : 24 Question Id : 68634038207 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

Give below are two statements : One is labelled as **Assertion A** and the other is labelled as **Reason R**:

Assertion A : Radio waves bend in a magnetic field.

Reason R : Radio waves are electromagnetic in nature.

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 not false
4. A is not false but R is true

Options :

686340150893. 1
686340150894. 2
686340150895. 3
686340150896. 4

Question Number : 25 Question Id : 68634038208 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Give below are two statements:

Statement I : Dolomite is used as refractory material and flux in iron and steel industry.

Statement II : Lignite and low grade bituminous coal were formed during the quaternary period.

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 :

686340150897. 1
686340150898. 2
686340150899. 3
686340150900. 4

Question Number : 25 Question Id : 68634038208 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Give below are two statements:

Statement I : Dolomite is used as refractory material and flux in iron and steel industry.

Statement II : Lignite and low grade bituminous coal were formed during the quaternary period.

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 :

686340150897. 1
686340150898. 2
686340150899. 3
686340150900. 4

Part B: Chemistry

Section Id :	686340752
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 :	6863401257
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 26 Question Id : 68634038209 Question Type : MCQ Option Shuffling : No 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 compound is ionic in nature and soluble in water?

1. 1-Bromocyclohepta-2,4,6-triene
2. 3-Bromohepta-2,4,6-triene
3. 3-Bromopenta-1,4-diene
4. 1-Bromocyclopenta-2,4-diene

Options :

686340150901. 1
686340150902. 2

686340150903. 3

686340150904. 4

Question Number : 26 Question Id : 68634038209 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

निम्न में से कौनसा यौगिक आयनिक प्रकृति का तथा जल में विलेय है?

1. 1-ब्रोमोसाइक्लोहेक्सा-2,4,6-ट्राईन

2. 3-ब्रोमोहेक्सा-2,4,6-ट्राईन

3. 3-ब्रोमोपेंटा-1,4-डाईन

4. 1-ब्रोमोसाइक्लोपेन्टा-2,4-डाईन

Options :

686340150901. 1

686340150902. 2

686340150903. 3

686340150904. 4

Question Number : 27 Question Id : 68634038210 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

To generate molecular orbitals in molecules consisting of three or more atoms, which of the following is correct

1. Group orbitals are first generated by combining atomic orbitals with same symmetry

2. Group orbitals are first generated by combining atomic orbitals with different symmetry.

3. Group orbitals can be treated as molecular orbitals of the molecule.

4. LCAO method can't be applied.

Options :

686340150905. 1

686340150906. 2

686340150907. 3

686340150908. 4

Question Number : 27 Question Id : 68634038210 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

तीन अथवा अधिक परमाणु वाले अणुओं में आण्विक कक्षक उत्पन्न करने के लिए निम्न में से कौन सा सही है ?

1. वर्ग कक्षक समान सममिति के परमाणु कक्षकों के संयोग द्वारा प्रथम उत्पन्न होते हैं।
2. वर्ग कक्षक असमान सममिति के परमाणु कक्षकों के संयोग द्वारा प्रथम उत्पन्न होते हैं।
3. वर्ग कक्षकों को अणुओं के आण्विक कक्षक की तरह मान सकते हैं।
4. LCAO विधि प्रयुक्त नहीं कर सकते हैं।

Options :

686340150905. 1
686340150906. 2
686340150907. 3
686340150908. 4

Question Number : 28 Question Id : 68634038211 Question Type : MCQ Option Shuffling : No 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 60 W electric heater was immersed in a gas taken in a constant-volume adiabatic container and it was switched on for 150s. The temperature of the gas increased by 50 °C. The heat capacity of the gas is

1. 1.8 kJ K⁻¹
2. 32.37 J K⁻¹
3. 1.8 J K⁻¹
4. 32.37 kJ K⁻¹

Options :

686340150909. 1
686340150910. 2
686340150911. 3
686340150912. 4

Question Number : 28 Question Id : 68634038211 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

स्थिर आयतन रुद्धोष्म निकाय में ली गई गैस में 60 W का विद्युत हीटर डूबा हुआ है तथा यह 150s के लिए चालू किया गया। गैस का तापमान 50°C से वृद्धि कर गया। गैस की उष्मा धारिता है

1. 1.8 kJ K^{-1}
2. 32.37 J K^{-1}
3. 1.8 J K^{-1}
4. 32.37 kJ K^{-1}

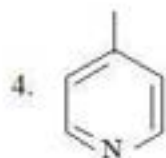
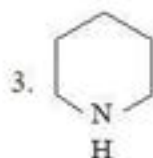
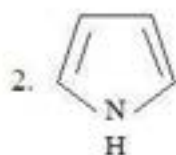
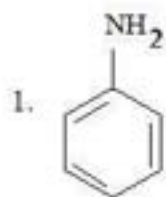
Options :

686340150909. 1
686340150910. 2
686340150911. 3
686340150912. 4

Question Number : 29 Question Id : 68634038212 Question Type : MCQ Option Shuffling : No 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 nonpolar aprotic solvent which of the following will act as strongest base?

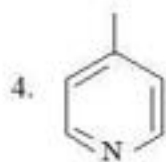
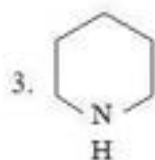
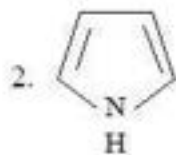
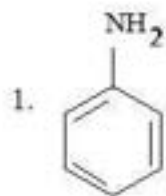


Options :

686340150913. 1
686340150914. 2
686340150915. 3
686340150916. 4

Question Number : 29 Question Id : 68634038212 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

अध्रुवीय अप्रोटिक विलयन में निम्न में से कौनसा प्रबल क्षारक का कार्य करता है।



Options :

686340150913. 1

686340150914. 2

686340150915. 3

686340150916. 4

Question Number : 30 Question Id : 68634038213 Question Type : MCQ Option Shuffling : No 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: For a binary solution the chemical potential of one component of the mixture cannot change independently of the chemical potential of the second component.

Reason R: $n_A d\mu_A + n_B d\mu_B = 0$

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

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

Options :

686340150917. 1
686340150918. 2
686340150919. 3
686340150920. 4

Question Number : 30 Question Id : 68634038213 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

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

अभिकथन A: एक द्विअंगी विलयन में मिश्रण के एक से संघटक का रासायनिक विभव दूसरे से संघटक के रासायनिक विभव को स्वतंत्र रूप से परिवर्तन नहीं कर सकता है।

कारण R: $n_A d\mu_A + n_B d\mu_B = 0$

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 :

686340150917. 1
686340150918. 2
686340150919. 3
686340150920. 4

Question Number : 31 Question Id : 68634038214 Question Type : MCQ Option Shuffling : No Is Question Mandatory :
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Van Arkel-De Boer process for purification of metals is based on thermal instability of

1. Sulphates
2. Phosphates
3. Iodides
4. Oxides

Options :

686340150921. 1
686340150922. 2
686340150923. 3
686340150924. 4

Question Number : 31 Question Id : 68634038214 Question Type : MCQ Option Shuffling : No Is Question Mandatory :
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

वॉन आरकेल डी बोर विधि किसके तापीय अस्थायित्व पर आधारित धातु के शोधन के लिए है।

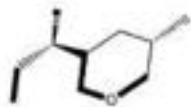
1. सल्फेट
2. फॉस्फेट
3. आयोडाइड
4. ऑक्साइड

Options :

686340150921. 1
686340150922. 2
686340150923. 3
686340150924. 4

Question Number : 32 Question Id : 68634038215 Question Type : MCQ Option Shuffling : No Is Question Mandatory :
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Find out the total number of stereoisomers in the following molecule.



1. 2

2. 4

3. 6

4. 8

Options :

686340150925. 1

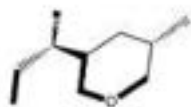
686340150926. 2

686340150927. 3

686340150928. 4

Question Number : 32 Question Id : 68634038215 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

निम्न अणु में त्रिविम समावयवता की कुल संख्या बताइए -



1. 2

2. 4

3. 6

4. 8

Options :

686340150925. 1

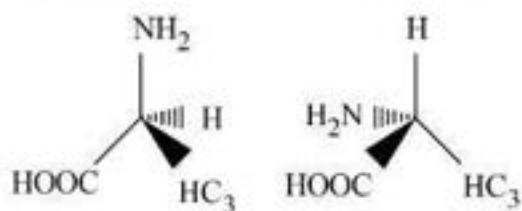
686340150926. 2

686340150927. 3

686340150928. 4

Question Number : 33 Question Id : 68634038216 Question Type : MCQ Option Shuffling : No 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 relation between the following pair of compounds?



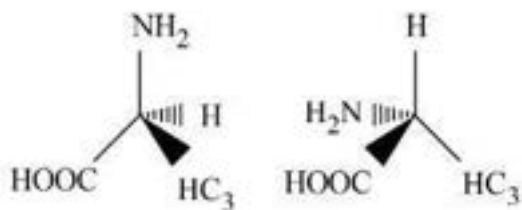
1. Enantiomers
2. Homomers
3. Identical
4. Diastereomers

Options :

686340150929. 1
 686340150930. 2
 686340150931. 3
 686340150932. 4

Question Number : 33 Question Id : 68634038216 Question Type : MCQ Option Shuffling : No 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 यौगिक के युग्म में क्या संबंध है?



1. प्रतिबिंब रूप
2. होमोमर
3. समरूप
4. अप्रतिबिंब रूप

Options :

686340150929. 1
 686340150930. 2
 686340150931. 3
 686340150932. 4

Question Number : 34 Question Id : 68634038217 Question Type : MCQ Option Shuffling : No 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 a particle in a square box of side 'l' and quantum numbers $n_1=1$, $n_2=2$, the most probable location of finding the particle is

1. $x = \frac{l}{2}, y = \frac{l}{4}$

2. $x = \frac{l}{4}, y = \frac{l}{2}$

3. $x = \frac{l}{2}, y = \frac{l}{2}$

4. $x = \frac{l}{4}, y = \frac{l}{4}$

Options :

686340150933. 1

686340150934. 2

686340150935. 3

686340150936. 4

Question Number : 34 Question Id : 68634038217 Question Type : MCQ Option Shuffling : No 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 कण के 'l' भुजा के वर्ग बॉक्स में तथा क्वांटम संख्या $n_1=1$, $n_2=2$ कण के पाये जाने की अधिकतम संभावित स्थिति है।

1. $x = \frac{l}{2}, y = \frac{l}{4}$

2. $x = \frac{l}{4}, y = \frac{l}{2}$

3. $x = \frac{l}{2}, y = \frac{l}{2}$

4. $x = \frac{l}{4}, y = \frac{l}{4}$

Options :

686340150933. 1

686340150934. 2

686340150935. 3

686340150936. 4

Question Number : 35 Question Id : 68634038218 Question Type : MCQ Option Shuffling : No 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 molar volume of an ideal gas at 500 K and 100 bar is $0.416 \text{ dm}^3 \text{ mol}^{-1}$. Under the same conditions the molar volume of carbon dioxide is $0.366 \text{ dm}^3 \text{ mol}^{-1}$. Based on this information which statement is correct for carbon dioxide.

1. Repulsive forces and attractive forces are equal
2. Attractive forces dominate repulsive forces
3. Repulsive forces dominate attractive forces
4. Carbon dioxide is behaving like an ideal gas.

Options :

686340150937. 1
686340150938. 2
686340150939. 3
686340150940. 4

Question Number : 35 Question Id : 68634038218 Question Type : MCQ Option Shuffling : No 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 500 K तथा 100 bar पर मोलर आयतन $0.416 \text{ dm}^3 \text{ mol}^{-1}$ है। समान स्थिति में कार्बनडाई आक्साइड का मोलर आयतन $0.366 \text{ dm}^3 \text{ mol}^{-1}$ है। इन परिस्थियों के आधार पर कार्बनडाई आक्साइड के लिए सही कथन है -

1. प्रतिकर्षण बल तथा आकर्षण बल बराबर है
2. आकर्षण बल प्रतिकर्षण बल पर प्रभावी है
3. प्रतिकर्षण बल आकर्षण बल पर प्रभावी है
4. कार्बनडाई ऑक्साइड आदर्श गैस की तरह व्यवहार कर रही है

Options :

686340150937. 1
686340150938. 2
686340150939. 3
686340150940. 4

Question Number : 36 Question Id : 68634038219 Question Type : MCQ Option Shuffling : No 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 examples of chain silicate and sheet silicate respectively are

1. Diopside, Spodumene
2. Kaolinite, Pyrophyllite
3. Diopside, Biotite
4. Muscovite, Pyrophyllite

Options :

686340150941. 1
686340150942. 2
686340150943. 3
686340150944. 4

Question Number : 36 Question Id : 68634038219 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

शृंखला सिलिकेट तथा शीट सिलिकेट के उदाहरण क्रमशः हैं -

1. डिओप्साइट, स्पोडुमीन
2. कोलिनाइट, पायरोफायलाइट
3. डिओप्साइट, बायोटाइट
4. मस्कोवाइट, पायरोफाएलाइट

Options :

686340150941. 1
686340150942. 2
686340150943. 3
686340150944. 4

Question Number : 37 Question Id : 68634038220 Question Type : MCQ Option Shuffling : No 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 liquid components 'A' and 'B' are mixed together to form ideal binary solution. Select the true options for this solution.

- A. A-B interactions are equal to A-A and B-B interactions.
- B. $\Delta V_{\text{mix}} = 0$.
- C. Both the components follow Duhem Margules's equation.
- D. They have same vapour pressure.

Choose the most appropriate answer from the options given below:

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

Options :

- 686340150945. 1
- 686340150946. 2
- 686340150947. 3
- 686340150948. 4

Question Number : 37 Question Id : 68634038220 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

अवयव 'A' तथा 'B' के दो द्रव को आदर्श द्विअंगी विलयन बनाने के लिए मिश्रित किया जाता है। इसके लिए सत्य विकल्प का चयन कीजिए -

- A. A-B अन्योन्यक्रिया A-A तथा B-B अन्योन्यक्रिया के बराबर है।
- B. $\Delta V_{\text{mix}} = 0$.
- C. दोनों अवयव डूहम मार्गुल्स समीकरण का पालन करते हैं।
- D. वे समान वाष्प दाब पर हैं।

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

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

Options :

- 686340150945. 1
- 686340150946. 2
- 686340150947. 3
- 686340150948. 4

Question Number : 38 Question Id : 68634038221 Question Type : MCQ Option Shuffling : No 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 radius ratio of Si^{4+} : O^{2-} is 0.29 suggesting a coordination number of 4 for silicon in silicates.

Statement II: SiO_4^{4-} ion is a tetrahedral ion in which Si is sp^3 hybridized.

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 :

686340150949. 1
686340150950. 2
686340150951. 3
686340150952. 4

Question Number : 38 Question Id : 68634038221 Question Type : MCQ Option Shuffling : No 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: Si^{4+} : O^{2-} की त्रिज्या अनुपात 0.29 है जो सिलिकेट में सिलिकोन के लिए 4 समन्वय संख्या को प्रस्तावित करता है।

कथन II: SiO_4^{4-} आयन एक चतुष्फलकीय आयन है जिसमें Si sp^3 संकरित है।

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

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

Options :

686340150949. 1
686340150950. 2
686340150951. 3

686340150952. 4

Question Number : 39 Question Id : 68634038222 Question Type : MCQ Option Shuffling : No 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 nucleophilic substitution reaction proceeding via S_N2 mechanism, which among the following will act as good leaving group?

1. CN^-
2. N_3^-
3. Cl^-
4. CH_3COO^-

Options :

686340150953. 1
686340150954. 2
686340150955. 3
686340150956. 4

Question Number : 39 Question Id : 68634038222 Question Type : MCQ Option Shuffling : No 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 नाभिकस्रेही प्रतिस्थापन अभिक्रिया जो S_N2 क्रियाविधि से होती है उसमे निम्न में से कौन सा अच्छा अवशिष्ट (लीविंग) समूह होगा?

1. CN^-
2. N_3^-
3. Cl^-
4. CH_3COO^-

Options :

686340150953. 1
686340150954. 2
686340150955. 3
686340150956. 4

Question Number : 40 Question Id : 68634038223 Question Type : MCQ Option Shuffling : No 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 HCl molecule, the molecular orbitals will be formed by combining

1. $1s$ (H), $1s$ (Cl)
2. $1s$ (H), $2s$ (Cl)
3. $1s$ (H), $3s$ (Cl)
4. $1s$ (H), $3p_x$ (Cl)

Options :

686340150957. 1
686340150958. 2
686340150959. 3
686340150960. 4

Question Number : 40 Question Id : 68634038223 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

HCl अणु में, किसके संयोजन से अण्विक कक्षक बनेंगे?

1. $1s$ (H), $1s$ (Cl)
2. $1s$ (H), $2s$ (Cl)
3. $1s$ (H), $3s$ (Cl)
4. $1s$ (H), $3p_x$ (Cl)

Options :

686340150957. 1
686340150958. 2
686340150959. 3
686340150960. 4

Question Number : 41 Question Id : 68634038224 Question Type : MCQ Option Shuffling : No 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 equimolar solutions of acetic acid, dichloroacetic acid and trichloroacetic acid, the depression in freezing point is maximum for

1. dichloroacetic acid
2. acetic acid
3. trichloroacetic acid
4. same for all

Options :

686340150961. 1

686340150962. 2
686340150963. 3
686340150964. 4

Question Number : 41 Question Id : 68634038224 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

एसिटिक अम्ल, डाईक्लोरोएसिटिक अम्ल तथा ट्राईक्लोरोएसिटिक अम्ल के समअणु विलयन का हिमांक अवनमन किसके लिए उच्चतम होगा?

1. डाईक्लोरोएसिटिक अम्ल
2. एसिटिक अम्ल
3. ट्राईक्लोरोएसिटिक अम्ल
4. सभी के लिए समान

Options :

686340150961. 1
686340150962. 2
686340150963. 3
686340150964. 4

Question Number : 42 Question Id : 68634038225 Question Type : MCQ Option Shuffling : No 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 anions on reaction with alkyl halide favor elimination over substitution, if effect of solvent is considered negligible?

1. Br^-
2. $\text{C}_2\text{H}_5\text{O}^-$
3. I^-
4. CH_3COO^-

Options :

686340150965. 1
686340150966. 2
686340150967. 3
686340150968. 4

Question Number : 42 Question Id : 68634038225 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

निम्न में से कौनसा ऋणायन एल्किल हैलाइड से अभिक्रिया प्रतिस्वापन के बजाय विलोपन को प्राथमिकता देगा यदि विलायक का प्रभाव नगण्य सम्मिलित करें -

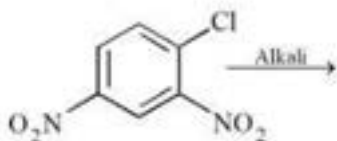
1. Br^-
2. $\text{C}_2\text{H}_5\text{O}^-$
3. I^-
4. CH_3COO^-

Options :

686340150965. 1
686340150966. 2
686340150967. 3
686340150968. 4

Question Number : 43 Question Id : 68634038226 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Predict the major product in the following reaction.



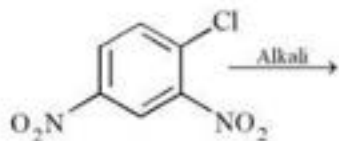
1. 2,4-Dinitrophenol
2. 1,3-Dinitrobenzene
3. 3,5-Dinitrophenol
4. 2,4,6-Trinitrophenol

Options :

686340150969. 1
686340150970. 2
686340150971. 3
686340150972. 4

Question Number : 43 Question Id : 68634038226 Question Type : MCQ Option Shuffling : No 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 अभिक्रिया में मुख्य उत्पाद परिकलित कीजिए:



1. 2,4-डाईनाइट्रोफीनॉल
2. 1,3-डाईनाइट्रोबेन्जिन
3. 3,5-डाईनाइट्रोफीनॉल
4. 2,4,6-ट्राईनाइट्रोफीनॉल

Options :

686340150969. 1
686340150970. 2
686340150971. 3
686340150972. 4

Question Number : 44 Question Id : 68634038227 Question Type : MCQ Option Shuffling : No 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 two phases are in equilibrium:

- A. Chemical potential of two phases is same.
- B. There is no change in Gibb's free energy.
- C. Temperature of two phases are same.
- D. Pressure of two phases are same.

Choose the most appropriate answer from the options given below:

1. A and D only
2. B and D only
3. A and C only
4. All of above

Options :

686340150973. 1
686340150974. 2
686340150975. 3
686340150976. 4

Question Number : 44 Question Id : 68634038227 Question Type : MCQ Option Shuffling : No 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 दो प्रवस्था साम्य में है:

- A. दो प्रावस्थाओं का रासायनिक विभव समान है
- B. वे गिब्स उर्जा में शून्य परिवर्तन रखते हैं
- C. दोनों प्रवस्थाओं का तापमान समान है
- D. दोनों प्रावस्थाओं का दाब समान है

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

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

Options :

- 686340150973. 1
- 686340150974. 2
- 686340150975. 3
- 686340150976. 4

Question Number : 45 Question Id : 68634038228 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

25% of a first order reaction completes in 2.1×10^6 s. How much time is required to complete the reaction?

- 1. 2.1×10^{24} s
- 2. 8.4×10^6 s
- 3. 4.2×10^{12} s
- 4. Infinity

Options :

- 686340150977. 1
- 686340150978. 2
- 686340150979. 3
- 686340150980. 4

Question Number : 45 Question Id : 68634038228 Question Type : MCQ Option Shuffling : No 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 कोटि अभिक्रिया को 25% पूर्ण होने के लिए 2.1×10^6 s लगते हैं। अभिक्रिया को पूर्ण होने के लिए कितना समय चाहिए?

1. 2.1×10^{24} s

2. 8.4×10^6 s

3. 4.2×10^{12} s

4. अनन्त

Options :

686340150977. 1

686340150978. 2

686340150979. 3

686340150980. 4

Question Number : 46 Question Id : 68634038229 Question Type : MCQ Option Shuffling : No 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 electrode potential diagram for Cl.



Identify the species capable of disproportionating in aqueous solution.

1. ClO_4^- only

2. ClO_3^- and OCl^-

3. OCl^- and Cl^-

4. Cl^- only

Options :

686340150981. 1

686340150982. 2

686340150983. 3

686340150984. 4

Question Number : 46 Question Id : 68634038229 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Cl के लिए इलेक्ट्रोड विभव आरेख पर विचार कीजिए:



जलीय विलयन में असमानुपातन देने वाली स्पीशीज की पहचान कीजिए।

1. केवल ClO_4^-
2. ClO_3^- तथा OCl^-
3. OCl^- तथा Cl^-
4. केवल Cl^-

Options :

686340150981. 1

686340150982. 2

686340150983. 3

686340150984. 4

Question Number : 47 Question Id : 68634038230 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Benzyne bond is formed by the

1. $\text{sp}^2\text{-sp}^2$ overlap
2. p-p overlap
3. $\text{sp}^2\text{-p}$ overlap
4. sp-sp overlap

Options :

686340150985. 1

686340150986. 2

686340150987. 3

686340150988. 4

Question Number : 47 Question Id : 68634038230 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

बेन्जाइन बन्ध किसके द्वारा बनता है -

1. sp^2-sp^2 अतिव्यापन
2. p-p अतिव्यापन
3. sp^2-p अतिव्यापन
4. sp-sp अतिव्यापन

Options :

686340150985. 1
686340150986. 2
686340150987. 3
686340150988. 4

Question Number : 48 Question Id : 68634038231 Question Type : MCQ Option Shuffling : No 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 properties used for calculating Pauling's electronegativity and Mullikan electronegativity, respectively are

1. Bond energy, IE + EA
2. IE, Bond energy + EA
3. IE + EA, Bond energy
4. Bond energy, Bond energy

Options :

686340150989. 1
686340150990. 2
686340150991. 3
686340150992. 4

Question Number : 48 Question Id : 68634038231 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

पोलिंग की विद्युतऋणता तथा मुलिकन की विद्युत ऋणता की गणना के लिए प्रयुक्त गुणधर्म क्रमशः है

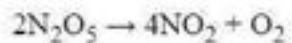
1. बन्ध उर्जा, IE + EA
2. IE, बन्ध उर्जा + EA
3. IE + EA, बन्ध उर्जा
4. बन्ध उर्जा, बन्ध उर्जा

Options :

686340150989. 1
686340150990. 2
686340150991. 3
686340150992. 4

Question Number : 49 Question Id : 68634038232 Question Type : MCQ Option Shuffling : No 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 the reaction



Rate of the reaction is:

1. $\frac{\Delta[\text{N}_2\text{O}_5]}{\Delta t} = \frac{1}{2} \frac{\Delta[\text{NO}_2]}{\Delta t}$

2. $-\frac{\Delta[\text{N}_2\text{O}_5]}{\Delta t} = \frac{1}{2} \frac{\Delta[\text{NO}_2]}{\Delta t}$

3. $\frac{\Delta[\text{O}_2]}{\Delta t} = \frac{\Delta[\text{NO}_2]}{\Delta t}$

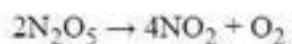
4. $-\frac{\Delta[\text{O}_2]}{\Delta t} = \frac{\Delta[\text{NO}_2]}{\Delta t}$

Options :

686340150993. 1
686340150994. 2
686340150995. 3
686340150996. 4

Question Number : 49 Question Id : 68634038232 Question Type : MCQ Option Shuffling : No 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 अभिक्रिया के लिए



अभिक्रिया की दर है:

$$1. \frac{\Delta[\text{N}_2\text{O}_5]}{\Delta t} = \frac{1}{2} \frac{\Delta[\text{NO}_2]}{\Delta t}$$

$$2. -\frac{\Delta[\text{N}_2\text{O}_5]}{\Delta t} = \frac{1}{2} \frac{\Delta[\text{NO}_2]}{\Delta t}$$

$$3. \frac{\Delta[\text{O}_2]}{\Delta t} = \frac{\Delta[\text{NO}_2]}{\Delta t}$$

$$4. -\frac{\Delta[\text{O}_2]}{\Delta t} = \frac{\Delta[\text{NO}_2]}{\Delta t}$$

Options :

686340150993. 1

686340150994. 2

686340150995. 3

686340150996. 4

Question Number : 50 Question Id : 68634038233 Question Type : MCQ Option Shuffling : No 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: To form interstitial alloys, the radius ratio of smaller atom/larger atom should be in the range 0.414-0.732.

Statement II: Two different metals having metallic radii differing only by 10% but similar crystal structures can form a good alloy.

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 :

686340150997. 1

686340150998. 2

686340150999. 3

686340151000. 4

Question Number : 50 Question Id : 68634038233 Question Type : MCQ Option Shuffling : No 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: अन्तरकाशी मिश्रधातु बनाने के लिए छोटे परमाणु/बड़े परमाणु की त्रिज्या अनुपात 0.414-0.732 परास में होनी चाहिए।

कथन II: दो भिन्न धातु जिनकी धात्विक त्रिज्या 10% से भिन्न हैं, किन्तु समान क्रिस्टल संरचना है, अच्छी मिश्रधातु बना सकती हैं।

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

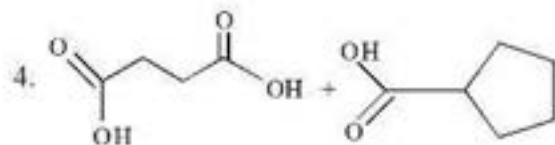
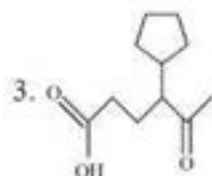
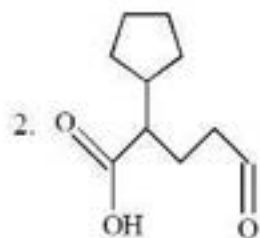
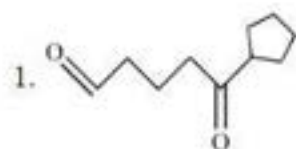
1. कथन I और II दोनों सत्य हैं
2. कथन I और II दोनों असत्य हैं
3. कथन I सत्य है, लेकिन कथन II असत्य है
4. कथन I असत्य है, लेकिन कथन II सत्य है

Options :

686340150997. 1
686340150998. 2
686340150999. 3
686340151000. 4

Question Number : 51 Question Id : 68634038234 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Deduce the structure of the product in the following reaction



Options :

686340151001. 1

686340151002. 2

686340151003. 3

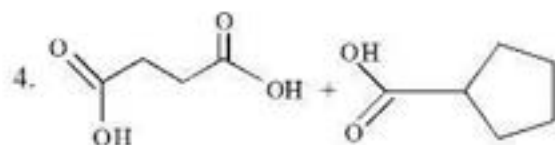
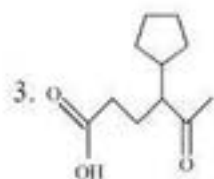
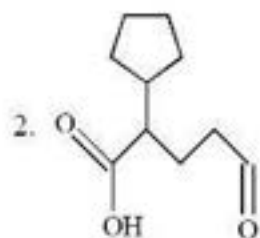
686340151004. 4

Question Number : 51 Question Id : 68634038234 Question Type : MCQ Option Shuffling : No 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 अभिक्रिया में उत्पाद की संरचना व्युत्पित कीजिए - में यशदरज



Options :

686340151001. 1

686340151002. 2

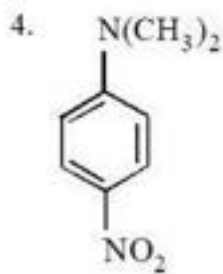
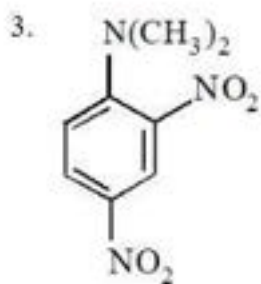
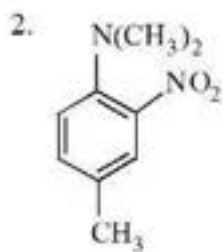
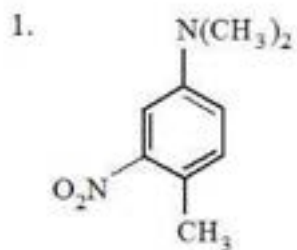
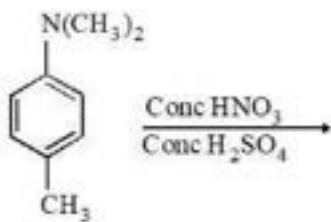
686340151003. 3

686340151004. 4

Question Number : 52 Question Id : 68634038235 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Identify the major product in the following reaction.



Options :

686340151005. 1

686340151006. 2

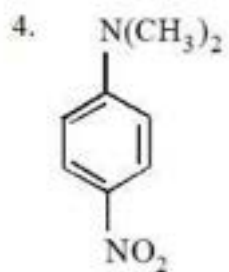
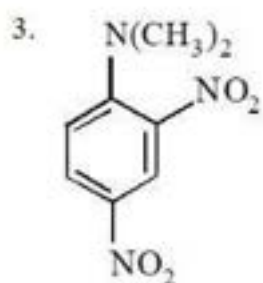
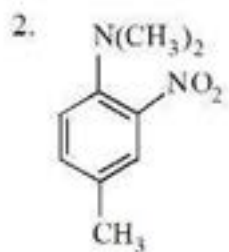
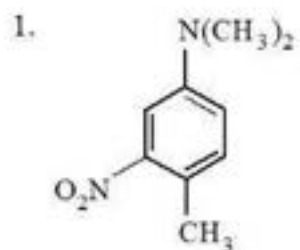
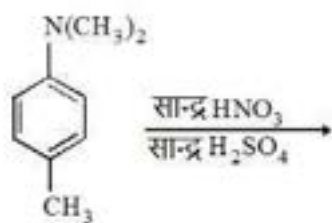
686340151007. 3

686340151008. 4

Question Number : 52 Question Id : 68634038235 Question Type : MCQ Option Shuffling : No 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 अभिक्रिया में मुख्य उत्पाद की पहचान कीजिए:



Options :

686340151005. 1

686340151006. 2

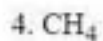
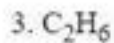
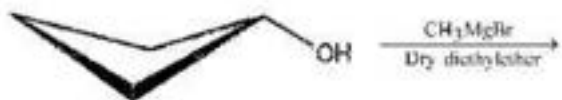
686340151007. 3

686340151008. 4

Question Number : 53 Question Id : 68634038236 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Identify the major product in the following reaction.



Options :

686340151009. 1

686340151010. 2

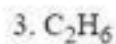
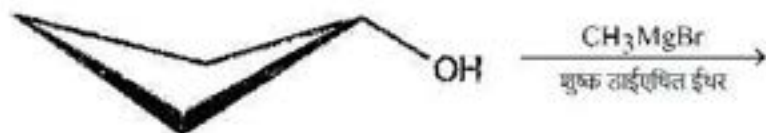
686340151011. 3

686340151012. 4

Question Number : 53 Question Id : 68634038236 Question Type : MCQ Option Shuffling : No 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 अभिक्रिया में मुख्य उत्पाद को पहचानिए - शुष्क डाईएथिल ईथर



Options :

686340151009. 1

686340151010. 2

686340151011. 3

686340151012. 4

Question Number : 54 Question Id : 68634038237 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Select the option which is correct about photochemical reaction:

- A. Temperature has very little effect on rate of reaction.
- B. The presence of light is the primary requirement.
- C. ΔG may be positive or negative for spontaneous photochemical reaction.
- D. Photochemical reaction always involves emission of light radiation.

Choose the correct answer from the options given below:

- 1. A and B only
- 2. A, B and D only
- 3. A, B and C only
- 4. All of above

Options :

- 686340151013. 1
- 686340151014. 2
- 686340151015. 3
- 686340151016. 4

Question Number : 54 Question Id : 68634038237 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

प्रकाश रासायनिक अभिक्रिया के बारे में कौनसा विकल्प सही है:

- A. अभिक्रिया की दर पर तापमान का बहुत कम प्रभाव पड़ता है।
- B. प्रकाश की उपस्थिति प्राथमिक आवश्यकता है
- C. स्वतः प्रकाश रासायनिक अभिक्रिया के लिए ΔG ऋणात्मक तथा धनात्मक हो सकता है
- D. प्रकाश रासायनिक अभिक्रिया में हमेशा प्रकाश विकिरण उत्सर्जित होती है।

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

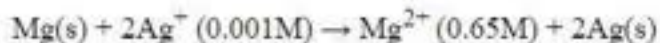
- 1. केवल A और B
- 2. केवल A, B और D
- 3. केवल A, B और C
- 4. उपरोक्त सभी

Options :

- 686340151013. 1
- 686340151014. 2
- 686340151015. 3
- 686340151016. 4

Question Number : 55 Question Id : 68634038238 Question Type : MCQ Option Shuffling : No 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 galvanic cell with the cell reaction



is correctly represented as

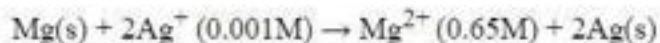
1. $\text{Mg}^{2+} (0.65 \text{ M}) | \text{Mg} || \text{Ag}^+ (0.001 \text{ M}) | \text{Ag}$
2. $\text{Mg} | \text{Mg}^{2+} (0.65 \text{ M}) || \text{Ag} | \text{Ag}^+ (0.001 \text{ M})$
3. $\text{Mg}^{2+} (0.65 \text{ M}) | \text{Mg} || \text{Ag} | \text{Ag}^+ (0.001 \text{ M})$
4. $\text{Mg} | \text{Mg}^{2+} (0.65 \text{ M}) || \text{Ag}^+ (0.001 \text{ M}) | \text{Ag}$

Options :

686340151017. 1
686340151018. 2
686340151019. 3
686340151020. 4

Question Number : 55 Question Id : 68634038238 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

गैल्वेनिक सेल की सेल अभिक्रिया दी गई है।



इस गैल्वेनिक सेल का सही प्रदर्शन है -

1. $\text{Mg}^{2+} (0.65 \text{ M}) | \text{Mg} || \text{Ag}^+ (0.001 \text{ M}) | \text{Ag}$
2. $\text{Mg} | \text{Mg}^{2+} (0.65 \text{ M}) || \text{Ag} | \text{Ag}^+ (0.001 \text{ M})$
3. $\text{Mg}^{2+} (0.65 \text{ M}) | \text{Mg} || \text{Ag} | \text{Ag}^+ (0.001 \text{ M})$
4. $\text{Mg} | \text{Mg}^{2+} (0.65 \text{ M}) || \text{Ag}^+ (0.001 \text{ M}) | \text{Ag}$

Options :

686340151017. 1
686340151018. 2
686340151019. 3
686340151020. 4

Question Number : 56 Question Id : 68634038239 Question Type : MCQ Option Shuffling : No 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 orders are correct for noble gases?

- A. Solubility in water $\text{He} < \text{Ne} < \text{Ar} < \text{Kr} < \text{Xe}$
- B. Boiling points $\text{He} < \text{Ne} < \text{Ar} < \text{Kr} < \text{Xe}$
- C. Chemical reactivity $\text{He} > \text{Ne} > \text{Ar} > \text{Kr} > \text{Xe}$
- D. Enthalpy of vaporisation $\text{He} > \text{Ne} > \text{Ar} > \text{Kr} > \text{Xe}$

Choose the correct answer from the options given below:

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

Options :

- 686340151021. 1
- 686340151022. 2
- 686340151023. 3
- 686340151024. 4

Question Number : 56 Question Id : 68634038239 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

निम्न में से कौनसा उत्कृष्ट गैस के लिए सही क्रम है?

- A. जल में विलेयता $\text{He} < \text{Ne} < \text{Ar} < \text{Kr} < \text{Xe}$
- B. क्वथनांक $\text{He} < \text{Ne} < \text{Ar} < \text{Kr} < \text{Xe}$
- C. रासायनिक अभिक्रियाशीलता $\text{He} > \text{Ne} > \text{Ar} > \text{Kr} > \text{Xe}$
- D. वाष्पशीलता की एन्थैल्पी $\text{He} > \text{Ne} > \text{Ar} > \text{Kr} > \text{Xe}$

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

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

Options :

- 686340151021. 1
- 686340151022. 2
- 686340151023. 3

Question Number : 57 Question Id : 68634038240 Question Type : MCQ Option Shuffling : No 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 moving boundary method yields more accurate data on transference number than does the Hittorf method.

Reason R: In moving boundary method, indicator electrolyte has same anion as principal electrolyte and is placed at the bottom due to its higher density.

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

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

Options :

686340151025. 1
686340151026. 2
686340151027. 3
686340151028. 4

Question Number : 57 Question Id : 68634038240 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

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

अभिकथन A: हिट्टोर्फ विधि की तुलना में गतिमान सीमा विधि से स्थानांतरण संख्या पर अधिक सटीक डाटा प्राप्त होता है।

कारण R: गतिमान सीमा विधि में सूचक विद्युत-अपघट्य और प्रमुख विद्युत-अपघट्य में समान ऋणायन होते हैं और इसे अपने अधिक धनत्व के कारण सबसे नीचे रखा जाता है।

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

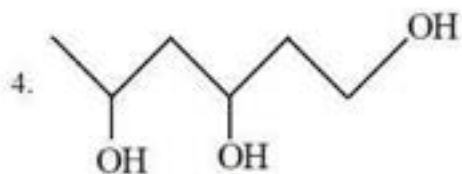
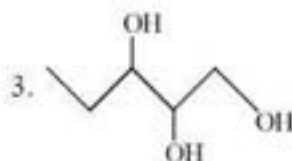
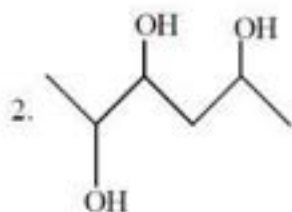
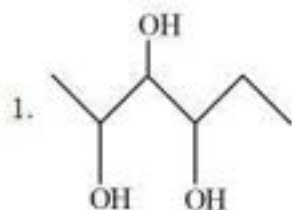
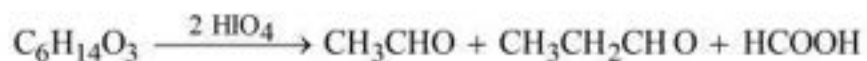
1. A और R दोनों सही हैं और R, A की सही व्याख्या है
2. A और R दोनों सही हैं और R, A की सही व्याख्या नहीं है
3. A सही है लेकिन R सही नहीं है
4. A सही नहीं है लेकिन R सही है

Options :

- 686340151025. 1
- 686340151026. 2
- 686340151027. 3
- 686340151028. 4

Question Number : 58 Question Id : 68634038241 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

Deduce the structure of the corresponding alcohol which shows the following reaction

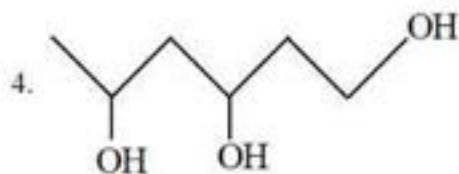
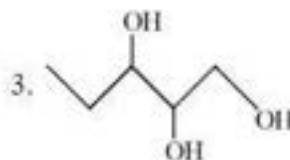
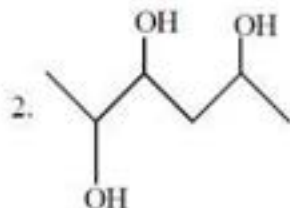
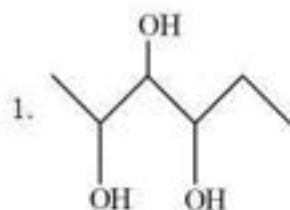
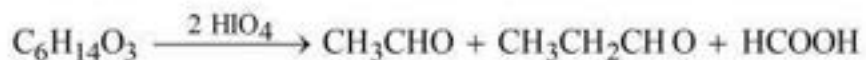


Options :

- 686340151029. 1
- 686340151030. 2
- 686340151031. 3
- 686340151032. 4

Question Number : 58 Question Id : 68634038241 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

संगत एल्कोहल की संरचना का निगमन कीजिए जो निम्नलिखित अभिक्रिया प्रदर्शित करती है:



Options :

686340151029. 1

686340151030. 2

686340151031. 3

686340151032. 4

Question Number : 59 Question Id : 68634038242 Question Type : MCQ Option Shuffling : No 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 correct combination of enzyme and metal ion at the active site is

1. Hemoglobin (Fe^{2+}), Carboxypeptidase (Zn^{2+}), Carbonic anhydrase Cu^{2+})

2. Hemoglobin (Fe^{3+}), Carboxypeptidase (Cu^{2+}), Carbonic anhydrase (Zn^{2+})

3. Hemoglobin (Fe^{2+}), Carboxypeptidase (Zn^{2+}), Carbonic anhydrase (Zn^{2+})

4. Hemoglobin (Fe^{3+}), Carboxypeptidase (Zn^{2+}), Carbonic anhydrase (Zn^{2+})

Options :

686340151033. 1

686340151034. 2
686340151035. 3
686340151036. 4

Question Number : 59 Question Id : 68634038242 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

सक्रिय स्थान पर एंजाइम तथा धातु का सही संयोजन है

1. हिमोग्लोबिन (Fe^{2+}), कर्बोक्सी पेप्टाइडेज (Zn^{2+}), कार्बोनिक ऐनहाइड्रिज (Cu^{2+})
2. हिमोग्लोबिन (Fe^{3+}), कर्बोक्सी पेप्टाइडेज (Cu^{2+}), कार्बोनिक ऐनहाइड्रिज (Zn^{2+})
3. हिमोग्लोबिन (Fe^{2+}), कर्बोक्सी पेप्टाइडेज (Zn^{2+}), कार्बोनिक ऐनहाइड्रिज (Zn^{2+})
4. हिमोग्लोबिन (Fe^{3+}), कर्बोक्सी पेप्टाइडेज (Zn^{2+}), कार्बोनिक ऐनहाइड्रिज (Zn^{2+})

Options :

686340151033. 1
686340151034. 2
686340151035. 3
686340151036. 4

Question Number : 60 Question Id : 68634038243 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Identify the infrared active molecules from the following

- A. N_2
- B. NO
- C. CO
- D. CO_2

Choose the correct answer from the options given below:

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

Options :

686340151037. 1
686340151038. 2
686340151039. 3
686340151040. 4

Question Number : 60 Question Id : 68634038243 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

निम्न में से अवरोक्त सक्रिय अणुओं की पहचान कीजिए

- A. N_2
- B. NO
- C. CO
- D. CO_2

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

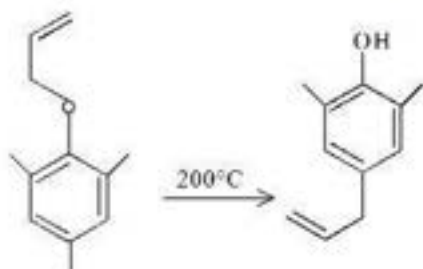
1. केवल A, B और C
2. केवल B, C और D
3. केवल B और C
4. केवल B और D

Options :

- 686340151037. 1
- 686340151038. 2
- 686340151039. 3
- 686340151040. 4

Question Number : 61 Question Id : 68634038244 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Identify the class of the following reaction.



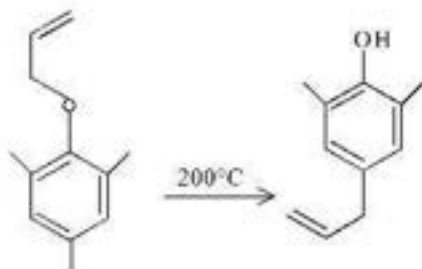
1. Aromatic Nucleophilic Substitution
2. Aromatic Electrophilic Substitution
3. Nucleophilic Elimination addition reaction
4. Pericyclic reaction

Options :

- 686340151041. 1
- 686340151042. 2
- 686340151043. 3

Question Number : 61 Question Id : 68634038244 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

निम्न अभिक्रिया की पहचान कीजिए -



1. ऐरोमैटिक नाभिक रागी प्रतिस्थापन अभिक्रिया
2. ऐरोमैटिक इलेक्ट्रानरागी प्रतिस्थापन अभिक्रिया
3. नाभिरागी विलोपन योगज अभिक्रिया
4. पेरीसाइक्लिक अभिक्रिया

Options :

686340151041. 1
686340151042. 2
686340151043. 3
686340151044. 4

Question Number : 62 Question Id : 68634038245 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Kronecker delta is defined by

1. $\delta_{nk} = 2, n = k$ and $\delta_{nk} = 2, n \neq k$
2. $\delta_{nk} = 3, n = k$ and $\delta_{nk} = 3, n \neq k$
3. $\delta_{nk} = 1, n = k$ and $\delta_{nk} = 0, n \neq k$
4. $\delta_{nk} = 0, n = k$ and $\delta_{nk} = 1, n \neq k$

Options :

686340151045. 1
686340151046. 2
686340151047. 3
686340151048. 4

Question Number : 62 Question Id : 68634038245 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

क्रोनेकर डेल्टा किसके द्वारा परिभाषित किया जाता है:

1. $\delta_{nk} = 2, n = k$ and $\delta_{nk} = 2, n \neq k$

2. $\delta_{nk} = 3, n = k$ and $\delta_{nk} = 3, n \neq k$

3. $\delta_{nk} = 1, n = k$ and $\delta_{nk} = 0, n \neq k$

4. $\delta_{nk} = 0, n = k$ and $\delta_{nk} = 1, n \neq k$

Options :

686340151045. 1

686340151046. 2

686340151047. 3

686340151048. 4

Question Number : 63 Question Id : 68634038246 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Number of C-O stretching frequency bands observed for $M(CO)_6$; $M(CO)_3L_3$ (fac-isomer), $M(CO)_3L_3$ (mer-isomer), respectively are:

1. 3, 2, 1

2. 1, 3, 2

3. 1, 2, 3

4. 1, 3, 3

Options :

686340151049. 1

686340151050. 2

686340151051. 3

686340151052. 4

Question Number : 63 Question Id : 68634038246 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

$M(CO)_6$: फलकीयसमावयव $M(CO)_3L_3$ रेखंशिक समावयव $M(CO)_3L_3$ के लिए C-O तनन आवृति बैंड की संख्या क्रमशः है।

1. 3, 2, 1

2. 1, 3, 2

3. 1, 2, 3

4. 1, 3, 3

Options :

686340151049. 1

686340151050. 2

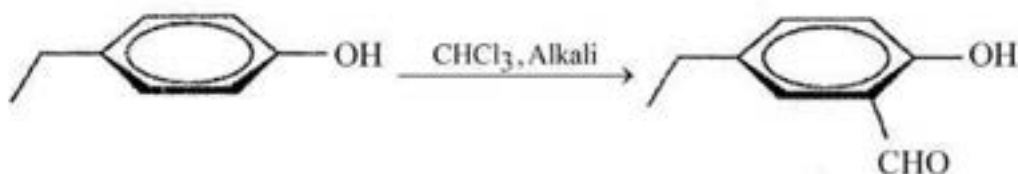
686340151051. 3

686340151052. 4

Question Number : 64 Question Id : 68634038247 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The following reaction undergoes via _____ and is known as _____ reaction.



1. Carbene, Reimer-Tiemann

2. Carbocation, Kolbe

3. Carbene, Kolbe

4. Carbocation, Reimer-Tiemann

Options :

686340151053. 1

686340151054. 2

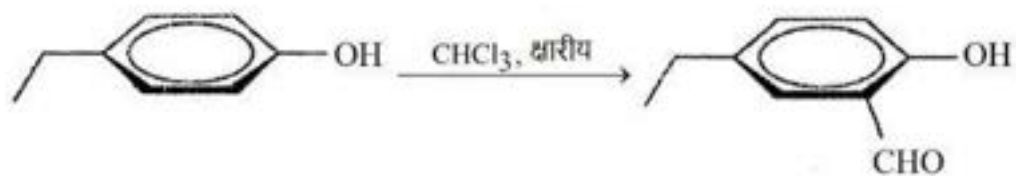
686340151055. 3

686340151056. 4

Question Number : 64 Question Id : 68634038247 Question Type : MCQ Option Shuffling : No 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 अभिक्रिया _____ के माध्यम से होती है तथा इसे _____ कहते हैं।



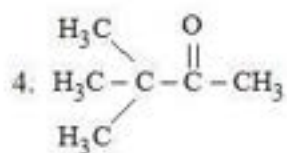
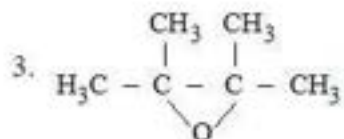
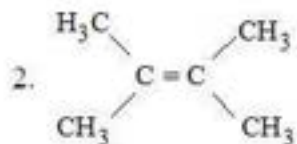
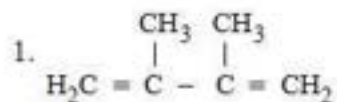
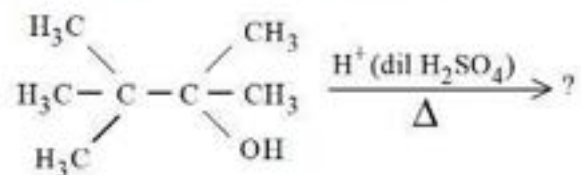
1. कार्बिन, राइमर टीमन
2. कार्बधनायन, कोल्बे
3. कार्बिन, कोल्बे
4. कार्बधनायन, राइमर टीमन

Options :

686340151053. 1
686340151054. 2
686340151055. 3
686340151056. 4

Question Number : 65 Question Id : 68634038248 Question Type : MCQ Option Shuffling : No 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 product formed in the following reaction



Options :

686340151057. 1

686340151058. 2

686340151059. 3

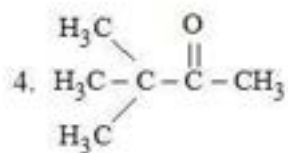
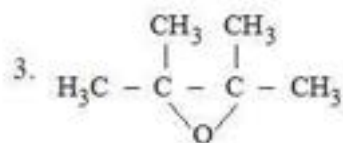
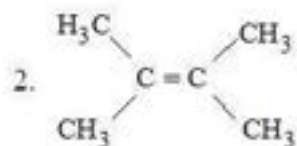
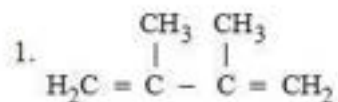
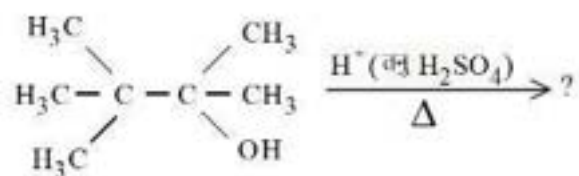
686340151060. 4

Question Number : 65 Question Id : 68634038248 Question Type : MCQ Option Shuffling : No 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 अभिक्रिया में सही उत्पाद का चयन कीजिए:



Options :

686340151057. 1

686340151058. 2

686340151059. 3

686340151060. 4

Question Number : 66 Question Id : 68634038249 Question Type : MCQ Option Shuffling : No 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: For $\text{Na}^+ | \text{K}^+$ pump, the active ion transport involve three Na^+ expelled out for two K^+ ions intake across the cell membrane.

Statement II: Binding of K^+ induces phosphorylation of ADP to ATP.

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 :

686340151061. 1
686340151062. 2
686340151063. 3
686340151064. 4

Question Number : 66 Question Id : 68634038249 Question Type : MCQ Option Shuffling : No 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: $\text{Na}^+ | \text{K}^+$ पम्प के लिए सक्रिय आयन परिगमन कोशिका झिल्ली के पार दो K^+ लेने के लिए तीन Na^+ बाहर जाते हैं।

कथन II: K^+ के बंधन से ADP का ATP में फॉस्फोरिकरण उत्पन्न होता है।

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

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

Options :

686340151061. 1
686340151062. 2
686340151063. 3
686340151064. 4

Question Number : 67 Question Id : 68634038250 Question Type : MCQ Option Shuffling : No 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 expression holds good for Freundlich adsorption isotherm.

1. $\frac{x}{m} = kp^{\frac{1}{n}}$

2. $\frac{x}{m} = k^{\frac{1}{n}} p^{\frac{1}{n}}$

3. $\frac{x}{m} = kp^2$

4. $\frac{x}{m} = \left(\frac{k}{p}\right)^{\frac{1}{n}}$

Options :

- 686340151065. 1
- 686340151066. 2
- 686340151067. 3
- 686340151068. 4

Question Number : 67 Question Id : 68634038250 Question Type : MCQ Option Shuffling : No 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 व्यंजक फ्रॉन्डलिक अधिशोषण समतापी के लिए सही है:

1. $\frac{x}{m} = kp^{\frac{1}{n}}$

2. $\frac{x}{m} = k^{\frac{1}{n}} p^{\frac{1}{n}}$

3. $\frac{x}{m} = kp^2$

4. $\frac{x}{m} = \left(\frac{k}{p}\right)^{\frac{1}{n}}$

Options :

- 686340151065. 1
- 686340151066. 2
- 686340151067. 3
- 686340151068. 4

Question Number : 68 Question Id : 68634038251 Question Type : MCQ Option Shuffling : No 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: Concentrated HNO_3 is colourless but often turns yellow on keeping.

Reason R: Photo chemical decomposition of HNO_3 gives NO_2 .

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

- 1. Both **A** and **R** are correct and **R** is the correct explanation of **A**
- 2. Both **A** and **R** are correct but **R** is **NOT** the correct explanation of **A**
- 3. **A** is correct but **R** is not correct
- 4. **A** is not correct but **R** is correct

Options :

686340151069. 1
686340151070. 2
686340151071. 3
686340151072. 4

Question Number : 68 Question Id : 68634038251 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

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

अभिकथन A: सांद्रित HNO_3 रंगहीन होता है लेकिन रखने पर अक्सर पीला हो जाता है।

कारण R: HNO_3 के प्रकाशरासायनिक अपघटन से NO_2 प्राप्त होता 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 :

686340151069. 1
686340151070. 2
686340151071. 3
686340151072. 4

Question Number : 69 Question Id : 68634038252 Question Type : MCQ Option Shuffling : No 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.	Carbonyl compounds react with ylide to form alkene.	I.	Cannizzaro Reaction
B.	Ketone reacts with zinc-mercury amalgam in HCl as reducing agent to form alkane.	II.	Clemmensen Reduction
C.	Carbonyl compounds react with basic solution of hydrazine as reducing agent to produce alkane.	III.	Wittig Reaction
D.	Formaldehyde react with NaOH to form methanol.	IV.	Wolf-Kishner Reduction

Choose the correct answer from the options given below:

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

Options :

686340151073. 1
686340151074. 2
686340151075. 3
686340151076. 4

Question Number : 69 Question Id : 68634038252 Question Type : MCQ Option Shuffling : No 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.	कार्बोनिल यौगिक ग्लाइड के साथ अभिक्रिया कर एल्कीन बनाते हैं।	I.	कैनज़ारो अभिक्रिया
B.	HCl में जिंक-मर्करी अमलगम अपचायक के रूप में किटोन से अभिक्रिया करके एल्केन बनाता है।	II.	वुल्फ-किशनर अपचयन
C.	कार्बोनिल यौगिक अपचायक के रूप में हाइड्राजीन के क्षारकीय विलयन के साथ अभिक्रिया में एल्केन बनाता है।	III.	विटिग अभिक्रिया
D.	फार्मिलिहाइड NaOH के साथ अभिक्रिया से मेथनॉल बनाता है।	IV.	वुल्फ-किशनर अपचयन

निम्नलिखित विकल्पों में से सही उत्तर का चयन कीजिए :

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

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

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

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

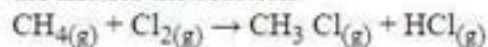
Options :

686340151073. 1
686340151074. 2
686340151075. 3
686340151076. 4

Question Number : 70 Question Id : 68634038253 Question Type : MCQ Option Shuffling : No 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 bond enthalpies for C-H, Cl-Cl, C-Cl and H-Cl are 99, 58, 78 and 103 kcal/mol respectively. What will be the ΔH for the reaction



1. -24 kcal

2. -26 kcal

3. -23 kcal

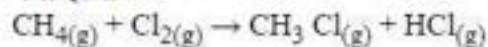
4. -32 kcal

Options :

686340151077. 1
686340151078. 2
686340151079. 3
686340151080. 4

Question Number : 70 Question Id : 68634038253 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

C-H, Cl-Cl, C-Cl और H-Cl की आवंध एन्थेपी क्रमशः 99, 58, 78 और 103 kcal/mole हैं। इस अभिक्रिया के लिए ΔH क्या होगा



1. -24 kcal
2. -26 kcal
3. -23 kcal
4. -32 kcal

Options :

686340151077. 1
686340151078. 2
686340151079. 3
686340151080. 4

Question Number : 71 Question Id : 68634038254 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Which among the elements of Lanthanoid series often exhibit +4 oxidation state.

1. Ytterbium
2. Lanthanum
3. Gadolinium
4. Cerium

Options :

686340151081. 1
686340151082. 2
686340151083. 3
686340151084. 4

Question Number : 71 Question Id : 68634038254 Question Type : MCQ Option Shuffling : No 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 लैंथेनॉयड श्रृंखला का कौन सा तत्व अक्सर +4 ऑक्सीकरण अवस्था को दर्शाता है?

1. यट्रबियम
2. लैंथेनम
3. गैडोलिनियम
4. सिरियम

Options :

686340151081. 1
686340151082. 2
686340151083. 3
686340151084. 4

Question Number : 72 Question Id : 68634038255 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Which of the following statement is not correct regarding five membered heterocyclic compounds?

1. Furan is least aromatic in nature among furan, thiophene and pyrrole.
2. Thiophene can have more number of canonical structures using $3d$ -orbitals.
3. Pyrrole has maximum double bond character among furan, thiophene and pyrrole.
4. Furan, thiophene and pyrrole can be synthesized using Paal-Knorr synthesis.

Options :

686340151085. 1
686340151086. 2
686340151087. 3
686340151088. 4

Question Number : 72 Question Id : 68634038255 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

निम्नलिखित में से कौन सा कथन पांच सदस्यी विषमचक्रीय यौगिक के संदर्भ में सही नहीं है?

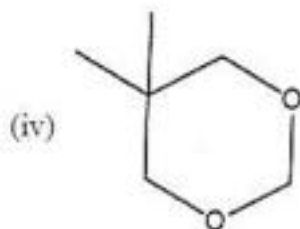
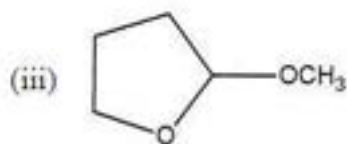
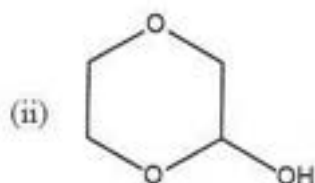
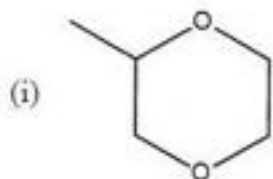
1. फ्यूरेन, थायोफिन तथा पाइरोल में से फ्यूरेन सबसे कम एरोमेटिक प्रकृति का है।
2. थायोफिन $3d$ कक्षकों का उपयोग करके अधिक अनुनादी संख्या रख सकता है।
3. फ्यूरेन, थायोफिन और पाइरोल में से पाइरोल का अधिकतम द्वि गुण आबंध होता है।
4. फ्यूरेन, थायोफिन और पाइरोल को पाल-नॉर संश्लेषण के प्रयोग से संश्लेषित किया जा सकता है।

Options :

686340151085. 1
686340151086. 2
686340151087. 3
686340151088. 4

Question Number : 73 Question Id : 68634038256 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Which of the following are acetals?



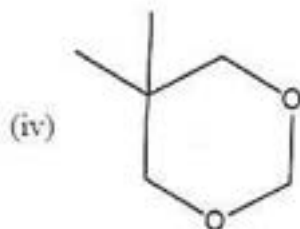
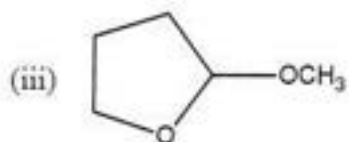
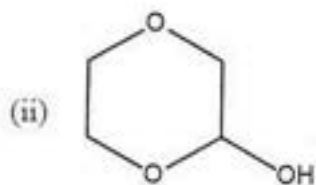
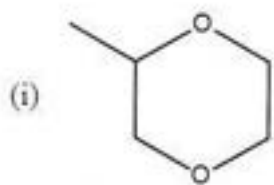
1. I and II
2. III and IV
3. I and III
4. I and IV

Options :

686340151089. 1
686340151090. 2
686340151091. 3
686340151092. 4

Question Number : 73 Question Id : 68634038256 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

निम्नलिखित में से कौन से ऐसीटल हैं?



1. I और II

2. III और IV

3. I और III

4. I और IV

Options :

686340151089. 1

686340151090. 2

686340151091. 3

686340151092. 4

Question Number : 74 Question Id : 68634038257 Question Type : MCQ Option Shuffling : No 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 nitrogen containing compound dissolves in 10% aq. sulphuric acid. The Hinsberg test gives a solid product that is not soluble in 10% aq. NaOH. Which one of the following compounds best fits the above facts?

1. *N, N*-Dimethylaniline
2. *N*-Methylbenzamide
3. *N*-Methylaniline
4. Benzylamine

Options :

686340151093. 1
686340151094. 2
686340151095. 3
686340151096. 4

Question Number : 74 Question Id : 68634038257 Question Type : MCQ Option Shuffling : No 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 नाइट्रोजन युक्त यौगिक 10% जलीय सल्फ्यूरिक अम्ल में घुल जाता है। हिंसबर्ग परीक्षण से एक ठोस उत्पाद प्राप्त होता है, जो 10% NaOH में घुलनशील नहीं है। निम्नलिखित में से कौन सा यौगिक उक्त तथ्यों के संदर्भ में सबसे उपयुक्त है?

1. *N, N*-डाइमेथिल एनिलीन
2. *N*-मेथिलबेंजामाइड
3. *N*-मेथिल एनिलीन
4. बेंजिल ऐमीन

Options :

686340151093. 1
686340151094. 2
686340151095. 3
686340151096. 4

Question Number : 75 Question Id : 68634038258 Question Type : MCQ Option Shuffling : No 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 20°C pure water requires 102.2 seconds to flow through the capillary of an Ostwald Viscometer while toluene at 20°C requires 68.9 seconds. Calculate the relative viscosity of the toluene. Densities of water and toluene are 0.998 and 0.866 g cm⁻³ respectively.

1. 1.709 poise
2. 0.585 poise
3. 1.287 poise
4. 1.170 poise

Options :

686340151097. 1
686340151098. 2
686340151099. 3
686340151100. 4

Question Number : 75 Question Id : 68634038258 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

20°C पर एक ओस्टवाल्ड श्यानतामापी की कोशिका से बहने के लिए विशुद्ध पानी को 102.2 सेकंड के समय की आवश्यकता है, तो टोल्युन को 68.9 सेकंड की। टोल्युन की साक्षेप श्यानता की गणना कीजिए। पानी और टोल्युन के घनत्व क्रमशः 0.998 और 0.866 g cm⁻³ है।

1. 1.709 poise
2. 0.585 poise
3. 1.287 poise
4. 1.170 poise

Options :

686340151097. 1
686340151098. 2
686340151099. 3
686340151100. 4

Question Number : 76 Question Id : 68634038259 Question Type : MCQ Option Shuffling : No 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 effective atomic number (EAN) of $[\text{Cd}(\text{NH}_3)_4]^{2+}$

1. 48

2. 46

3. 54

4. 56

Options :

686340151101. 1

686340151102. 2

686340151103. 3

686340151104. 4

Question Number : 76 Question Id : 68634038259 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

$[\text{Cd}(\text{NH}_3)_4]^{2+}$ का प्रभावी परमाणु-क्रमांक (EAN) है -

1. 48

2. 46

3. 54

4. 56

Options :

686340151101. 1

686340151102. 2

686340151103. 3

686340151104. 4

Question Number : 77 Question Id : 68634038260 Question Type : MCQ Option Shuffling : No 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 dissociation constant of bromocresol purple indicator is 3.981×10^{-7} at 0°C . The indicator when added to a buffer solution gave a colour matched with 50% basic colour and rest matched with acidic colour. The pH of buffer is: $[\log 3.98 = 0.5999]$

1. 7.40

2. 3.25

3. 6.40

4. 5.40

Options :

- 686340151105. 1
- 686340151106. 2
- 686340151107. 3
- 686340151108. 4

Question Number : 77 Question Id : 68634038260 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

0° C पर ब्रोमो क्रिसोल बैंगनी सूचक का वियोजन स्थिरांक 3.981×10^{-7} है। एक बफर विलयन में मिलाये जाने पर सूचक से जो रंग प्राप्त हुआ, वह 50% क्षारकीय रंग से मिलता है और शेष अम्लीय रंग से मिलता है। बफर का pH है:
[log 3.98 = 0.5999]

- 1. 7.40
- 2. 3.25
- 3. 6.40
- 4. 5.40

Options :

- 686340151105. 1
- 686340151106. 2
- 686340151107. 3
- 686340151108. 4

Question Number : 78 Question Id : 68634038261 Question Type : MCQ Option Shuffling : No 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 type of isomerism displayed in following pair of compounds is

$[\text{Co}(\text{NH}_3)_6]$ $[\text{Cr}(\text{C}_2\text{O}_4)_3]$ and $[\text{Cr}(\text{NH}_3)_6]$ $[\text{Co}(\text{C}_2\text{O}_4)_3]$

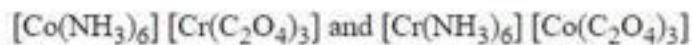
- 1. Coordination isomerism
- 2. Linkage isomerism
- 3. Ionization isomerism
- 4. Geometric isomerism

Options :

- 686340151109. 1
- 686340151110. 2
- 686340151111. 3
- 686340151112. 4

Question Number : 78 Question Id : 68634038261 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

यौगिकों का निम्नलिखित जोड़ा किस प्रकार की समावयवता को दर्शाता है?



1. उपसहसंयोजन समावयवता
2. बंधनी समावयवता
3. आयनन समावयवता
4. ज्यामितीय समावयवता

Options :

686340151109. 1
686340151110. 2
686340151111. 3
686340151112. 4

Question Number : 79 Question Id : 68634038262 Question Type : MCQ Option Shuffling : No 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 compounds on reaction with two moles of Grignard reagent followed by acidic hydrolysis does not give tertiary alcohol?

1. Ethylacetate
2. Acetyl chloride
3. Methyl formate
4. Acetic Anhydride

Options :

686340151113. 1
686340151114. 2
686340151115. 3
686340151116. 4

Question Number : 79 Question Id : 68634038262 Question Type : MCQ Option Shuffling : No 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 यौगिक ग्रिगनार्ड अभिकर्मक के दो ग्राम अणुओं के साथ अभिक्रिया के उपरांत अम्लीय जलापघटनके परिणामस्वरूप तृतीयक एल्कोहल नहीं देता है?

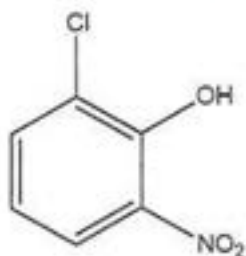
1. ऐथिल ऐसिटेट
2. ऐसीटिल क्लोराइड
3. मेथिल फॉर्मेट
4. ऐसीटिक एनहाइड्राइड

Options :

686340151113. 1
686340151114. 2
686340151115. 3
686340151116. 4

Question Number : 80 Question Id : 68634038263 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

How many signals are shown by the following compound in the NMR spectra?



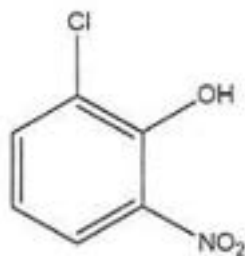
1. 1
2. 2
3. 3
4. 4

Options :

686340151117. 1
686340151118. 2
686340151119. 3
686340151120. 4

Question Number : 80 Question Id : 68634038263 Question Type : MCQ Option Shuffling : No 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 यौगिक NMR स्पेक्ट्रम में कितने संकेतन दिखाता है?



1. 1

2. 2

3. 3

4. 4

Options :

686340151117. 1

686340151118. 2

686340151119. 3

686340151120. 4

Question Number : 81 Question Id : 68634038264 Question Type : MCQ Option Shuffling : No 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 final product of the reaction of borax with aqueous hydrochloric acid (HCl)?

1. B_2O_3

2. $NaBO_2$

3. H_3BO_3

4. BCl_3

Options :

686340151121. 1

686340151122. 2

686340151123. 3

686340151124. 4

Question Number : 81 Question Id : 68634038264 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

बोरैक्स और जलीय हाइड्रोक्लोरिक अम्ल (HCl) की अभिक्रिया का अंतिम उत्पाद क्या होगा?

1. B_2O_3
2. $NaBO_2$
3. H_3BO_3
4. BCl_3

Options :

686340151121. 1
686340151122. 2
686340151123. 3
686340151124. 4

Question Number : 82 Question Id : 68634038265 Question Type : MCQ Option Shuffling : No 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 first order diffraction from (110) plane of KCl observed using X-ray of wavelength 150 pm and edge length of unit cell is 305 pm, then glancing angle is equal to -

$[\sin 20.35^\circ = 0.3478$

$\sin 38.35^\circ = 0.6205$

$\sin 40.35^\circ = 0.6475$

$\sin 18.35^\circ = 0.3148]$

1. 38.35°
2. 20.35°
3. 40.35°
4. 18.35°

Options :

686340151125. 1
686340151126. 2
686340151127. 3
686340151128. 4

Question Number : 82 Question Id : 68634038265 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

एक्स-रे के 150 pm तरंग-दैर्घ्य के उपयोग से KCl के (110) समतल से प्रथम कोटि विवर्तन प्रेक्षित होता है। यदि एकक सेल के भुजा की लम्बाई 305 pm है तो पृष्ठसर्पी कोण किसके बराबर है :

$$[\sin 20.35^\circ = 0.3478$$

$$\sin 38.35^\circ = 0.6205$$

$$\sin 40.35^\circ = 0.6475$$

$$\sin 18.35^\circ = 0.3148]$$

1. 38.35°

2. 20.35°

3. 40.35°

4. 18.35°

Options :

686340151125. 1

686340151126. 2

686340151127. 3

686340151128. 4

Question Number : 83 Question Id : 68634038266 Question Type : MCQ Option Shuffling : No 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 splitting pattern of NMR signals of 1, 2-Dibromoethane in increasing order of δ values?

1. Triplet followed by triplet

2. Doublet followed by doublet

3. Triplet followed by doublet

4. No splitting

Options :

686340151129. 1

686340151130. 2

686340151131. 3

686340151132. 4

Question Number : 83 Question Id : 68634038266 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

1,2-डाइब्रोमोइथेन के NMR संकेतको का विपाटन प्रतिरूप के δ मानों का बढ़ता क्रम होगा:

1. ट्रिप्लेट फिर ट्रिप्लेट
2. डब्लेट फिर डब्लेट
3. ट्रिप्लेट फिर डब्लेट
4. विपाटन नहीं होगा

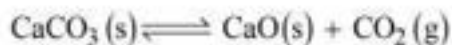
Options :

686340151129. 1
686340151130. 2
686340151131. 3
686340151132. 4

Question Number : 84 Question Id : 68634038267 Question Type : MCQ Option Shuffling : No 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 decomposition of CaCO_3 in a closed vessel is represented by the equation



Calculate the number of phases, components and degree of freedom

1. $p = 2; C = 3; F = 3$
2. $p = 3; C = 2; F = 1$
3. $p = 2; C = 2; F = 2$
4. $p = 3; C = 3; F = 2$

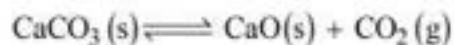
Options :

686340151133. 1
686340151134. 2
686340151135. 3
686340151136. 4

Question Number : 84 Question Id : 68634038267 Question Type : MCQ Option Shuffling : No 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 बंद निकाय में CaCO_3 के अपघटन को प्रदर्शित करने वाला समीकरण है



प्रावस्थाओं, संघटकों और स्वतंत्रता की कोटियों की संख्या की गणना कीजिए:

1. $p = 2; C = 3; F = 3$

2. $p = 3; C = 2; F = 1$

3. $p = 2; C = 2; F = 2$

4. $p = 3; C = 3; F = 2$

Options :

686340151133. 1

686340151134. 2

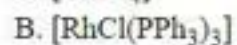
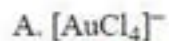
686340151135. 3

686340151136. 4

Question Number : 85 Question Id : 68634038268 Question Type : MCQ Option Shuffling : No 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 form square planar complexes



Choose the correct option:

1. A and B only

2. C and D only

3. A and C only

4. B and D only

Options :

686340151137. 1

686340151138. 2

686340151139. 3

686340151140. 4

Question Number : 85 Question Id : 68634038268 Question Type : MCQ Option Shuffling : No 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 वर्ग समतली संकुल बनाते हैं?

- A. $[\text{AuCl}_4]^-$
- B. $[\text{RhCl}(\text{PPh}_3)_3]$
- C. $[\text{NiBr}_4]^{2-}$
- D. $[\text{FeCl}_4]^{2-}$

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

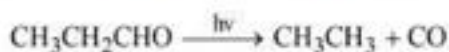
- 1. केवल A और B
- 2. केवल C और D
- 3. केवल A और C
- 4. केवल B और D

Options :

- 686340151137. 1
- 686340151138. 2
- 686340151139. 3
- 686340151140. 4

Question Number : 86 Question Id : 68634038269 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

Calculate the number of moles of carbon mono oxide in the following reaction



If the light irradiated has $\lambda = 3020 \text{ \AA}$, the quantum yield of reaction 0.54 and the light energy absorbed is 15000 erg in a given time.

- 1. $3.26 \times 10^{-9} \text{ mol}$
- 2. $2.04 \times 10^{-9} \text{ mol}$
- 3. $1.04 \times 10^{-9} \text{ mol}$
- 4. $2.56 \times 10^{-9} \text{ mol}$

Options :

- 686340151141. 1
- 686340151142. 2
- 686340151143. 3
- 686340151144. 4

Question Number : 86 Question Id : 68634038269 Question Type : MCQ Option Shuffling : No 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 अभिक्रिया में कार्बन मोनो ऑक्साइड के मोलों की संख्या की गणना कीजिए:



अगर तय समय में किरणित प्रकाश का $\lambda = 3020 \text{ \AA}$ है, अभिक्रिया की क्वान्टम लब्धि 0.54 है और अवशोषित प्रकाश ऊर्जा 15000 erg हैं।

1. $3.26 \times 10^{-9} \text{ mol}$

2. $2.04 \times 10^{-9} \text{ mol}$

3. $1.04 \times 10^{-9} \text{ mol}$

4. $2.56 \times 10^{-9} \text{ mol}$

Options :

686340151141. 1

686340151142. 2

686340151143. 3

686340151144. 4

Question Number : 87 Question Id : 68634038270 Question Type : MCQ Option Shuffling : No 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 conversion of diamond to graphite at room temperature and pressure is spontaneous ($\Delta G^\circ = -2.90 \text{ kJ mol}^{-1}$)

Statement II: The electrical conductivity of graphite perpendicular to the plane is low, whereas parallel to the plane is very high.

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 :

686340151145. 1

686340151146. 2

686340151147. 3

686340151148. 4

Question Number : 87 Question Id : 68634038270 Question Type : MCQ Option Shuffling : No 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: कमरे के ताप पर और दाब पर हीरे का ग्रेफाइट में रूपांतरण स्वतः होता है ($\Delta G^\circ = -2.90 \text{ kJ mol}^{-1}$)

कथन II: ग्रेफाइट की विद्युतीय चालकता समतल के लम्बवत होने पर कम होती है, जबकि समतल के समांतर होने पर बहुत उच्च होती है।

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

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

Options :

686340151145. 1
686340151146. 2
686340151147. 3
686340151148. 4

Question Number : 88 Question Id : 68634038271 Question Type : MCQ Option Shuffling : No 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 compound is not an alkaloid.

1. Nicotine
2. Paracetamol
3. Reserpine
4. Cocaine

Options :

686340151149. 1
686340151150. 2
686340151151. 3
686340151152. 4

Question Number : 88 Question Id : 68634038271 Question Type : MCQ Option Shuffling : No 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 यौगिक एक एल्केलॉइड नहीं है?

1. निकोटीन
2. पैरासिटामॉल
3. रेसरपाइन
4. कोकेन

Options :

686340151149. 1
686340151150. 2
686340151151. 3
686340151152. 4

Question Number : 89 Question Id : 68634038272 Question Type : MCQ Option Shuffling : No 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 liquid having molar mass of 50 g mol^{-1} boils at 80°C . If the latent heat of vapourization is 500 cal g^{-1} , the molar entropy of vapourization is

1. $70.8 \text{ cal K}^{-1}\text{mol}^{-1}$
2. $312 \text{ cal K}^{-1}\text{mol}^{-1}$
3. $1.42 \text{ cal K}^{-1}\text{mol}^{-1}$
4. $25.3 \text{ cal K}^{-1}\text{mol}^{-1}$

Options :

686340151153. 1
686340151154. 2
686340151155. 3
686340151156. 4

Question Number : 89 Question Id : 68634038272 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

50 g mol⁻¹ के ग्राम अणुक द्रव्यमान वाला एक द्रव 80° C पर उबलता है। अगर वाष्पन की गुप्त ऊष्मा 500 cal g⁻¹ है, तो वाष्पन की ग्राम अणुक एन्ट्रॉपी होगी:

1. 70.8 cal K⁻¹mol⁻¹
2. 312 cal K⁻¹mol⁻¹
3. 1.42 cal K⁻¹mol⁻¹
4. 25.3 cal K⁻¹mol⁻¹

Options :

686340151153. 1
686340151154. 2
686340151155. 3
686340151156. 4

Question Number : 90 Question Id : 68634038273 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Oxidation state of Sulphur in dithionite and dithionate ions are respectively

1. +3 and +4
2. +4 and +3
3. +3 and +5
4. +5 and +3

Options :

686340151157. 1
686340151158. 2
686340151159. 3
686340151160. 4

Question Number : 90 Question Id : 68634038273 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

डाइथायोनाइट और डाइथायोनेट आयनों में सल्फर की ऑक्सीकरण अवस्था क्रमशः है

1. +3 और +4
2. +4 और +3
3. +3 और +5
4. +5 और +3

Options :

- 686340151157. 1
- 686340151158. 2
- 686340151159. 3
- 686340151160. 4

Question Number : 91 Question Id : 68634038274 Question Type : MCQ Option Shuffling : No 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.	$\nabla^2\psi + \frac{8\pi^2m}{h^2}(E - V)\psi = 0$	I.	Planck
B.	$E = hv$	II.	Heisenberg
C.	$\Delta x \cdot \Delta p \geq \frac{h}{4\pi}$	III.	Schrodinger
D.	$\lambda = \frac{h}{p}$	IV.	de Broglie

Choose the correct answer from the options given below:

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

Options :

- 686340151161. 1
- 686340151162. 2
- 686340151163. 3
- 686340151164. 4

Question Number : 91 Question Id : 68634038274 Question Type : MCQ Option Shuffling : No 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.	$\nabla^2 \psi + \frac{8\pi^2 m}{h^2} (E - V) \psi = 0$	I.	प्लैंक
B.	$E = hv$	II.	हायज़नबर्ग
C.	$\Delta x \cdot \Delta p \geq \frac{h}{4\pi}$	III.	श्रोडिंजर
D.	$\lambda = \frac{h}{p}$	IV.	डि ब्रोग्ली

निम्नलिखित विकल्पों में से सही उत्तर का चयन कीजिए :

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

Options :

686340151161. 1
686340151162. 2
686340151163. 3
686340151164. 4

Question Number : 92 Question Id : 68634038275 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

Determine the Miller indices for a plane when the intercepts along the axes are 2a, 3b and 2c

1. (3, 2, 2)
2. (1, 1, 1)
3. (2, 3, 2)
4. (3, 2, 3)

Options :

686340151165. 1
686340151166. 2
686340151167. 3
686340151168. 4

Question Number : 92 Question Id : 68634038275 Question Type : MCQ Option Shuffling : No 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 समतल के मिलर अक्षकों का निर्धारण कीजिए, जब अक्षक पर 2a, 3b और 2c के अंतः खंड है:

1. (3, 2, 2)
2. (1, 1, 1)
3. (2, 3, 2)
4. (3, 2, 3)

Options :

686340151165. 1
686340151166. 2
686340151167. 3
686340151168. 4

Question Number : 93 Question Id : 68634038276 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Using Slater's rule, the shielding constant and effective nuclear charge for the outermost electron of Mg are respectively.

1. 9.10 and 2.90
2. 9.15 and 2.85
3. 8.15 and 3.85
4. 9.10 and 3.90

Options :

686340151169. 1
686340151170. 2
686340151171. 3
686340151172. 4

Question Number : 93 Question Id : 68634038276 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

स्लेटर के नियम के अनुसार Mg के सबसे बाहरी इलेक्ट्रॉन का परिरक्षण स्थिरांक और प्रभावी नाभिकीय आवेश क्रमशः है:

1. 9.10 और 2.90
2. 9.15 और 2.85
3. 8.15 और 3.85
4. 9.10 और 3.90

Options :

686340151169. 1
686340151170. 2
686340151171. 3
686340151172. 4

Question Number : 94 Question Id : 68634038277 Question Type : MCQ Option Shuffling : No 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 energy required for various electronic transitions follow the order

1. $\sigma \rightarrow \sigma^* > n - \sigma^* > \pi - \pi^* > n \rightarrow \pi^*$

2. $\sigma \rightarrow \sigma^* > n \rightarrow \pi^* > n - \sigma^* > n - \pi^*$

3. $\pi - \pi^* > n \rightarrow \pi^* > \sigma \rightarrow \sigma^* > n - \sigma^*$

4. $n \rightarrow \pi^* > \sigma \rightarrow \sigma^* > n - \sigma^* > \pi - \pi^*$

Options :

686340151173. 1
686340151174. 2
686340151175. 3
686340151176. 4

Question Number : 94 Question Id : 68634038277 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

विभिन्न विद्युतीय संक्रमणों के लिए आवश्यक ऊर्जा का सही क्रम है:

1. $\sigma \rightarrow \sigma^* > n - \sigma^* > \pi - \pi^* > n \rightarrow \pi^*$

2. $\sigma \rightarrow \sigma^* > n \rightarrow \pi^* > n - \sigma^* > n - \pi^*$

3. $\pi - \pi^* > n \rightarrow \pi^* > \sigma \rightarrow \sigma^* > n - \sigma^*$

4. $n \rightarrow \pi^* > \sigma \rightarrow \sigma^* > n - \sigma^* > \pi - \pi^*$

Options :

686340151173. 1
686340151174. 2
686340151175. 3
686340151176. 4

Question Number : 95 Question Id : 68634038278 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Which among the following is wrong statement?

1. Haemoglobin consists of a tetramer of myoglobin like subunits with four iron sites.
2. All four Fe sites present in haemoglobin bind with oxygen during oxygen transport.
3. Myoglobin contains no Fe atom in it.
4. Haemoglobin is an oxygen transport protein and myoglobin is an oxygen storage protein.

Options :

686340151177. 1
686340151178. 2
686340151179. 3
686340151180. 4

Question Number : 95 Question Id : 68634038278 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

निम्नलिखित में से कौन सा कथन गलत है?

1. हिमोग्लोबिन में चार आयरन स्थलों वाले उप-एकक की तरह मायग्लोबिन का एक चतुष्टय (टेटामर) होता है।
2. ऑक्सीजन अभिगमन के दौरान हिमोग्लोबिन में उपस्थित सभी चारों Fe स्थल ऑक्सीजन से जुड़ जाते हैं।
3. मायग्लोबिन में Fe परमाणु नहीं होते।
4. हिमोग्लोबिन एक ऑक्सीजन अभिगमन प्रोटीन है और मायग्लोबिन एक ऑक्सीजन संग्रहण प्रोटीन है।

Options :

686340151177. 1
686340151178. 2
686340151179. 3
686340151180. 4

Question Number : 96 Question Id : 68634038279 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

Identify the correct statements applicable to rotational spectroscopy.

- A. It lies in the microwave region
- B. The molecules must have permanent dipole moment
- C. The selection rule is $\Delta J = \pm 2$
- D. Only one transition is observed at room temperature.

Choose the correct answer from the options given below:

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

Options :

- 686340151181. 1
- 686340151182. 2
- 686340151183. 3
- 686340151184. 4

Question Number : 96 Question Id : 68634038279 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1

घूर्णनी स्पेक्ट्रमिकी पर प्रयुक्त होने वाले सही कथन की पहचान कीजिए:

- A. यह सूक्ष्म तरंग क्षेत्र में रहती है।
- B. अणुओं का स्थायी द्वि-ध्रुव आघूर्ण होना चाहिए।
- C. चयन नियम $\Delta J = \pm 2$ है।
- D. कमरे के ताप पर केवल एक संक्रमण प्रेक्षित होता है।

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

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

Options :

- 686340151181. 1
- 686340151182. 2
- 686340151183. 3
- 686340151184. 4

Question Number : 97 Question Id : 68634038280 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Treatment of 1-Methylcyclohexene with an ether solution of diborane (B_2H_6), followed by reaction with alkaline H_2O_2 produces which of the following product?

1. 1-Methylcyclohexanol
2. *cis*-1-Methylcyclohexane-1,2-diol
3. *cis*-2-Methylcyclohexanol
4. *trans*-1-Methylcyclohexane-1,2-diol

Options :

686340151185. 1
686340151186. 2
686340151187. 3
686340151188. 4

Question Number : 97 Question Id : 68634038280 Question Type : MCQ Option Shuffling : No 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-मेथिलसाइक्लोहेक्सीन का डाइबोरेन (B_2H_6) के इथर विलयन से अभिक्रिया करते है फिर क्षारकीय H_2O_2 से अभिक्रिया होने के परिणामस्वरूप निम्नलिखित में से कौन सा उत्पाद उत्पन्न होता है?

1. 1-मेथिलसाइक्लोहेक्सेनॉल
2. *सिस*-1-मेथिलसाइक्लोहेक्सेन-1,2-डाईऑल
3. *सिस*-2-मेथिलसाइक्लोहेक्सेनॉल
4. *ट्रांस*-1-मेथिलसाइक्लोहेक्सेन-1,2-डाईऑल

Options :

686340151185. 1
686340151186. 2
686340151187. 3
686340151188. 4

Question Number : 98 Question Id : 68634038281 Question Type : MCQ Option Shuffling : No 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: cyanide and phosphorus trifluoride ligands stabilize metals in low oxidation states.

Reason R: Cyanide and phosphorus trifluoride ligands are excellent π -acceptor ligands.

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

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

Options :

686340151189. 1
686340151190. 2
686340151191. 3
686340151192. 4

Question Number : 98 Question Id : 68634038281 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

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

अभिकथन A: सायनाइड और फॉस्फोरस ट्राइफ्लोराइड लिगेंड निम्न ऑक्सीकरण अवस्थाओं में धातु को स्थाई करते हैं।

कारण R: सायनाइड और फॉस्फोरस ट्राइक्लोराइड लिगेंड उत्तम π -ग्राही लिगेंड होते हैं।

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

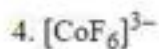
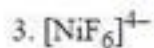
1. A और R दोनों सही हैं और R, A की सही व्याख्या है
2. A और R दोनों सही हैं और R, A की सही व्याख्या नहीं है
3. A सही है लेकिन R सही नहीं है
4. A सही नहीं है लेकिन R सही है

Options :

686340151189. 1
686340151190. 2
686340151191. 3
686340151192. 4

Question Number : 99 Question Id : 68634038282 Question Type : MCQ Option Shuffling : No 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 complexes are diamagnetic complexes?



Options :

686340151193. 1

686340151194. 2

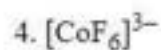
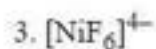
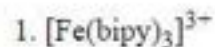
686340151195. 3

686340151196. 4

Question Number : 99 Question Id : 68634038282 Question Type : MCQ Option Shuffling : No 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 संकुल में से कौन प्रतिचुंबकीय संकुल है?



Options :

686340151193. 1

686340151194. 2

686340151195. 3

686340151196. 4

Question Number : 100 Question Id : 68634038283 Question Type : MCQ Option Shuffling : No 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 correct statements for second law of thermodynamics is/are

- A. Heat does not flow spontaneously from a cool body to a hotter body
- B. The entropy of perfectly crystalline substance is zero at 0 K.
- C. No process is possible in which the sole result is the absorption of heat from a reservoir and its complete conversion to work.
- D. For a spontaneous change $\Delta S_{\text{total}} > 0$

Choose the most appropriate answer from the options given below:

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

Options :

- 686340151197. 1
- 686340151198. 2
- 686340151199. 3
- 686340151200. 4

Question Number : 100 Question Id : 68634038283 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

ऊष्मागतिक के दूसरे नियम से सही कथन है/हैं

- A. ऊष्मा एक ठंडी निकाय संबंध में से गर्म निकाय तक स्वतः नहीं बहती।
- B. 0 K पर एक विशुद्ध क्रिस्टलीय पदार्थ की एन्ट्रॉपी शून्य होती है।
- C. ऐसा कोई प्रक्रम संभव नहीं है जिसका सम्पूर्ण परिणाम एक कुंड से ऊष्मा का अवशोषण और उसका पूर्णतः कार्य में रूपांतरण हो।
- D. एक स्वतः परिवर्तन के लिए $\Delta S_{\text{कुल}} > 0$

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

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

Options :

- 686340151197. 1
- 686340151198. 2
- 686340151199. 3
- 686340151200. 4