National Testing Agency

Question Paper Name :	Chemistry 15th March 2024 Shift 3
Subject Name :	Chemistry
Creation Date :	2024-03-15 21:11:44
Duration :	105
Total Marks :	300
Display Marks:	Yes

Chemistry

Group Number :	1
Group Id :	68019186
Group Maximum Duration :	0
Group Minimum Duration :	105
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	300
Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No

Chemistry

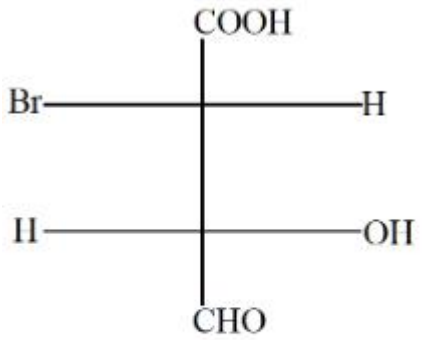
Section Id :	680191119
Section Number :	1

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 :	680191156
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 1 Question Id : 6801916602 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Assign the R and S configuration to the following molecule



1. 2S, 3R
2. 2R, 3S
3. 2S, 3S
4. 2R, 3R

Options :

68019125901. 1

68019125902. 2

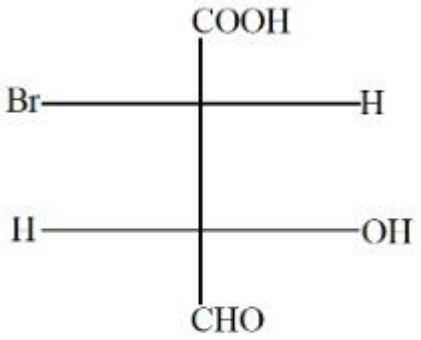
68019125903. 3

68019125904. 4

Question Number : 1 Question Id : 6801916602 Question Type : MCQ Option Shuffling : No 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 अणु में R और S विन्यास को निर्दिष्ट करें



1. 2S, 3R
2. 2R, 3S
3. 2S, 3S
4. 2R, 3R

Options :

68019125901. 1

68019125902. 2

68019125903. 3

68019125904. 4

Question Number : 2 Question Id : 6801916603 Question Type : MCQ Option Shuffling : No 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 order of the stability of different conformation of cyclohexane is
(A). chair
(B). boat
(C). twist boat
(D). half chair

1. (A) > (B) > (C) > (D)
2. (A) > (C) > (B) > (D)
3. (A) > (D) > (C) > (B)
4. (D) > (C) > (B) > (A)

Options :

68019125905. 1

68019125906. 2

68019125907. 3

68019125908. 4

Question Number : 2 Question Id : 6801916603 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

साइक्लोहेक्सेन की विभिन्न संरचना की स्थिरता का सही क्रम है
(A) कुर्सी
(B) नाव
(C) ट्विस्ट नाव
(D) आधी कुर्सी

1. (A) > (B) > (C) > (D)
2. (A) > (C) > (B) > (D)
3. (A) > (D) > (C) > (B)
4. (D) > (C) > (B) > (A)

Options :

68019125905. 1

68019125906. 2

68019125907. 3

68019125908. 4

Question Number : 3 Question Id : 6801916604 Question Type : MCQ Option Shuffling : No 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 is not an electrophile?

1. NO^+
2. BF_3
3. CO_2
4. NH_4^+

Options :

68019125909. 1

68019125910. 2

68019125911. 3

68019125912. 4

Question Number : 3 Question Id : 6801916604 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

कौन सा एक इलेक्ट्रॉनरागी नहीं है?

1. NO^+
2. BF_3
3. CO_2
4. NH_4^+

Options :

68019125909. 1

68019125910. 2

68019125911. 3

68019125912. 4

Question Number : 4 Question Id : 6801916605 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Iodoform reaction is given by
(A). all methyl ketones with CH_3CO group
(B). Acetaldehyde
(C). all secondary alcohols with $CH_3CH(OH)$ group
(D). all primary alcohols
Choose the ***correct*** answer from the options given below:

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

Options :

68019125913. 1

68019125914. 2

68019125915. 3

68019125916. 4

Question Number : 4 Question Id : 6801916605 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

आयोडोफॉर्म अभिक्रिया किसके द्वारा दी जाती है
(A). CH_3CO समूह के साथ सभी मिथाइल कीटोन
(B) एसिटल्डिहाइड
(C). $CH_3CH(OH)$ समूह वाले सभी द्वितीयक एल्कोहल
(D) सभी प्राथमिक एल्कोहल
नीचे दिए गए विकल्पों में से सही उत्तर चुनें।

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

Options :

68019125913. 1

68019125914. 2

68019125915. 3

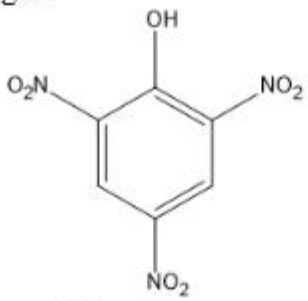
68019125916. 4

Question Number : 5 Question Id : 6801916606 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Arrange the following compounds A,B,C and D in decreasing order of acidic strength

(A).



(B).

(C).

(D).

Choose the correct answer from the options given below:

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

Options :

68019125917. 1

68019125918. 2

68019125919. 3

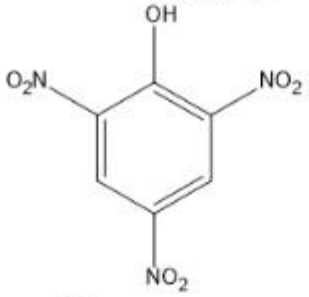
68019125920. 4

Question Number : 5 Question Id : 6801916606 Question Type : MCQ Option Shuffling : No 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 यौगिकों A, B, C और D को उनकी घटती अम्लीय क्षमता के क्रम में व्यवस्थित करें।

(A).



(B).

(C).

(D).

नीचे दिए गए विकल्पों में से सही उत्तर चुनिए

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

Options :

68019125917. 1

68019125918. 2

68019125919. 3

68019125920. 4

Question Number : 6 Question Id : 6801916607 Question Type : MCQ Option Shuffling : No 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.	$Ph_2C{=}NOH \longrightarrow PhCONHPh$	I.	Knoevenagel condensation
B.	$CH_3COCH_3 \longrightarrow CH_3COOCH_3$	II.	Claisen - Schmidt reaction
C.	$PhCHO \longrightarrow PhCH{=}CHCOOH$	III.	Beckmann rearrangement
D.	$PhCHO \longrightarrow PhCH(OH)CH_2COCH_3$	IV.	Baeyer Villiger oxidation

Choose the **correct** answer from the options given below:

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

Options :

68019125921. 1

68019125922. 2

68019125923. 3

68019125924. 4

Question Number : 6 Question Id : 6801916607 Question Type : MCQ Option Shuffling : No 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 और सूची-II का मिलान करें

	सूची I		सूची II
A.	$Ph_2C{=}NOH \longrightarrow PhCONHPh$	I.	नोवेनाजेल संघनन
B.	$CH_3COCH_3 \longrightarrow CH_3COOCH_3$	II.	क्लैसेन-स्मिथ अभिक्रिया
C.	$PhCHO \longrightarrow PhCH{=}CHCOOH$	III.	बेकमैन पुनर्व्यवस्था
D.	$PhCHO \longrightarrow PhCH(OH)CH_2COCH_3$	IV.	बेयर विलिगर ऑक्सीकरण

नीचे दिए गए विकल्पों में से सही उत्तर चुनें।

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

Options :

68019125921. 1

68019125922. 2

68019125923. 3

68019125924. 4

Question Number : 7 Question Id : 6801916608 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Arrange the following carbonyl compounds in the decreasing order of their reactivity towards nucleophilic addition reaction

(A). CH_3CHO

(B). HCHO

(C). Cl_3CCHO

(D). $CH_3COCH_2CH_3$

Choose the **correct** answer from the options given below:

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

Options :

68019125925. 1

68019125926. 2

68019125927. 3

68019125928. 4

Question Number : 7 Question Id : 6801916608 Question Type : MCQ Option Shuffling : No 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 कार्बोनिल यौगिकों को नाभिकरागी संयोजन अभिक्रिया के प्रति उनकी अभिक्रियात्मकता के घटते क्रम में व्यवस्थित करें

(A). CH_3CHO

(B). HCHO

(C). Cl_3CCHO

(D). $CH_3COCH_2CH_3$

नीचे दिए गए विकल्पों में से सही उत्तर चुनें।

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

Options :

68019125925. 1

68019125926. 2

68019125927. 3

68019125928. 4

Question Number : 8 Question Id : 6801916609 Question Type : MCQ Option Shuffling : No 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 distinct NMR signals observed in case of acetone and ethyl methyl ketone are

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

Options :

68019125929. 1

68019125930. 2

68019125931. 3

68019125932. 4

Question Number : 8 Question Id : 6801916609 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

एसीटोन और इथाईल मिथाईल कीटोन में व्यक्त विशिष्ट एन एम आर संकेतों की संख्या है

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

Options :

68019125929. 1

68019125930. 2

68019125931. 3

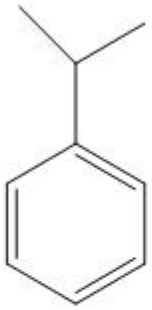
68019125932. 4

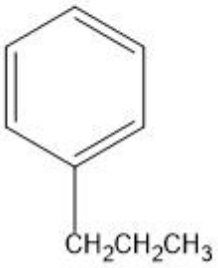
Question Number : 9 Question Id : 6801916610 Question Type : MCQ Option Shuffling : No Is

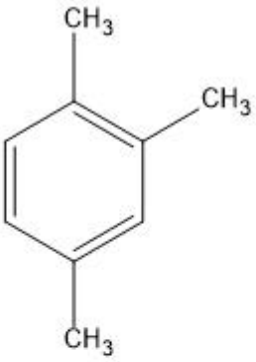
Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

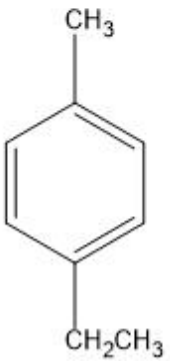
Correct Marks : 4 Wrong Marks : 1

The structure of the compound having molecular formula C_9H_{12} showing NMR peaks at δ 7.1, 2.2, 1.5 and 0.9 ppm is

1. 

2. 

3. 

4. 

Options :

68019125933. 1

68019125934. 2

68019125935. 3

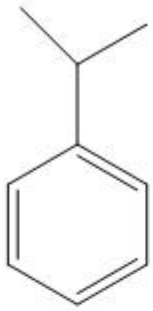
68019125936. 4

Question Number : 9 Question Id : 6801916610 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

आणविक सूत्र C_9H_{12} वाले यौगिक की संरचना, जो δ 7.1, 2.2, 1.5 और 0.9 ppm पर NMR शिखर दिखा रहें हैं, क्या होगी?

1.



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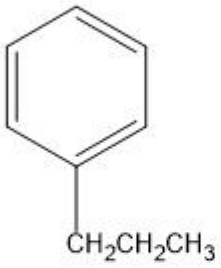
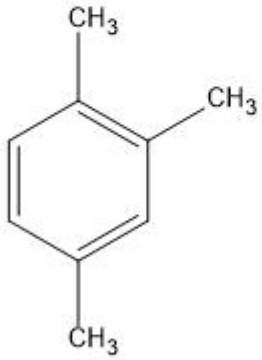


3.



4.

Options :

68019125933. 1

68019125934. 2

68019125935. 3

68019125936. 4

Question Number : 10 Question Id : 6801916611 Question Type : MCQ Option Shuffling : No 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 vibrational mode shows no IR absorption bands

1. symmetric CO_2 stretch
2. antisymmetric CO_2 stretch
3. symmetric O=C=S stretch
4. CH_3-C$\equiv$CH stretch

Options :

68019125937. 1

68019125938. 2

68019125939. 3

68019125940. 4

Question Number : 10 Question Id : 6801916611 Question Type : MCQ Option Shuffling : No 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 कंपन मोड कोई IR अवशोषण पट्ट नहीं दिखाता है?

1. सममित CO_2 खिंचाव
2. प्रतिसममित CO_2 खिंचाव
3. सममित O = C = S खिंचाव
4. CH_3-C$\equiv$CH खिंचाव

Options :

68019125937. 1

68019125938. 2

68019125939. 3

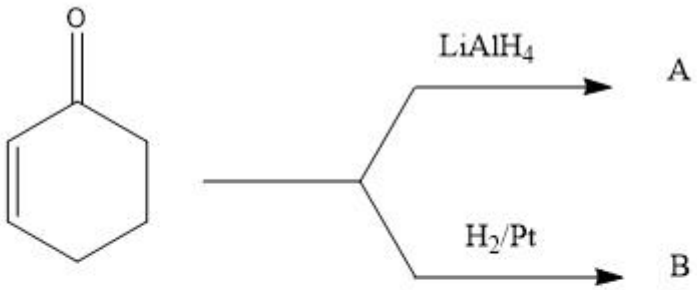
68019125940. 4

Question Number : 11 Question Id : 6801916612 Question Type : MCQ Option Shuffling : No Is

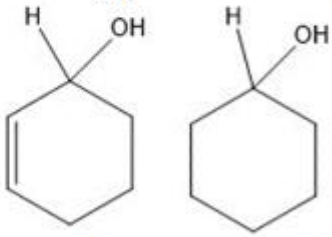
Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

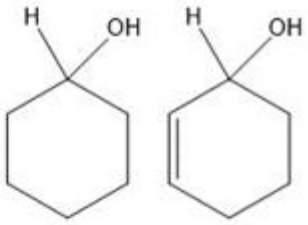
In the following reaction, identify the product A and B



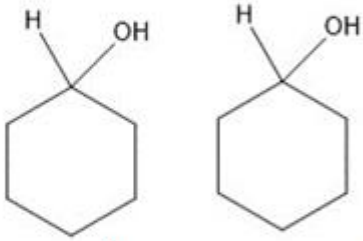
1. A B



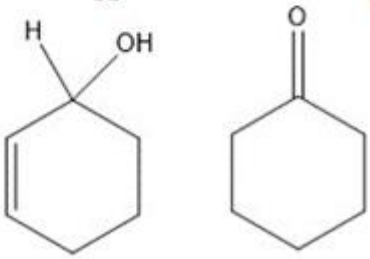
2. A B



3. A B



4. A B



Options :

68019125941. 1

68019125942. 2

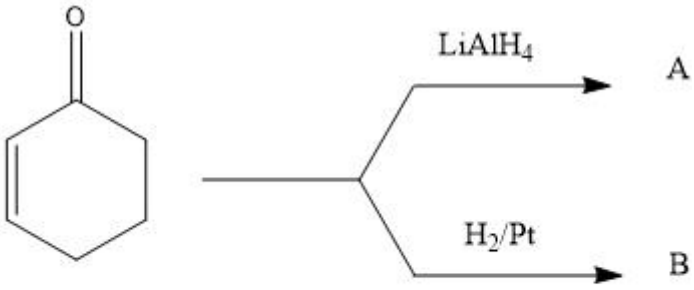
68019125943. 3

68019125944. 4

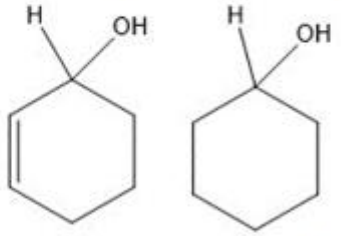
Question Number : 11 Question Id : 6801916612 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

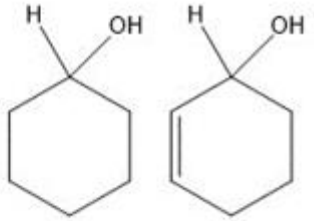
निम्नलिखित अभिक्रिया में, उत्पाद A और B की पहचान करें



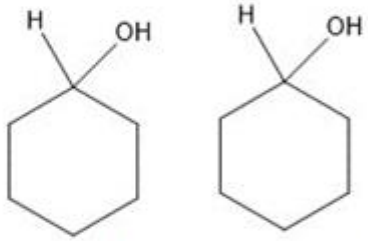
1. A B



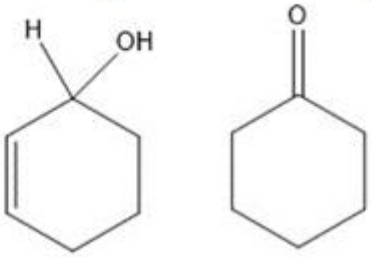
2. A B



3. A B



4. A B



Options :

68019125941. 1

68019125942. 2

68019125943. 3

68019125944. 4

Question Number : 12 Question Id : 6801916613 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Consider the following statements with reference to Citral:
(A). Citral is a liquid which has a smell of lemon
(B). Oxidation of citral with alkaline permanganate followed by chromic acid gives acetone, oxalic and laevulic acid
(C). It also forms oxime
(D). It shows two geometrical isomers: trans isomer known as neral and cis isomer known as geranial
Choose the **correct** answer from the options given below:

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

Options :

68019125945. 1

68019125946. 2

68019125947. 3

68019125948. 4

Question Number : 12 Question Id : 6801916613 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

सिट्राल के संदर्भ में निम्नलिखित कथनों पर विचार करें:
(A) सिट्राल एक तरल पदार्थ है जिसमें नींबू की गंध होती है।
(B) क्षारीय परमैंगनेट के साथ सिट्राल के ऑक्सीकरण के बाद क्रोमिक एसिड से एसीटोन, ओक्षालिक और लेवुलिक एसिड मिलता है।
(C) यह ऑक्साइम भी बनाता है।
(D) यह दो ज्यामितीय आइसोमर दिखाता है: ट्रांस आइसोमर जिसे नेरल के रूप में जाना जाता है और सिस आइसोमर जिसे जेरानियल के रूप में जाना जाता है।
नीचे दिए गए विकल्पों में से सही उत्तर चुनें।

1. (A), (B), (C) और (D)
2. (A), (B) और (C)
3. (A), (B) और (D)
4. (B), (C) और (D)

Options :

68019125945. 1

68019125946. 2

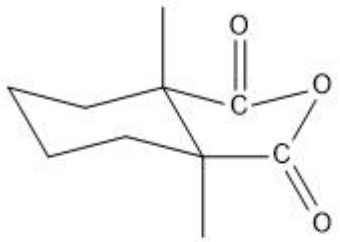
68019125947. 3

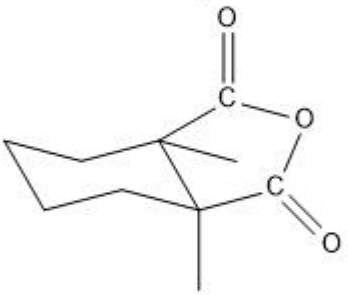
68019125948. 4

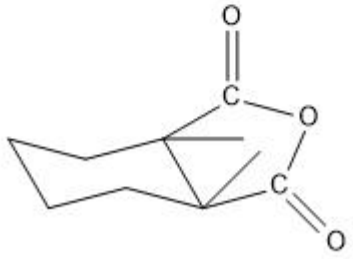
Question Number : 13 Question Id : 6801916614 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the following isomer of 1, 2- cyclohexanedicarboxylic acid form anhydride on heating?

1. 

2. 

3. 

4. Reaction not possible

Options :

68019125949. 1

68019125950. 2

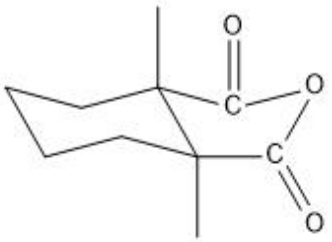
68019125951. 3

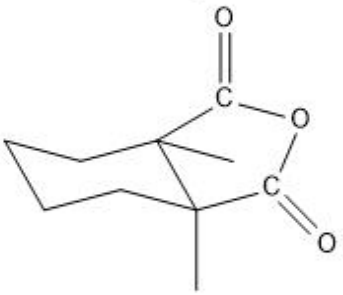
68019125952. 4

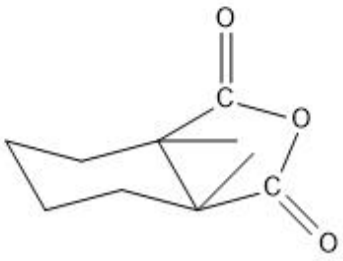
Question Number : 13 Question Id : 6801916614 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

निम्नलिखित में से 1, 2-साइक्लोहेक्सेनेडीकार्बोक्सिलिक अम्ल का कौन सा समावयव गर्म करने पर एनहाइड्राइड बनाता है?

1. 

2. 

3. 

4. अभिक्रिया संभव नहीं है

Options :

68019125949. 1

68019125950. 2

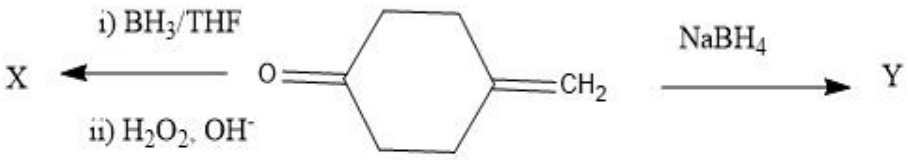
68019125951. 3

68019125952. 4

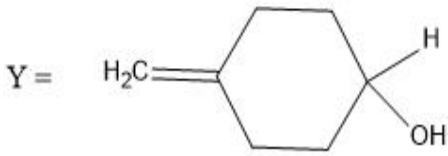
Question Number : 14 Question Id : 6801916615 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

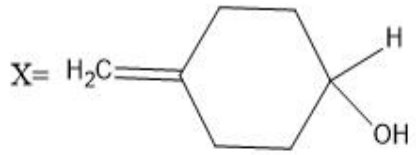
Correct Marks : 4 Wrong Marks : 1

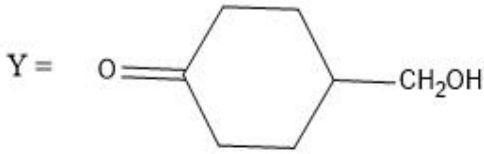
Give the structure of X and Y

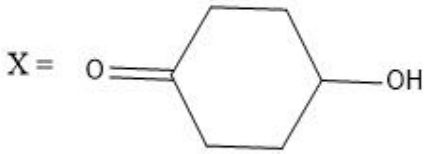


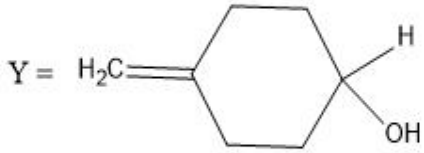
1. 



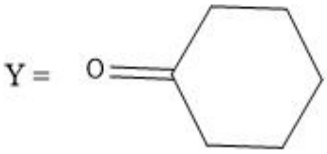
2. 



3. 



4. 



Options :

68019125953. 1

68019125954. 2

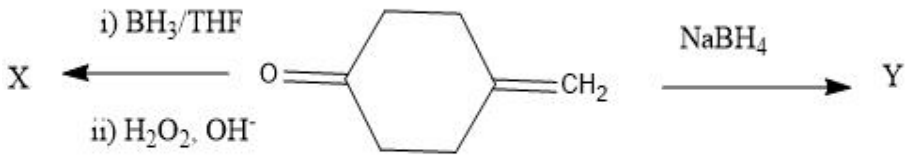
68019125955. 3

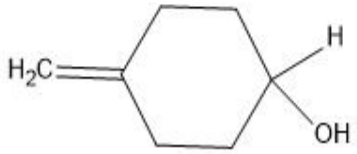
68019125956. 4

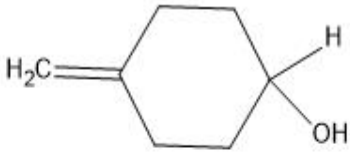
Question Number : 14 Question Id : 6801916615 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

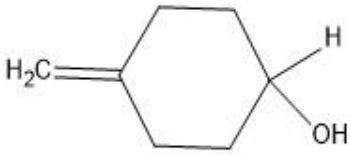
Correct Marks : 4 Wrong Marks : 1

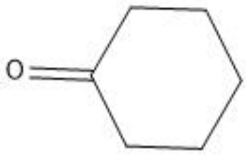
X और Y की संरचना ज्ञात कीजिये



1. X =  Y = 

2. X=  Y = 

3. X =  Y = 

4. X =  Y = 

Options :

68019125953. 1

68019125954. 2

68019125955. 3

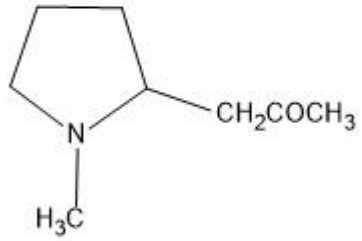
68019125956. 4

Question Number : 15 Question Id : 6801916616 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

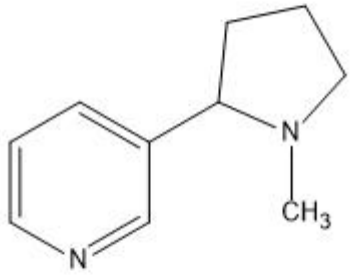
Correct Marks : 4 Wrong Marks : 1

Identify the structure of the alkaloid having the following characteristics;
(A). It is coca alkaloid having molecular formula $C_8H_{15}NO$
(B). As the free base, it rapidly racemizes
(C). Its reactions show the presence of keto group and a tertiary nitrogen atom
(D). Synthesized by condensing ɤ- methylaminobutyraldehyde with ethylacetoacetate in buffered solution at pH7
Choose the **correct** answer from the options given below:

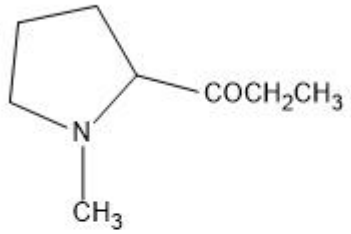
1.



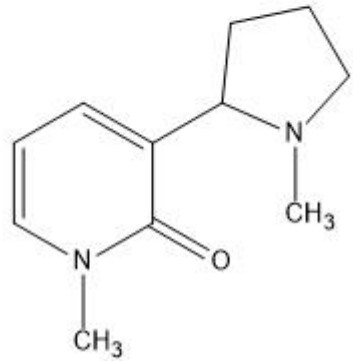
2.



3.



4.



Options :

68019125957. 1

68019125958. 2

68019125959. 3

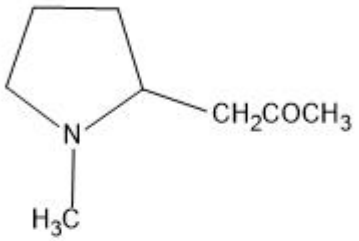
68019125960. 4

Question Number : 15 Question Id : 6801916616 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

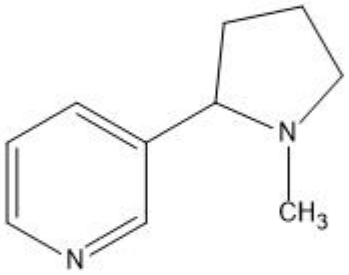
Correct Marks : 4 Wrong Marks : 1

निम्नलिखित विशेषताओं वाले ऐल्क्लॉएड की संरचना की पहचान करें;
(A) यह कोका ऐल्क्लॉएड है जिसका आणविक सूत्र $C_8H_{15}NO$ है।
(B) मुक्त क्षार के रूप में, यह तेजी से रेसिमाइज़ है
(C) इसकी अभिक्रियाएँ कीटो समूह और एक तृतीयक नाइट्रोजन परमाणु की उपस्थिति को दर्शाती हैं।
(D) pH 7 पर एक उभय प्रतिरोधी विलयन में इथाईलएसिटोएसिटेट के साथ ४-
मिथाइलमिनोब्यूट्रियलडिहाइड को संघनित करके संश्लेषित किया जाता है
नीचे दिए गए विकल्पों में से सही उत्तर चुनें।

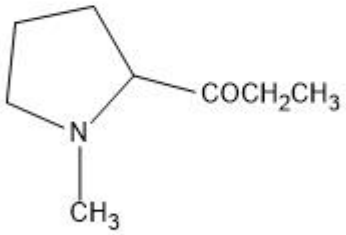
1.



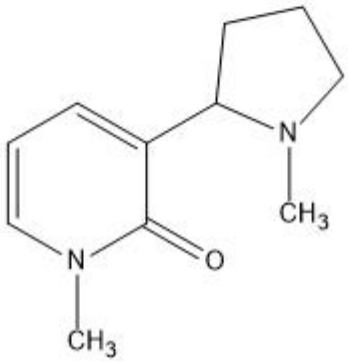
2.



3.



4.



Options :

68019125957. 1

68019125958. 2

68019125959. 3

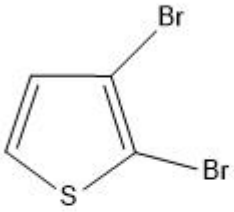
68019125960. 4

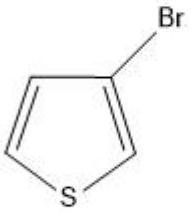
Question Number : 16 Question Id : 6801916617 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum

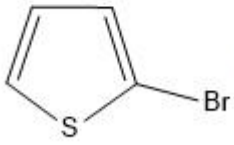
Instruction Time : 0

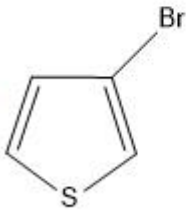
Correct Marks : 4 Wrong Marks : 1

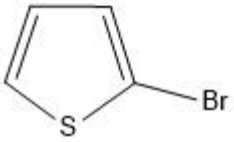
Identify the product in the following chemical reaction

1. 

2. 

3. 

and 

4. 

Options :

68019125961. 1

68019125962. 2

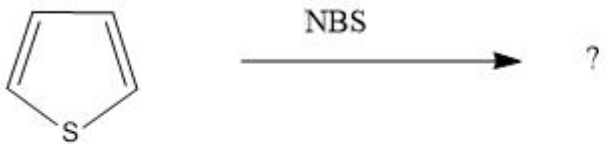
68019125963. 3

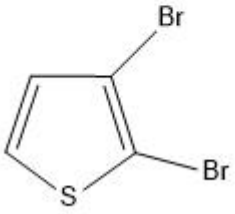
68019125964. 4

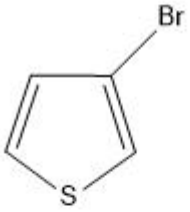
Question Number : 16 Question Id : 6801916617 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

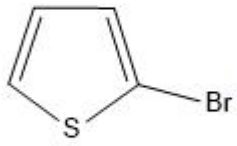
Correct Marks : 4 Wrong Marks : 1

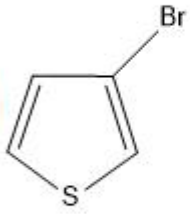
निम्नलिखित रासायनिक अभिक्रिया में उत्पाद की पहचान करें

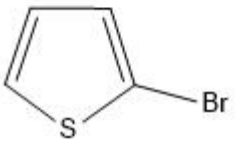


1. 

2. 

3. 

and 

4. 

Options :

68019125961. 1

68019125962. 2

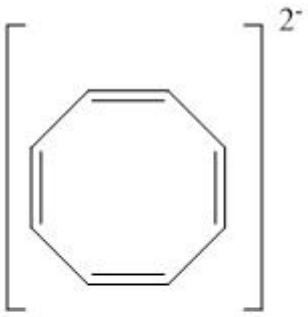
68019125963. 3

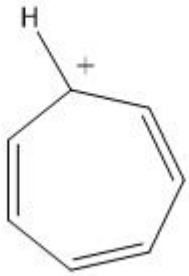
68019125964. 4

Question Number : 17 Question Id : 6801916618 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

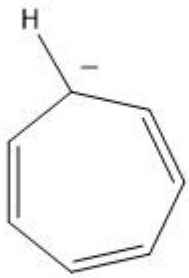
Correct Marks : 4 Wrong Marks : 1

Which of the following molecule is aromatic ?

(A). 

(B). 

(C). 

(D). 

Choose the **correct** answer from the options given below:

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

Options :

68019125965. 1

68019125966. 2

68019125967. 3

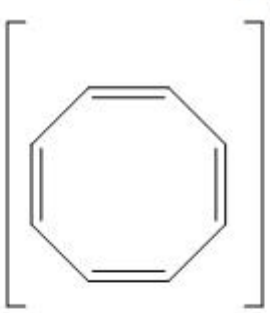
68019125968. 4

Question Number : 17 Question Id : 6801916618 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

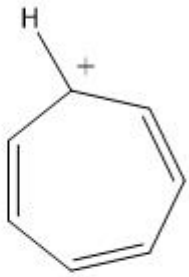
Correct Marks : 4 Wrong Marks : 1

निम्नलिखित में से कौन सा अणु ऐरोमैटिक है?

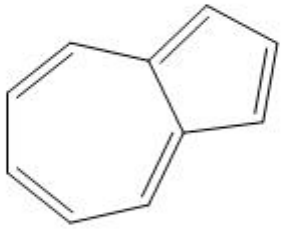
(A).



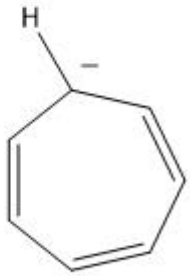
(B).



(C).



(D).



नीचे दिए गए विकल्पों में से सही उत्तर चुनें।

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

Options :

68019125965. 1

68019125966. 2

68019125967. 3

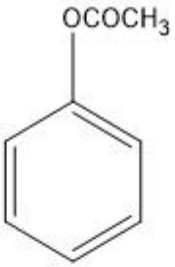
68019125968. 4

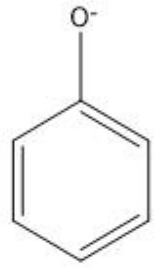
Question Number : 18 Question Id : 6801916619 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum

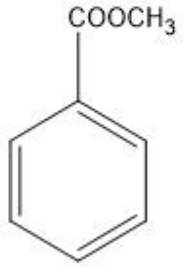
Instruction Time : 0

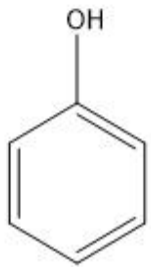
Correct Marks : 4 Wrong Marks : 1

Which of the following compounds will have the highest order of their reactivity towards electrophilic substitution reaction:

1. 

2. 

3. 

4. 

Options :

68019125969. 1

68019125970. 2

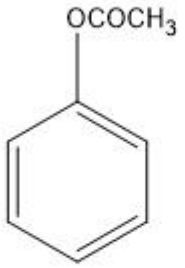
68019125971. 3

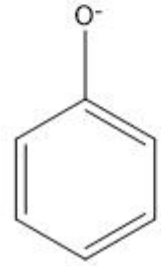
68019125972. 4

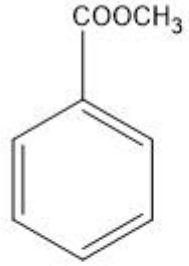
Question Number : 18 Question Id : 6801916619 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

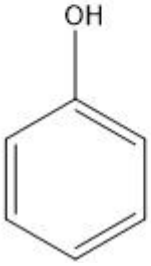
Correct Marks : 4 Wrong Marks : 1

निम्नलिखित में से किस यौगिक की इलेक्ट्रानरागी प्रतिस्थापन अभिक्रिया के प्रति उनकी अभिक्रियात्मकता का उच्चतम क्रम होगाः

1. 

2. 

3. 

4. 

Options :

68019125969. 1

68019125970. 2

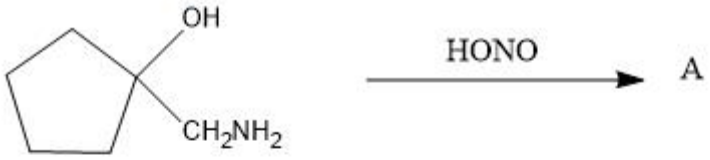
68019125971. 3

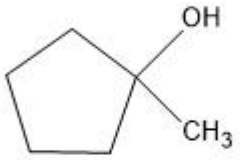
68019125972. 4

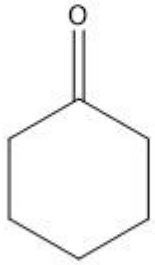
Question Number : 19 Question Id : 6801916620 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

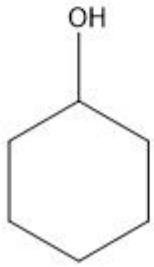
Correct Marks : 4 Wrong Marks : 1

Identify the product A in the following chemical reaction.



1. 

2. 

3. 

4. Reaction do not occur

Options :

68019125973. 1

68019125974. 2

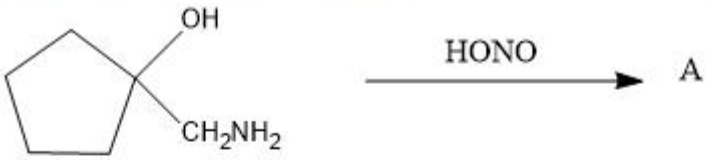
68019125975. 3

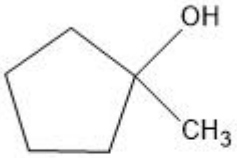
68019125976. 4

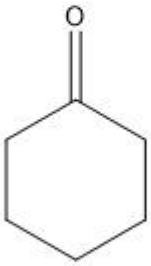
Question Number : 19 Question Id : 6801916620 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

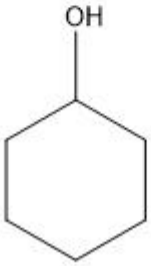
Correct Marks : 4 Wrong Marks : 1

निम्नलिखित रासायनिक अभिक्रिया में उत्पाद A की पहचान करें।



1. 

2. 

3. 

4. अभिक्रिया नहीं होती है

Options :

68019125973. 1

68019125974. 2

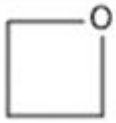
68019125975. 3

68019125976. 4

Question Number : 20 Question Id : 6801916621 Question Type : MCQ Option Shuffling : No 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.		I.	Oxepane
B.		II.	Oxolane
C.		III.	Oxetane
D.		IV.	Oxirane

Choose the **correct** answer from the options given below:

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

Options :

68019125977. 1

68019125978. 2

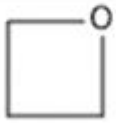
68019125979. 3

68019125980. 4

Question Number : 20 Question Id : 6801916621 Question Type : MCQ Option Shuffling : No 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 मिलान सूची-II से करें

सूची I		सूची II	
A.		I.	ऑक्सीपेन
B.		II.	ऑक्सोलेन
C.		III.	ऑक्सीटेन
D.		IV.	ऑक्सीरेन

नीचे दिए गए विकल्पों में से सही उत्तर चुनें।

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

Options :

68019125977. 1

68019125978. 2

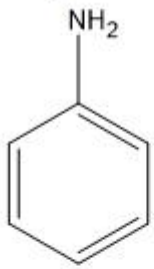
68019125979. 3

68019125980. 4

Question Number : 21 Question Id : 6801916622 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

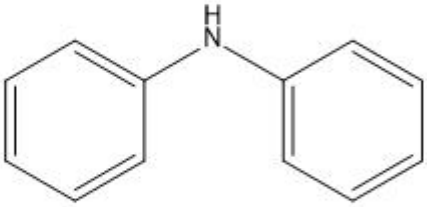
Correct Marks : 4 Wrong Marks : 1

To arrange the following compounds in the order of basicity :

(A). 

(B). 

(C). 

(D). 

नीचे दिए गए विकल्पों में से सही उत्तर चुनें।

1. (B) > (A) > (C) > (D)
2. (D) > (C) > (B) > (A)
3. (A) > (B) > (C) > (D)
4. (C) > (D) > (A) > (B)

Options :

68019125981. 1

68019125982. 2

68019125983. 3

68019125984. 4

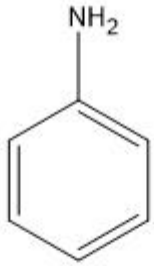
Question Number : 21 Question Id : 6801916622 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum

Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

निम्नलिखित यौगिकों को क्षारता के क्रम में व्यवस्थित करने के लिए:

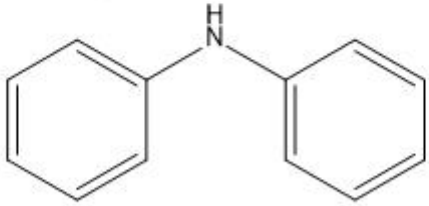
(A).



(B).

(C).

(D).



नीचे दिए गए विकल्पों में से सही उत्तर चुनें।

1. (B) > (A) > (C) > (D)
2. (D) > (C) > (B) > (A)
3. (A) > (B) > (C) > (D)
4. (C) > (D) > (A) > (B)

Options :

68019125981. 1

68019125982. 2

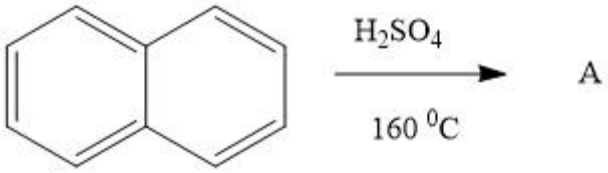
68019125983. 3

68019125984. 4

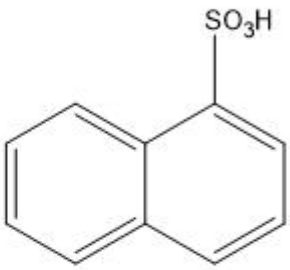
Question Number : 22 Question Id : 6801916623 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

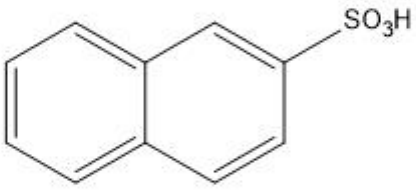
Correct Marks : 4 Wrong Marks : 1

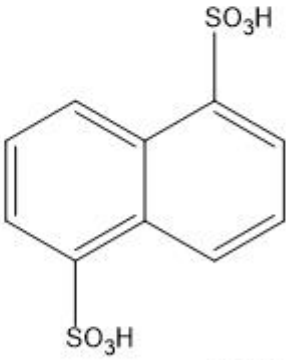
Write the product A in the following reaction:

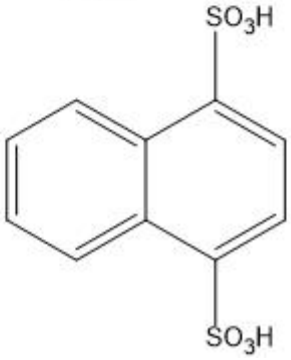


The options are :

1. 

2. 

3. 

4. 

Options :

68019125985. 1

68019125986. 2

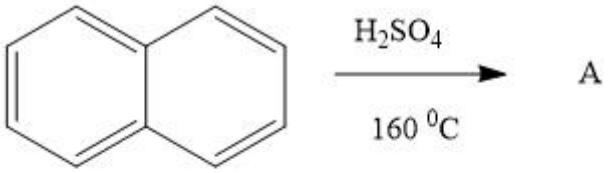
68019125987. 3

68019125988. 4

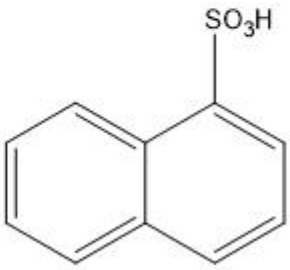
Question Number : 22 Question Id : 6801916623 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

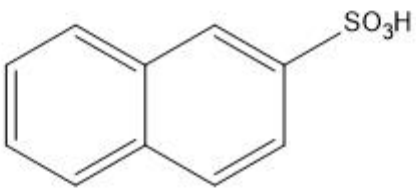
Correct Marks : 4 Wrong Marks : 1

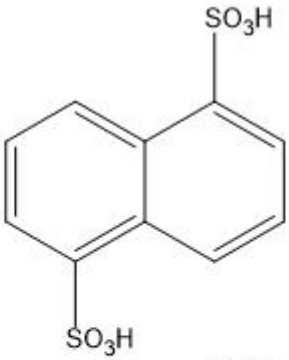
निम्नलिखित अभिक्रिया में उत्पाद A लिखें:

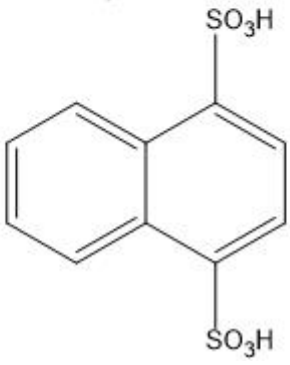


विकल्प हैं:

1. 

2. 

3. 

4. 

Options :

68019125985. 1

68019125986. 2

68019125987. 3

68019125988. 4

Question Number : 23 Question Id : 6801916624 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Consider the following statements:
(A). 1,2- addition reaction occurs faster as compared to 1,4- addition reaction but 1,4 - addition product is more stable.
(B). Formation of 1,2 -addition product is kinetic or rate controlled.
(C). Formation of 1,4 -addition product is thermodynamic or equilibrium controlled.
(D). At low temperature the formation of 1,2 -addition product from allyl cation is a reversible reaction.

Choose the ***correct*** answer from the options given below:

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

Options :

68019125989. 1

68019125990. 2

68019125991. 3

68019125992. 4

Question Number : 23 Question Id : 6801916624 Question Type : MCQ Option Shuffling : No 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 कथनों पर विचार करें:
(A) 1,2 -संयोजन अभिक्रिया 1,4 -संयोजन अभिक्रिया की तुलना में तीव्रता से होती है किन्तु 1,4 -संयोजन अभिक्रिया का उत्पाद अधिक स्थिर होता है।
(B) 1, 2- संयोजन अभिक्रिया में उत्पाद का निर्माण गतिज या दर नियंत्रित होता है।
(C) 1, 4- संयोजन अभिक्रिया में उत्पाद का निर्माण ऊष्मागतिकीय या साम्य नियंत्रित होता है।
(D) कम तापमान पर, एलाइल धनायन से 1,2- संयोजन अभिक्रिया के उत्पाद का निर्माण उत्क्रमणीय अभिक्रिया है।
नीचे दिए गए विकल्पों में से सही उत्तर चुनें।

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

Options :

68019125989. 1

68019125990. 2

68019125991. 3

68019125992. 4

Question Number : 24 Question Id : 6801916625 Question Type : MCQ Option Shuffling : No 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 S_N1 and S_N2 reactions
(A). S_N1 is a unimolecular reaction with first order kinetics while S_N2 reaction is bimolecular reaction with second order kinetics.
(B). In S_N2 , the reaction proceeds through the formation of carbocation while S_N1 does not.
(C). S_N2 is a stereospecific reaction. The product formed with inversion of configuration only.
(D). S_N1 reaction is favoured in the presence of weak base or poor nucleophile.
Choose the **correct** answer from the options given below:

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

Options :

68019125993. 1

68019125994. 2

68019125995. 3

68019125996. 4

Question Number : 24 Question Id : 6801916625 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

S_N1 और S_N2 अभिक्रियाओं में

(A) S_N1 प्रथम कोटि गतिकी की एक आणविक अभिक्रिया है जबकि S_N2 द्वितीय कोटि गतिकी की द्वि-आणविक अभिक्रिया है।

(B) S_N2 में अभिक्रिया कार्बोधनायन के निर्माण के माध्यम से आगे बढ़ती है जबकि S_N1 में नहीं

(C) S_N2 एक त्रिविम विशिष्ट अभिक्रिया है। उत्पाद केवल विन्यास के व्युत्क्रम द्वारा बना है।

(D) दुर्बल क्षार या दुर्बल नाभिकरागी की उपस्थिति में S_N1 अभिक्रिया होती है।

नीचे दिए गए विकल्पों में से सही उत्तर चुनें।

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

Options :

68019125993. 1

68019125994. 2

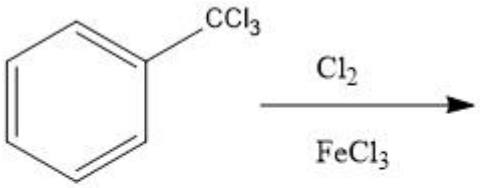
68019125995. 3

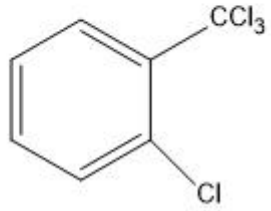
68019125996. 4

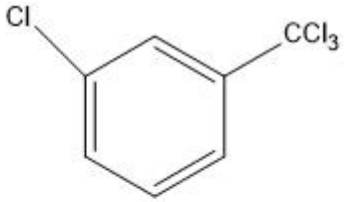
Question Number : 25 Question Id : 6801916626 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

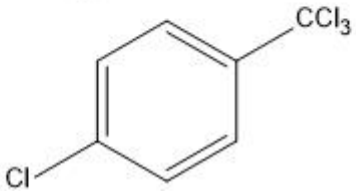
Find the major product in the following reaction



1. 

2. 

3. 

4. 

Options :

68019125997. 1

68019125998. 2

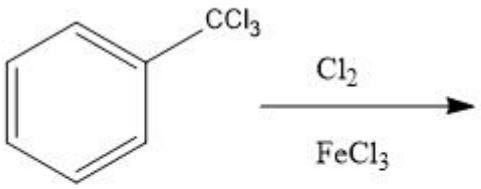
68019125999. 3

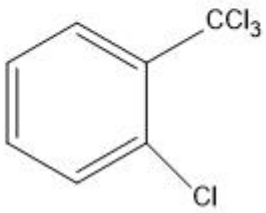
68019126000. 4

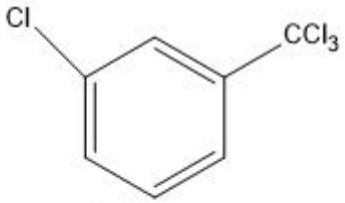
Question Number : 25 Question Id : 6801916626 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

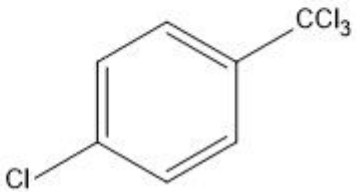
निम्नलिखित अभिक्रिया में प्रमुख उत्पाद ज्ञात कीजिए।



1. 

2. 

3. 

4. 

Options :

68019125997. 1

68019125998. 2

68019125999. 3

68019126000. 4

Question Number : 26 Question Id : 6801916627 Question Type : MCQ Option Shuffling : No 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 ionic conductance at infinite dilution for NaOH, NaCl and $BaCl_2$ are 248.1×10^{-4}, 126.5×10^{-4} and 280.0×10^{-4} S m^2 mol^{-1} respectively. The Λ_m^0 for $Ba(OH)_2$ is

1. 523.2×10^{-4} S m^2 mol^{-1}
2. 5.232×10^{-4} S m^2 mol^{-1}
3. 52.3×10^{-4} S m^2 mol^{-1}
4. 50.5×10^{-4} S m^2 mol^{-1}

Options :

68019126001. 1

68019126002. 2

68019126003. 3

68019126004. 4

Question Number : 26 Question Id : 6801916627 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

NaOH, NaCl और $BaCl_2$ के लिए अनंत तनुता पर मोलर आयनिक चालकत्व क्रमशः 248.1×10^{-4}, 126.5×10^{-4} और 280.0×10^{-4} Sm^2 mol^{-1} हैं। $Ba(OH)_2$ के लिए Λ_m^0 है

1. 523.2×10^{-4} S m^2 mol^{-1}
2. 5.232×10^{-4} S m^2 mol^{-1}
3. 52.3×10^{-4} S m^2 mol^{-1}
4. 50.5×10^{-4} S m^2 mol^{-1}

Options :

68019126001. 1

68019126002. 2

68019126003. 3

68019126004. 4

Question Number : 27 Question Id : 6801916628 Question Type : MCQ Option Shuffling : No 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 conductometric titration of hydrochloric acid against ammonium hydroxide

1. The conductance increases till end point with the volume of NH_4OH added
2. The conductance remains more or less constant till the end point
3. The conductance remains more or less constant after the end point
4. The conductance increases after the end point with the volume of NH_4OH added

Options :

68019126005. 1

68019126006. 2

68019126007. 3

68019126008. 4

Question Number : 27 Question Id : 6801916628 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

हाइड्रोक्लोरिक अम्ल के अमोनियम हाइड्रॉक्साइड के साथ चालकतामितीय अनुमापन में

1. NH_4OH की बढ़ती मात्रा के साथ चालकत्व अंतिम बिंदु तक बढ़ता है।
2. चालकत्व अंतिम बिंदु तक लगभग स्थिर रहता है।
3. चालकत्व अंतिम बिंदु के बाद लगभग स्थिर रहता है।
4. NH_4OH की बढ़ती मात्रा के साथ चालकत्व अंतिम बिंदु के बाद भी बढ़ता है।

Options :

68019126005. 1

68019126006. 2

68019126007. 3

68019126008. 4

Question Number : 28 Question Id : 6801916629 Question Type : MCQ Option Shuffling : No 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 ionic strength of a solution which is 0.1 molal in NaCl and 0.01 molal in calcium Chloride is (assuming complete dissociation)

1. 0.13 molal
2. 0.26 molal
3. 0.11 molal
4. 0.056 molal

Options :

68019126009. 1

68019126010. 2

68019126011. 3

68019126012. 4

Question Number : 28 Question Id : 6801916629 Question Type : MCQ Option Shuffling : No 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 विलयन की आयनिक प्रबलता NaCl में 0.1 मोलल और कैल्शियम क्लोराइड में 0.01 मोलल है (पूर्ण वियोजन मानते हुए)

1. 0.13 मोलल
2. 0.26 मोलल
3. 0.11 मोलल
4. 0.056 मोलल

Options :

68019126009. 1

68019126010. 2

68019126011. 3

68019126012. 4

Question Number : 29 Question Id : 6801916630 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

From the following half-cell reactions

$Zn^{2+} + 2e^- \rightarrow Zn(s)$; $E^0_{el} = -0.76$ V

$CuI + e^- \rightarrow Cu(s) + I^-(aq)$; $E^0_{el} = +0.17$ V

The standard potential E^0 of the cell

$Zn, Zn^{2+}(1\ M) \mid I^-(1M), CuI; Cu$

will be

1. – 0.42 V
2. +1.10 V
3. + 0.42V
4. + 0.59 V

Options :

68019126013. 1

68019126014. 2

68019126015. 3

68019126016. 4

Question Number : 29 Question Id : 6801916630 Question Type : MCQ Option Shuffling : No 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 हाफ-सेल अभिक्रियाओं से

$Zn^{2+} + 2e^- \rightarrow Zn(s)$; $E^0_{el} = -0.76$ V

$CuI + e^- \rightarrow Cu(s) + I^-(aq)$; $E^0_{el} = +0.17$ V

सेल की मानक क्षमता E^0

$Zn, Zn^{2+}(1\ M) \mid I^-(1M), CuI; Cu$

होगी।

1. – 0.42 V
2. +1.10 V
3. + 0.42V
4. + 0.59 V

Options :

68019126013. 1

68019126014. 2

68019126015. 3

68019126016. 4

Question Number : 30 Question Id : 6801916631 Question Type : MCQ Option Shuffling : No 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 **Energies**		**LIST II** **Values**
A.	Energy of ground state of He^+	I.	+6.04 eV
B.	Potential energy of I orbit of H-atom	II.	–27.2 eV
C.	Kinetic Energy of II excited state of He^+	III.	54.4 eV
D.	Ionization potential of He^+	IV.	–54.4 eV

Choose the correct answer from the options given below:

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

Options :

68019126017. 1

68019126018. 2

68019126019. 3

68019126020. 4

Question Number : 30 Question Id : 6801916631 Question Type : MCQ Option Shuffling : No 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 ऊर्जा		सूची II मान	
A.	He^+ की मूल अवस्था की ऊर्जा	I.	+6.04 eV
B.	H-परमाणु की कक्षक I की स्थितिज ऊर्जा	II.	–27.2 eV
C.	He^+ की उत्तेजित अवस्था II की गतिज ऊर्जा	III.	54.4 eV
D.	He^+ का आयनन विभव	IV.	–54.4 e

नीचे दिए गए विकल्पों में से सही उत्तर चुनें।

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

Options :

68019126017. 1

68019126018. 2

68019126019. 3

68019126020. 4

Question Number : 31 Question Id : 6801916632 Question Type : MCQ Option Shuffling : No 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 reduction potential of hydrogen half cell will be negative if

1. $p(H_2) = 1$ bar and $[H^+] = 1M$
2. $p(H_2) = 1$ bar and $[H^+] = 2M$
3. $p(H_2) = 2$ bar and $[H^+] = 1M$
4. $p(H_2) = 2$ bar and $[H^+] = 2M$

Options :

68019126021. 1

68019126022. 2

68019126023. 3

68019126024. 4

Question Number : 31 Question Id : 6801916632 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

हाइड्रोजन हाफ-सेल की अपचयन क्षमता ऋणात्मक होगी यदि

1. $p(H_2) = 1$ बार और $[H^+] = 1M$
2. $p(H_2) = 1$ बार और $[H^+] = 2M$
3. $p(H_2) = 2$ बार और $[H^+] = 1M$
4. $p(H_2) = 2$ बार और $[H^+] = 2M$

Options :

68019126021. 1

68019126022. 2

68019126023. 3

68019126024. 4

Question Number : 32 Question Id : 6801916633 Question Type : MCQ Option Shuffling : No 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 decreasing strength of bond formed by overlap of
(A). s-s
(B). p-p
(C). s-p
follows the order

1. (C), (A), (B).
2. (B), (A), (C).
3. (A), (B), (C).
4. (A), (C), (B).

Options :

68019126025. 1

68019126026. 2

68019126027. 3

68019126028. 4

Question Number : 32 Question Id : 6801916633 Question Type : MCQ Option Shuffling : No 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 अतिव्यापन द्वारा गठित आबंध की घटती प्रबलता
(A). s-s
(B). p-p
(C). s-p
निम्न क्रम का पालन करती है

1. (C), (A), (B).
2. (B), (A), (C).
3. (A), (B), (C).
4. (A), (C), (B).

Options :

68019126025. 1

68019126026. 2

68019126027. 3

68019126028. 4

Question Number : 33 Question Id : 6801916634 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The increasing order of molarity of 25 gm each of
(A). NaOH
(B). LiOH
(C). KOH
(D). $Al(OH)_3$
(E). $B(OH)_3$
in same volume of water is

1. (D) < (E) < (C) < (A) < (B)
2. (D) < (C) < (B) < (A) < (E).
3. (B) < (A) < (C) < (E) < (D).
4. (B) < (C) < (D) < (A) < (E).

Options :

68019126029. 1

68019126030. 2

68019126031. 3

68019126032. 4

Question Number : 33 Question Id : 6801916634 Question Type : MCQ Option Shuffling : No 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 प्रत्येक की 25 ग्राम की मोलरता का
(A). NaOH
(B). LiOH
(C). KOH
(D). $Al(OH)_3$
(E). $B(OH)_3$
पानी की समान मात्रा में आरोही क्रम होगा:

1. (D) < (E) < (C) < (A) < (B)
2. (D) < (C) < (B) < (A) < (E).
3. (B) < (A) < (C) < (E) < (D).
4. (B) < (C) < (D) < (A) < (E).

Options :

68019126029. 1

68019126030. 2

68019126031. 3

68019126032. 4

Question Number : 34 Question Id : 6801916635 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

An electron is confined to move in a one-dimensional box of length 1Å. Its energy in the first excited state is approximately

1. 150.4 eV
2. 112.8 eV
3. 37.6 eV
4. 342.0 eV

Options :

68019126033. 1

68019126034. 2

68019126035. 3

68019126036. 4

Question Number : 34 Question Id : 6801916635 Question Type : MCQ Option Shuffling : No 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 इलेक्ट्रॉन 1Å लंबाई के एक आयामी बॉक्स में गति के लिए सीमित है। इसकी पहली उत्तेजित अवस्था में ऊर्जा लगभग है

1. 150.4 eV
2. 112.8 eV
3. 37.6 eV
4. 342.0 eV

Options :

68019126033. 1

68019126034. 2

68019126035. 3

68019126036. 4

Question Number : 35 Question Id : 6801916636 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The increasing order of number of vibrational degrees of freedom from the following
(A). CO_2
(B). CH_4
(C). H_2
(D). C_2H_6
follows the order

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

Options :

68019126037. 1

68019126038. 2

68019126039. 3

68019126040. 4

Question Number : 35 Question Id : 6801916636 Question Type : MCQ Option Shuffling : No 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 से स्वतंत्रता की कंपन कोटि की संख्या का बढ़ता क्रम

(A). CO_2

(B). CH_4

(C).H_2

(D) C_2H_6

निम्न क्रम का पालन करता है

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

Options :

68019126037. 1

68019126038. 2

68019126039. 3

68019126040. 4

Question Number : 36 Question Id : 6801916637 Question Type : MCQ Option Shuffling : No 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 regarding the shapes of d -orbitals is **not correct**

1. d_z^2 is a dumb-bell shaped curve symmetric about z-axis with a ring like collar in xy plan
2. d_x^2- $_y^2$ is double dumb-bell shaped with signs of the lobes on y-axis will always be positive.
3. d_{xy} is double dumb-bell shaped
4. A 3d orbital would have no radial node

Options :

68019126041. 1

68019126042. 2

68019126043. 3

68019126044. 4

Question Number : 36 Question Id : 6801916637 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

d-कक्षकों की आकृतियों के संबंध में निम्नलिखित में से कौन सा सही नहीं है

1. d_z^2 , z-अक्ष में xy तल में वलय-समान कॉलर के साथ एक सममित डम्बलाकार वक्र है
2. d_x^2- $_y^2$, y-अक्ष पर खण्डों के सदैव धनात्मक चिह्नों के साथ दोहरा डम्बलाकार है
3. d_{xy} दोहरा डम्बलाकार है
4. एक 3d कक्षक में कोई त्रिज्य निस्पंद नहीं होगा

Options :

68019126041. 1

68019126042. 2

68019126043. 3

68019126044. 4

Question Number : 37 Question Id : 6801916638 Question Type : MCQ Option Shuffling : No 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 magnitude of angular momentum of an electron occupying 3s atomic orbital is

1. $\sqrt{2}\,\hbar$
2. $\sqrt{6}\,\hbar$
3. $\sqrt{3}\,\hbar$
4. **0**

Options :

68019126045. 1

68019126046. 2

68019126047. 3

68019126048. 4

Question Number : 37 Question Id : 6801916638 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

3s परमाणु कक्षक के अध्यासनकर्त्ता इलेक्ट्रॉन के कोणीय संवेग का परिमाण है

1. $\sqrt{2}\,\hbar$
2. $\sqrt{6}\,\hbar$
3. $\sqrt{3}\,\hbar$
4. **0**

Options :

68019126045. 1

68019126046. 2

68019126047. 3

68019126048. 4

Question Number : 38 Question Id : 6801916639 Question Type : MCQ Option Shuffling : No 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 (Quantity)		**LIST II (Conversion)**
A.	88 g of CO_2	I.	2 mol
B.	6.023×10^{23} molecules of H_2O	II.	1 mol
C.	96g of O_2	III.	6.023×10^{23} molecules
D.	1 mol of any gas	IV.	3 mol

Choose the **correct** answer from the options given below:

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

Options :

68019126049. 1

68019126050. 2

68019126051. 3

68019126052. 4

Question Number : 38 Question Id : 6801916639 Question Type : MCQ Option Shuffling : No 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 के साथ मिलान करिए:

	सूची I (मात्रा)		**सूची II (रूपांतरण)**
A.	88 ग्राम CO_2	I.	2 मोल
B.	H_2O के 6.023×10^{23} अणु	II.	1 मोल
C.	96 ग्राम O_2	III.	6.023×10^{23} अणु
D.	किसी भी गैस का 1 मोल	IV.	3 मोल

नीचे दिए गए विकल्पों में से सही उत्तर चुनें:

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

Options :

68019126049. 1

68019126050. 2

68019126051. 3

68019126052. 4

Question Number : 39 Question Id : 6801916640 Question Type : MCQ Option Shuffling : No 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 (Concentration)		**LIST II (Units)**	
A.	Molarity	I.	mol
B.	Mole Fraction	II.	unitless
C.	Mole	III.	mol L^{-1}
D.	Molality	IV.	mol kg^{-1}

Choose the **correct** answer from the options given below:

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

Options :

68019126053. 1

68019126054. 2

68019126055. 3

68019126056. 4

Question Number : 39 Question Id : 6801916640 Question Type : MCQ Option Shuffling : No 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 के साथ मिलान करिए:

सूची I (सांद्रता)		सूची II (इकाइयाँ)	
A.	मोलरता	I.	मोल
B.	मोल अंश	II.	इकाईरहित
C.	मोल	III.	$mol\ L^{-1}$
D.	मोललता	IV.	$mol\ kg^{-1}$

नीचे दिए गए विकल्पों में से सही उत्तर चुनें:

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

Options :

68019126053. 1

68019126054. 2

68019126055. 3

68019126056. 4

Question Number : 40 Question Id : 6801916641 Question Type : MCQ Option Shuffling : No 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 plot of log k versus 1/T of a reaction is linear with a

1. Positive slope and zero intercept
2. Positive slope and nonzero intercept
3. Negative slope and zero intercept
4. Negative slope and nonzero intercept

Options :

68019126057. 1

68019126058. 2

68019126059. 3

68019126060. 4

Question Number : 40 Question Id : 6801916641 Question Type : MCQ Option Shuffling : No 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 अभिक्रिया के $\log k$ बनाम $1/T$ का प्लॉट निम्न के साथ रैखिक है

1. सकारात्मक प्रवणता और शून्य अन्तःखंड
2. सकारात्मक प्रवणता और अशून्य अन्तःखंड
3. नकारात्मक प्रवणता और शून्य अन्तःखंड
4. नकारात्मक प्रवणता और अशून्य अन्तःखंड

Options :

68019126057. 1

68019126058. 2

68019126059. 3

68019126060. 4

Question Number : 41 Question Id : 6801916642 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Among the given characteristics of viscosity of liquids
(A). Greater the viscosity, more slowly the liquid flows
(B). Glass is an extremely viscous liquid
(C). Viscosity of liquid increases as the temperature rises
(D). Fluidity is the reciprocal of viscosity
Choose the **correct** characteristic(s) from the options given below:

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

Options :

68019126061. 1

68019126062. 2

68019126063. 3

68019126064. 4

Question Number : 41 Question Id : 6801916642 Question Type : MCQ Option Shuffling : No Is

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

Correct Marks : 4 Wrong Marks : 1

द्रव पदार्थों की श्यानता की दी गई विशेषताओं में से
(A). श्यानता जितनी अधिक होगी, द्रव का प्रवाह अधिक मंद होगा
(B). ग्लास एक अत्यधिक श्यान द्रव है
(C). तापमान बढ़ने पर द्रव की श्यानता बढ़ जाती है
(D). तरलता श्यानता के प्रतिलोम है
नीचे दिए गए विकल्पों में से सही विशेषताओं का चयन करें:

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

Options :

68019126061. 1

68019126062. 2

68019126063. 3

68019126064. 4

Question Number : 42 Question Id : 6801916643 Question Type : MCQ Option Shuffling : No 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 Millar indices of crystal planes which cut through the crystal axes at (2a, 3b, c) are

1. (326)
2. (231)
3. (132)
4. $(3\bar{2}\,\bar{2})$

Options :

68019126065. 1

68019126066. 2

68019126067. 3

68019126068. 4

Question Number : 42 Question Id : 6801916643 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

क्रिस्टल तलों के मिलर सूचकांक जो क्रिस्टल अक्षों को (2a, 3b, c) पर प्रतिच्छेद करते हैं

1. (326)
2. (231)
3. (132)
4. $(3\bar{2}\,\bar{2})$

Options :

68019126065. 1

68019126066. 2

68019126067. 3

68019126068. 4

Question Number : 43 Question Id : 6801916644 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The number of degrees of freedom for liquid water and water vapour in equilibrium at a pressure of 1 atm is

1. 0
2. 1
3. 2
4. 3

Options :

68019126069. 1

68019126070. 2

68019126071. 3

68019126072. 4

Question Number : 43 Question Id : 6801916644 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

साम्य में द्रव जल और जल वाष्प के लिए 1 atm दाब पर स्वतंत्रता की कोटि की संख्या है

1. 0
2. 1
3. 2
4. 3

Options :

68019126069. 1

68019126070. 2

68019126071. 3

68019126072. 4

Question Number : 44 Question Id : 6801916645 Question Type : MCQ Option Shuffling : No 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 zero order reaction
(A) The rate of the reaction is independent of reactant concentration
(B) The rate constant is independent of temperature
(C) The rate constant of the reaction is independent of reactant concentration
(D) Thermal decomposition of HI on gold surface is a zero order reaction
Choose the **correct** feature(s) from the options given below:

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

Options :

68019126073. 1

68019126074. 2

68019126075. 3

68019126076. 4

Question Number : 44 Question Id : 6801916645 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

शून्य कोटि अभिक्रिया के लिए
(A). अभिक्रिया की दर अभिकारक सांद्रता से स्वतंत्र है
(B). दर स्थिरांक तापमान से स्वतंत्र है
(C). अभिक्रिया का दर स्थिरांक अभिकारक सांद्रता से स्वतंत्र है
(D). सोने की सतह पर HI का तापीय अपघटन एक शून्य कोटि की अभिक्रिया है
नीचे दिए गए विकल्पों में से सही विशेषता/विशेषताएँ चुनें:

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

Options :

68019126073. 1

68019126074. 2

68019126075. 3

68019126076. 4

Question Number : 45 Question Id : 6801916646 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The unit of van der Waal's constant 'a' is

1. $dm^3\ mol^{-1}$
2. $dm^6\ atm\ mol^{-2}$
3. $dm^6\ mol^{-1}$
4. $dm^2\ atm\ mol^{-1}$

Options :

68019126077. 1

68019126078. 2

68019126079. 3

68019126080. 4

Question Number : 45 Question Id : 6801916646 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum

Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

वान डेर वाल्स स्थिरांक 'a' की इकाई है

1. $dm^3\ mol^{-1}$
2. $dm^6\ atm\ mol^{-2}$
3. $dm^6\ mol^{-1}$
4. $dm^2\ atm\ mol^{-1}$

Options :

68019126077. 1

68019126078. 2

68019126079. 3

68019126080. 4

Question Number : 46 Question Id : 6801916647 Question Type : MCQ Option Shuffling : No 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 expression of average speed (u_{av}) of molecules of a gas is given by

1. $\left(\frac{8RT}{\pi m}\right)^{1/2}$
2. $\left(\frac{8RT}{\pi M}\right)^{1/2}$
3. $\left(\frac{3RT}{\pi m}\right)^{1/2}$
4. $\left(\frac{3RT}{m}\right)^{1/2}$

Options :

68019126081. 1

68019126082. 2

68019126083. 3

68019126084. 4

Question Number : 46 Question Id : 6801916647 Question Type : MCQ Option Shuffling : No 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 गैस के अणुओं की औसत गति (u_{av}) का अभिव्यंजक निम्न प्रकार होता है

1. $\left(\frac{8RT}{\pi m}\right)^{1/2}$
2. $\left(\frac{8RT}{\pi M}\right)^{1/2}$
3. $\left(\frac{3RT}{\pi m}\right)^{1/2}$
4. $\left(\frac{3RT}{m}\right)^{1/2}$

Options :

68019126081. 1

68019126082. 2

68019126083. 3

68019126084. 4

Question Number : 47 Question Id : 6801916648 Question Type : MCQ Option Shuffling : No 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 statements is **not correct**

1. Viscosity of ethanol is smaller than that of glycol
2. Viscosity of liquids increases with increase of pressure
3. The variation of viscosity of liquids with temperature is given by $\eta = A\, e^{-E/RT}$
4. The volume of liquid flowing in time t through a pipe is given by Poisseuille equation

Options :

68019126085. 1

68019126086. 2

68019126087. 3

68019126088. 4

Question Number : 47 Question Id : 6801916648 Question Type : MCQ Option Shuffling : No 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 सही नहीं है

1. इथेनॉल की श्यानता ग्लाइकोल की तुलना में कम होती है
2. दाब बढ़ने पर द्रवों की श्यानता बढ़ जाती है
3. तापमान के साथ द्रवों की श्यानता की भिन्नता निम्न प्रकार ज्ञात की जाती है $\eta = A\, e^{-E/RT}$
4. एक पाइप के माध्यम से समय t में बहने वाले द्रव की मात्रा प्वोइसिली समीकरण द्वारा ज्ञात की जाती है

Options :

68019126085. 1

68019126086. 2

68019126087. 3

68019126088. 4

Question Number : 48 Question Id : 6801916649 Question Type : MCQ Option Shuffling : No 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 expression relating molality (m) and mole fraction (x_2) of solute in a solution is

1. $x_2 = \frac{mM_1}{1+mM_1}$
2. $x_2 = \frac{mM_1}{1-mM_1}$
3. $x_2 = \frac{1+mM_1}{mM_1}$
4. $x_2 = \frac{1-mM_1}{mM_1}$

Options :

68019126089. 1

68019126090. 2

68019126091. 3

68019126092. 4

Question Number : 48 Question Id : 6801916649 Question Type : MCQ Option Shuffling : No 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 विलयन में विलेय की मोललता (m) और मोल अंश (x_2) को संबंधित करने वाला अभिव्यंजक है

1. $x_2 = \frac{mM_1}{1+mM_1}$
2. $x_2 = \frac{mM_1}{1-mM_1}$
3. $x_2 = \frac{1+mM_1}{mM_1}$
4. $x_2 = \frac{1-mM_1}{mM_1}$

Options :

68019126089. 1

68019126090. 2

68019126091. 3

68019126092. 4

Question Number : 49 Question Id : 6801916650 Question Type : MCQ Option Shuffling : No 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 atomic masses of $^{1}H = 1.673 \times 10^{-27}$ kg and $^{35}Cl = 58.06 \times 10^{-27}$ kg. The reduced mass of HCl is

1. 162.6×10^{-27}kg
2. 16.26×10^{-27} kg
3. 1.626×10^{-27} kg
4. 1626×10^{-27} kg

Options :

68019126093. 1

68019126094. 2

68019126095. 3

68019126096. 4

Question Number : 49 Question Id : 6801916650 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

परमाणु द्रव्यमान $^{1}H = 1.673 \times 10^{-27}$ किग्रा और $^{35}Cl = 58.06 \times 10^{-27}$ किग्रा हैं। HCl का न्यूनीकृत द्रव्यमान है

1. 162.6×10^{-27}किग्रा
2. 16.26×10^{-27} किग्रा
3. 1.626×10^{-27} किग्रा
4. 1626×10^{-27} किग्रा

Options :

68019126093. 1

68019126094. 2

68019126095. 3

68019126096. 4

Question Number : 50 Question Id : 6801916651 Question Type : MCQ Option Shuffling : No 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 (Sign of thermodynamic properties)		**LIST II (Consequences)**	
A.	$\Delta H = -ve, \Delta S = -ve, \Delta G = -ve$	I.	Reaction will be non-spontaneous at high temperature
B.	$\Delta H = -ve, \Delta S = -ve, \Delta G = +ve$	II.	Reaction will be non-spontaneous at low temperature
C.	$\Delta H = +ve, \Delta S = +ve, \Delta G = +ve$	III.	Reaction will be spontaneous at low temperature
D.	$\Delta H = +ve, \Delta S = +ve, \Delta G = -ve$	IV.	Reaction will be spontaneous at high temperature

Choose the **correct** answer from the options given below:

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

Options :

68019126097. 1

68019126098. 2

68019126099. 3

68019126100. 4

Question Number : 50 Question Id : 6801916651 Question Type : MCQ Option Shuffling : No 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 के साथ मिलान करिए:

सूची I (ऊष्मागतिकीय गुणों का संकेत)		सूची II (परिणाम)	
A.	$\Delta H = -ve, \Delta S = -ve, \Delta G = -ve$	I.	उच्च तापमान पर अभिक्रिया अस्वतः होगी
B.	$\Delta H = -ve, \Delta S = -ve, \Delta G = +ve$	II.	निम्न तापमान पर अभिक्रिया अस्वतः होगी
C.	$\Delta H = +ve, \Delta S = +ve, \Delta G = +ve$	III.	निम्न तापमान पर अभिक्रिया स्वतः होगी
D.	$\Delta H = +ve, \Delta S = +ve, \Delta G = -ve$	IV.	उच्च तापमान पर अभिक्रिया स्वतः होगी

नीचे दिए गए विकल्पों में से सही उत्तर चुनें:

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

Options :

68019126097. 1

68019126098. 2

68019126099. 3

68019126100. 4

Question Number : 51 Question Id : 6801916652 Question Type : MCQ Option Shuffling : No 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 wavelength (in nanometer) associated with a proton moving at 1.0×10^3 ms^{-1}.

1. 0.032 nm
2. 0.40 nm
3. 2.5 nm
4. 14.0 nm

Options :

68019126101. 1

68019126102. 2

68019126103. 3

68019126104. 4

Question Number : 51 Question Id : 6801916652 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

1.0×10^3 ms^{-1} पर गतिशील प्रोटॉन से सम्बद्ध तरंगदैर्ध्य (नैनोमीटर में) की गणना करें

1. 0.032 एनएम
2. 0.40 एनएम
3. 2.5 एनएम
4. 14.0 एनएम

Options :

68019126101. 1

68019126102. 2

68019126103. 3

68019126104. 4

Question Number : 52 Question Id : 6801916653 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The probability of finding the electron in the px orbital is
(A). Zero at the nucleus
(B). Maximum on two opposite sides of the nucleus along X-axis
(C). Zero on Z- axis
(D). Same on all sides around the nucleus
Choose the ***correct*** answer from the options given below:

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

Options :

68019126105. 1

68019126106. 2

68019126107. 3

68019126108. 4

Question Number : 52 Question Id : 6801916653 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

p_x कक्षक में इलेक्ट्रॉन खोजने की प्रायिकता है
(A). नाभिक पर शून्य
(B). X-अक्ष के अनुदिश नाभिक की दो विपरीत भुजाओं पर अधिकतम
(C). Z-अक्ष पर शून्य
(D). नाभिक के चारों ओर सभी तरफ समान
नीचे दिए गए विकल्पों में से सही उत्तर चुनें:

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

Options :

68019126105. 1

68019126106. 2

68019126107. 3

68019126108. 4

Question Number : 53 Question Id : 6801916654 Question Type : MCQ Option Shuffling : No 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 order of decreasing ionic radii among the following isoelectronic species is
(A). K^+
(B). Ca^{2+}
(C). Cl^-
(D). S^{2-}
Choose the **correct** answer from the options given below:

1. (A) > (B) > (C) > (D).
2. (A) > (C) > (B) > (D).
3. (D) > (B) > (C) > (A).
4. (D) > (C) > (A) > (B).

Options :

68019126109. 1

68019126110. 2

68019126111. 3

68019126112. 4

Question Number : 53 Question Id : 6801916654 Question Type : MCQ Option Shuffling : No 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 समइलेक्ट्रानी स्पीशीज के बीच घटती आयनिक त्रिज्या का सही क्रम है

(A). K^+

(B). Ca^{2+}

(C). Cl^-

(D). S^{2-}

नीचे दिए गए विकल्पों में से सही उत्तर चुनें:

1. (A) > (B) > (C) > (D).
2. (A) > (C) > (B) > (D).
3. (D) > (B) > (C) > (A).
4. (D) > (C) > (A) > (B).

Options :

68019126109. 1

68019126110. 2

68019126111. 3

68019126112. 4

Question Number : 54 Question Id : 6801916655 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Electronegativity of the following elements increases in the order
(A). C
(B). N
(C). Si
(D). P
Choose the correct answer from the options given below:

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

Options :

68019126113. 1

68019126114. 2

68019126115. 3

68019126116. 4

Question Number : 54 Question Id : 6801916655 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

निम्नलिखित तत्वों की वैद्युत ऋणात्मकता का आरोही क्रम है
(A). C
(B). N
(C). Si
(D). P
नीचे दिए गए विकल्पों में से सही उत्तर चुनें:

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

Options :

68019126113. 1

68019126114. 2

68019126115. 3

68019126116. 4

Question Number : 55 Question Id : 6801916656 Question Type : MCQ Option Shuffling : No 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 compound (s) with two lone pairs of electrons on the central atom is (are)

(A). BrF_5

(B). ClF_3

(C). XeF_4

(D). SF_4

Choose the **correct** answer from the options given below:

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

Options :

68019126117. 1

68019126118. 2

68019126119. 3

68019126120. 4

Question Number : 55 Question Id : 6801916656 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

केंद्रीय परमाणु पर इलेक्ट्रॉनों के दो एकल युग्म वाला यौगिक है (हैं)

(A). BrF_5

(B). ClF_3

(C). XeF_4

(D). SF_4

नीचे दिए गए विकल्पों में से सही उत्तर चुनें:

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

Options :

68019126117. 1

68019126118. 2

68019126119. 3

68019126120. 4

Question Number : 56 Question Id : 6801916657 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Stability of the species Li_2, Li_2^- and Li_2^+ increases in the order of:

1. $Li_2^- < Li_2 < Li_2^+$
2. $Li_2 < Li_2^+ < Li_2^-$
3. $Li_2^- < Li_2^+ < Li_2$
4. $Li_2 < Li_2^- < Li_2^+$

Options :

68019126121. 1

68019126122. 2

68019126123. 3

68019126124. 4

Question Number : 56 Question Id : 6801916657 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

स्पीशीज Li_2, Li_2^- और Li_2^+ का स्थायित्व निम्न क्रम में बढ़ता है

1. $Li_2^- < Li_2 < Li_2^+$
2. $Li_2 < Li_2^+ < Li_2^-$
3. $Li_2^- < Li_2^+ < Li_2$
4. $Li_2 < Li_2^- < Li_2^+$

Options :

68019126121. 1

68019126122. 2

68019126123. 3

68019126124. 4

Question Number : 57 Question Id : 6801916658 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

SF_2, SF_4 and SF_6 have the hybridization at sulphur atom respectively as

1. sp^2, sp^3, sp^3d^2
2. sp, sp^3, sp^3d^2
3. sp^3, sp^3d, sp^3d^2
4. sp^3, spd^2, d^2sp^3

Options :

68019126125. 1

68019126126. 2

68019126127. 3

68019126128. 4

Question Number : 57 Question Id : 6801916658 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

SF_2, SF_4 और SF_6 में क्रमशः सल्फर परमाणु पर संकरण है

1. sp^2, sp^3, sp^3d^2
2. sp, sp^3, sp^3d^2
3. sp^3, sp^3d, sp^3d^2
4. sp^3, spd^2, d^2sp^3

Options :

68019126125. 1

68019126126. 2

68019126127. 3

68019126128. 4

Question Number : 58 Question Id : 6801916659 Question Type : MCQ Option Shuffling : No 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 each Cl in $CaOCl_2$ is/are

1. 0
2. +1
3. –1
4. +1, –1

Options :

68019126129. 1

68019126130. 2

68019126131. 3

68019126132. 4

Question Number : 58 Question Id : 6801916659 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

$CaOCl_2$ में प्रत्येक Cl की ऑक्सीकरण अवस्था/अवस्थाएँ है/हैं

1. 0
2. +1
3. –1
4. +1, –1

Options :

68019126129. 1

68019126130. 2

68019126131. 3

68019126132. 4

Question Number : 59 Question Id : 6801916660 Question Type : MCQ Option Shuffling : No 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 these will not be oxidised by ozone ?

1. KI
2. $FeSO_4$
3. $KMnO_4$
4. K_2MnO_4

Options :

68019126133. 1

68019126134. 2

68019126135. 3

68019126136. 4

Question Number : 59 Question Id : 6801916660 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

इनमें से किसका ओजोन द्वारा ऑक्सीकरण नहीं होगा?

1. KI
2. $FeSO_4$
3. $KMnO_4$
4. K_2MnO_4

Options :

68019126133. 1

68019126134. 2

68019126135. 3

68019126136. 4

Question Number : 60 Question Id : 6801916661 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which one of the following is the weakest base ?

1. $Ca(OH)_2$
2. KOH
3. LiOH
4. $Sr(OH)_2$

Options :

68019126137. 1

68019126138. 2

68019126139. 3

68019126140. 4

Question Number : 60 Question Id : 6801916661 Question Type : MCQ Option Shuffling : No 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 सबसे दुर्बल क्षार है?

1. $Ca(OH)_2$
2. KOH
3. LiOH
4. $Sr(OH)_2$

Options :

68019126137. 1

68019126138. 2

68019126139. 3

68019126140. 4

Question Number : 61 Question Id : 6801916662 Question Type : MCQ Option Shuffling : No 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 oxides is not expected to react with sodium hydroxide ?

1. CaO
2. SiO_2
3. BeO
4. B_2O_3

Options :

68019126141. 1

68019126142. 2

68019126143. 3

68019126144. 4

Question Number : 61 Question Id : 6801916662 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

निम्नलिखित में से किस ऑक्साइड की सोडियम हाइड्रॉक्साइड के साथ अभिक्रिया अपेक्षित नहीं है?

1. CaO
2. SiO_2
3. BeO
4. B_2O_3

Options :

68019126141. 1

68019126142. 2

68019126143. 3

68019126144. 4

Question Number : 62 Question Id : 6801916663 Question Type : MCQ Option Shuffling : No 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 basic structural unit of silicates is

1. SiO_3^{2-}
2. SiO_4^{2-}
3. SiO^{-}
4. SiO_4^{4-}

Options :

68019126145. 1

68019126146. 2

68019126147. 3

68019126148. 4

Question Number : 62 Question Id : 6801916663 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

सिलिकेट्स की मूल संरचनात्मक इकाई है

1. SiO_3^{2-}
2. SiO_4^{2-}
3. SiO^{-}
4. SiO_4^{4-}

Options :

68019126145. 1

68019126146. 2

68019126147. 3

68019126148. 4

Question Number : 63 Question Id : 6801916664 Question Type : MCQ Option Shuffling : No 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 Formula		**LIST II Structure**	
A.	XeO_4	I.	Pyramidal
B.	XeO_2F_2	II.	Tetrahedral
C.	XeF_4	III.	Trigonal bipyramidal
D.	XeO_3	IV.	Square planar

Choose the **correct** answer from the options given below:

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

Options :

68019126149. 1

68019126150. 2

68019126151. 3

68019126152. 4

Question Number : 63 Question Id : 6801916664 Question Type : MCQ Option Shuffling : No 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 के साथ मिलान करिए:

सूची I सूत्र		**सूची II संरचना**	
A.	XeO_4	I.	पिरामिडी
B.	XeO_2F_2	II.	चतुष्फलक
C.	XeF_4	III.	त्रिकोणीय द्विपिरामिडी
D.	XeO_3	IV.	वर्ग तलीय

नीचे दिए गए विकल्पों में से सही उत्तर चुनें:

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

Options :

68019126149. 1

68019126150. 2

68019126151. 3

68019126152. 4

Question Number : 64 Question Id : 6801916665 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Reaction of diborane with excess ammonia at low temperature gives initially

1. $B_2H_6.NH_3$
2. Borazole
3. $[BH_2(NH_3)_2]^+[BH_4]^-$
4. $B_2N_4H_{10}$

Options :

68019126153. 1

68019126154. 2

68019126155. 3

68019126156. 4

Question Number : 64 Question Id : 6801916665 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

अल्प तापमान पर अतिरिक्त अमोनिया के साथ डाइबोरेन की अभिक्रिया प्रारंभ में देती है

1. $B_2H_6.NH_3$
2. बोराज़ोल
3. $[BH_2(NH_3)_2]^+[BH_4]^-$
4. $B_2N_4H_{10}$

Options :

68019126153. 1

68019126154. 2

68019126155. 3

68019126156. 4

Question Number : 65 Question Id : 6801916666 Question Type : MCQ Option Shuffling : No 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 Ion		**LIST II Shape**	
A.	ICl_2^-	I.	V-shape
B.	NH_2^-	II.	Linear
C.	NH_4^+	III.	Tetrahedral
D.	$[PtCl_4]^{2-}$	IV.	Square Planar

Choose the **correct** answer from the options given below:

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

Options :

68019126157. 1

68019126158. 2

68019126159. 3

68019126160. 4

Question Number : 65 Question Id : 6801916666 Question Type : MCQ Option Shuffling : No 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 के साथ मिलान करिए:

सूची I आयन		सूची II आकृति	
A.	ICl_2^-	I.	वी-आकृति
B.	NH_2^-	II.	रैखिक
C.	NH_4+	III.	चतुष्फलक
D.	$[PtCl_4]^{2-}$	IV.	वर्ग तलीय

नीचे दिए गए विकल्पों में से सही उत्तर चुनें:

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

Options :

68019126157. 1

68019126158. 2

68019126159. 3

68019126160. 4

Question Number : 66 Question Id : 6801916667 Question Type : MCQ Option Shuffling : No 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 species has the highest electron affinity ?

1. F^-
2. Cl^-
3. O^-
4. Na^-

Options :

68019126161. 1

68019126162. 2

68019126163. 3

68019126164. 4

Question Number : 66 Question Id : 6801916667 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

निम्नलिखित में से किस स्पीशीज में सबसे अधिक इलेक्ट्रॉन बंधुता है?

1. F^-
2. Cl^-
3. O^-
4. Na^-

Options :

68019126161. 1

68019126162. 2

68019126163. 3

68019126164. 4

Question Number : 67 Question Id : 6801916668 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Arrange the increasing order of charges (molar conductivity) of the compounds used in Werner coordination theory

(A). $CoCl_3.6NH_3$

(B). $CoCl_3.5NH_3$

(C). $CoCl_3.4NH_3$

(D). $CoCl_3.3NH_3$

Choose the **correct** answer from the options given below:

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

Options :

68019126165. 1

68019126166. 2

68019126167. 3

68019126168. 4

Question Number : 67 Question Id : 6801916668 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

वर्नर समन्वय सिद्धांत में प्रयुक्त यौगिकों के आवेशों (मोलर चालकता) के आरोही क्रम को व्यवस्थित करें:

(A). $CoCl_3.6NH_3$

(B). $CoCl_3.5NH_3$

(C). $CoCl_3.4NH_3$

(D). $CoCl_3.3NH_3$

नीचे दिए गए विकल्पों में से सही उत्तर चुनें:

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

Options :

68019126165. 1

68019126166. 2

68019126167. 3

68019126168. 4

Question Number : 68 Question Id : 6801916669 Question Type : MCQ Option Shuffling : No 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 EAN of $[Co(NH_3)_6]^{3+}$?

1. 36
2. 38
3. 35
4. 54

Options :

68019126169. 1

68019126170. 2

68019126171. 3

68019126172. 4

Question Number : 68 Question Id : 6801916669 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

$[Co(NH_3)_6]^{3+}$ की प्रभावी परमाणु संख्या क्या है?

1. 36
2. 38
3. 35
4. 54

Options :

68019126169. 1

68019126170. 2

68019126171. 3

68019126172. 4

Question Number : 69 Question Id : 6801916670 Question Type : MCQ Option Shuffling : No 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 Ions		**LIST II Magnetic moment (BM)**
A.	Co^{2+}	I.	1.73
B.	Mn^{2+}	II.	3.87
C.	Cr^{2+}	III.	4.90
D.	Cu^{2+}	IV.	5.92

Choose the correct answer from the options given below:

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

Options :

68019126173. 1

68019126174. 2

68019126175. 3

68019126176. 4

Question Number : 69 Question Id : 6801916670 Question Type : MCQ Option Shuffling : No 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 के साथ मिलान करिए:

	सूची I आयन		सूची II चुंबकीय आघूर्ण (BM)
A.	Co^{2+}	I.	1.73
B.	Mn^{2+}	II.	3.87
C.	Cr^{2+}	III.	4.90
D.	Cu^{2+}	IV.	5.92

नीचे दिए गए विकल्पों में से सही उत्तर चुनें:

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

Options :

68019126173. 1

68019126174. 2

68019126175. 3

68019126176. 4

Question Number : 70 Question Id : 6801916671 Question Type : MCQ Option Shuffling : No 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 Metal/compounds		LIST II Catalytic properties	
A.	$TiCl_3$	I.	Adams catalyst
B.	$FeSO_4$	II.	Repp synthesis
C.	Pt/PtO	III.	Used as the Zieglar-Natta catalyst
D.	Ni	IV.	Used as Fenton's reagent

Choose the **correct** answer from the options given below:

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

Options :

68019126177. 1

68019126178. 2

68019126179. 3

68019126180. 4

Question Number : 70 Question Id : 6801916671 Question Type : MCQ Option Shuffling : No 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 के साथ मिलान करिए:

LIST I धातु/यौगिक		LIST II उत्प्रेरक गुण	
A.	$TiCl_3$	I.	एडम्स उत्प्रेरक
B.	$FeSO_4$	II.	रेप्प संश्लेषण
C.	Pt/PtO	III.	ज़िगलर-नाट्टा उत्प्रेरक के रूप में उपयोग किया जाता है
D.	Ni	IV.	फेंटन के अभिकर्मक के रूप में उपयोग किया जाता है

नीचे दिए गए विकल्पों में से सही उत्तर चुनें:

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

Options :

68019126177. 1

68019126178. 2

68019126179. 3

68019126180. 4

Question Number : 71 Question Id : 6801916672 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Europium(Eu) resembles Calcium(Ca) in the following ways:
(A). Both are diamagnetic
(B). Insolubility of their sulphates and carbonates in water
(C). Solubility of these metals in liquid NH_3
(D). Insolubility of their dichlorides in strong HCl

Choose the **correct** answer from the options given below:

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

Options :

68019126181. 1

68019126182. 2

68019126183. 3

68019126184. 4

Question Number : 71 Question Id : 6801916672 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यूरोपियम (Eu) निम्नलिखित माध्यमों से कैल्शियम (Ca) सदृश है:
(A). दोनों प्रतिचुम्बकीय हैं
(B). पानी में सल्फेट और कार्बोनेट की अघुलनशीलता
(C). द्रव NH_3 में धातुओं की घुलनशीलता
(D). प्रबल HCl में डाइक्लोराइड्स की अघुलनशीलता
नीचे दिए गए विकल्पों में से सही उत्तर चुनें:

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

Options :

68019126181. 1

68019126182. 2

68019126183. 3

68019126184. 4

Question Number : 72 Question Id : 6801916673 Question Type : MCQ Option Shuffling : No 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 Lanthanide contraction from Ce to Lu is

1. 0.20 Å
2. 0.10 Å
3. 0.30 Å
4. 0.25 Å

Options :

68019126185. 1

68019126186. 2

68019126187. 3

68019126188. 4

Question Number : 72 Question Id : 6801916673 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Ce से Lu तक लैंथेनाइड संकुचन है

1. 0.20 Å
2. 0.10 Å
3. 0.30 Å
4. 0.25 Å

Options :

68019126185. 1

68019126186. 2

68019126187. 3

68019126188. 4

Question Number : 73 Question Id : 6801916674 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Mg-ATP complex is a substrate for

1. Kinase
2. Catalase
3. Helicase
4. Hydrolyses

Options :

68019126189. 1

68019126190. 2

68019126191. 3

68019126192. 4

Question Number : 73 Question Id : 6801916674 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Mg-ATP संकुल निम्न के लिए एक क्रियाधार है

1. काइनेस
2. कैटालेस
3. हेलीकेस
4. हाइड्रोलाइसेस

Options :

68019126189. 1

68019126190. 2

68019126191. 3

68019126192. 4

Question Number : 74 Question Id : 6801916675 Question Type : MCQ Option Shuffling : No 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 oxidation state of Pd in $[Pd(OAC)_2]$?

1. 0
2. 1
3. 2
4. 3

Options :

68019126193. 1

68019126194. 2

68019126195. 3

68019126196. 4

Question Number : 74 Question Id : 6801916675 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

$[Pd(OAC)_2]$ में Pd की ऑक्सीकरण अवस्था क्या है?

1. 0
2. 1
3. 2
4. 3

Options :

68019126193. 1

68019126194. 2

68019126195. 3

68019126196. 4

Question Number : 75 Question Id : 6801916676 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Cytochrome C is a/an

1. Electron donor
2. Electron acceptor
3. Neutral
4. Negatively charged

Options :

68019126197. 1

68019126198. 2

68019126199. 3

68019126200. 4

Question Number : 75 Question Id : 6801916676 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

साइटोक्रोम सी एक है

1. इलेक्ट्रॉन दाता
2. इलेक्ट्रॉन ग्राही
3. उदासीन
4. ऋणावेशित

Options :

68019126197. 1

68019126198. 2

68019126199. 3

68019126200. 4