

National Testing Agency

Question Paper Name :	BTECH E 2nd Sep 2020 Shift 1
Subject Name :	BTECH E
Creation Date :	2020-09-02 15:14:44
Duration :	180
Total Marks :	300
Display Marks:	Yes
Share Answer Key With Delivery Engine :	Yes
Actual Answer Key :	Yes

BTECH

Group Number :	1
Group Id :	405036114
Group Maximum Duration :	0
Group Minimum Duration :	180
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	300
Is this Group for Examiner? :	No

Chemistry

Section Id :	405036383
Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory

Number of Questions :	25
Number of Questions to be attempted :	25
Section Marks :	100
Display Number Panel :	Yes
Group All Questions :	Yes
Mark As Answered Required? :	Yes
Sub-Section Number :	1
Sub-Section Id :	405036733
Question Shuffling Allowed :	Yes

Question Number : 26 Question Id : 40503610581 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

An open beaker of water in equilibrium
with water vapour is in a sealed container.
When a few grams of glucose are added
to the beaker of water, the rate at which
water molecules :

Options :

- 40503638566. leaves the vapour increases
- 40503638567. leaves the solution increases
- 40503638568. leaves the vapour decreases
- 40503638569. leaves the solution decreases

Question Number : 26 Question Id : 40503610581 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

एक पानी का खुला बीकर जो जल वाष्प के साम्य में है एक बंद पात्र में रखा गया है। जब ग्लूकोज के कुछ ग्राम बीकर के पानी में डाला जाता है तो दर जिससे पानी के अणु :

Options :

40503638566. वाष्प को छोड़ेंगे, बढ़ता है

40503638567. विलयन को छोड़ेंगे, बढ़ता है

40503638568. वाष्प को छोड़ेंगे, घटता है

40503638569. विलयन को छोड़ेंगे, घटता है

Question Number : 27 Question Id : 40503610582 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

For the following Assertion and Reason,
the correct option is

Assertion (A) : When Cu (II) and sulphide ions are mixed, they react together extremely quickly to give a solid.

Reason (R) : The equilibrium constant of $\text{Cu}^{2+}(\text{aq}) + \text{S}^{2-}(\text{aq}) \rightleftharpoons \text{CuS}(\text{s})$ is high because the solubility product is low.

Options :

Both (A) and (R) are true and (R) is the explanation for (A).
40503638570.

Both (A) and (R) are true but (R) is not the explanation for (A).
40503638571.

(A) is false and (R) is true.
40503638572.

Both (A) and (R) are false.
40503638573.

Question Number : 27 Question Id : 40503610582 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

निम्नलिखित कथन तथा कारण के लिए सही विकल्प है :

कथन (A) : जब Cu (II) तथा सल्फाइड आयन मिलाये जाते हैं तो वे अत्यन्त जल्दी से अभिक्रिया करके एक ठोस देते हैं।

कारण (R) : $\text{Cu}^{2+}(\text{aq}) + \text{S}^{2-}(\text{aq}) \rightleftharpoons \text{CuS}(\text{s})$ का साम्य स्थिरांक उच्च है क्योंकि विलेयता गुणनफल निम्न है।

Options :

40503638570. (A) तथा (R) सत्य हैं तथा (A) के लिये (R) सही व्याख्या है।

40503638571. (A) तथा (R) दोनों सही हैं परन्तु (R), (A) के लिए सही व्याख्या नहीं है।

40503638572. (A) गलत है तथा (R) सत्य है।

40503638573. (A) तथा (R) दोनों ही गलत हैं।

Question Number : 28 Question Id : 40503610583 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following is used for the preparation of colloids ?

Options :

40503638574. Mond Process

40503638575. Ostwald Process

40503638576. Van Arkel Method

40503638577. Bredig's Arc Method

Question Number : 28 Question Id : 40503610583 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

निम्न में से कौन कोलायड के तैयार करने में प्रयुक्त होता है?

Options :

40503638574. माँड प्रक्रम

40503638575. ओस्टवाल्ड प्रक्रम

40503638576. वैन अर्किल विधि

40503638577. ब्रेडिग्स आर्क विधि

Question Number : 29 Question Id : 40503610584 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

If AB_4 molecule is a polar molecule, a possible geometry of AB_4 is :

Options :

40503638578. Tetrahedral

40503638579. Square planar

40503638580. Rectangular planar

40503638581. Square pyramidal

Question Number : 29 Question Id : 40503610584 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

यदि AB_4 अणु एक ध्रुवी अणु है तो AB_4 की सम्भव ज्यामिति होगी :

Options :

40503638578. चतुष्फलकीय

40503638579. वर्ग समतली

40503638580. आयतीय समतली

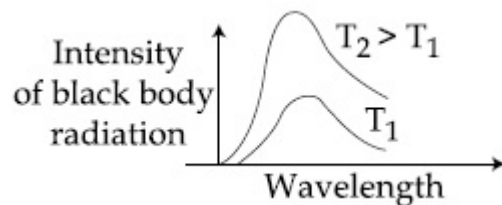
40503638581. वर्ग पिरैमिडी

Question Number : 30 Question Id : 40503610585 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

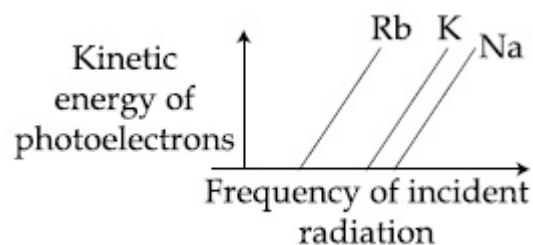
Correct Marks : 4 Wrong Marks : 1

The figure that is not a direct manifestation of the quantum nature of atoms is :

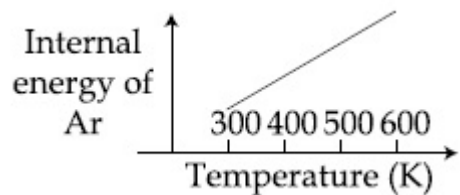
Options :



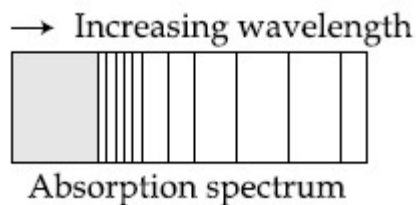
40503638582.



40503638583.



40503638584.

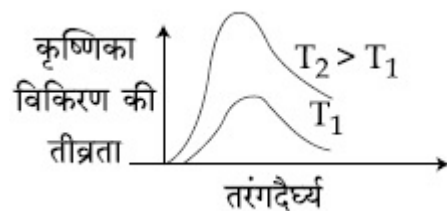


40503638585.

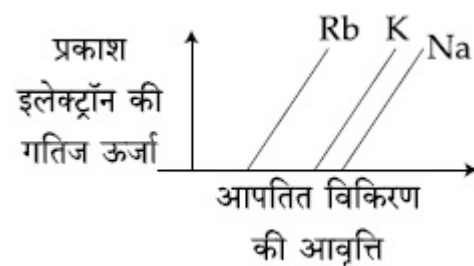
Question Number : 30 Question Id : 40503610585 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

चित्र जो परमाणु के क्वान्टम प्रकृति की सीधी अभिव्यक्ति नहीं है, है :

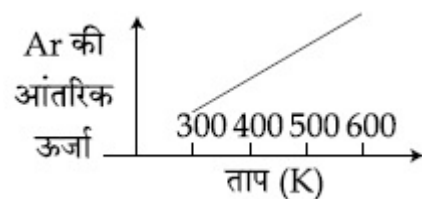
Options :



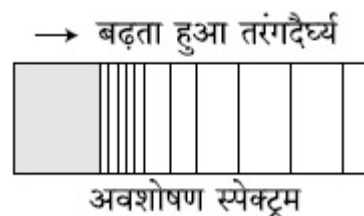
40503638582.



40503638583.



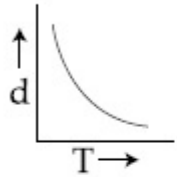
40503638584.



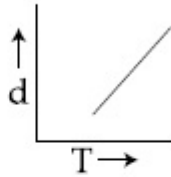
40503638585.

Correct Marks : 4 Wrong Marks : 1

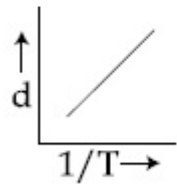
Which one of the following graphs is not correct for ideal gas ?



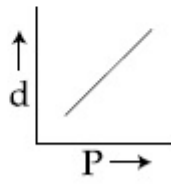
I



II



III



IV

d = Density, P = Pressure, T = Temperature

Options :

40503638586. I

40503638587. II

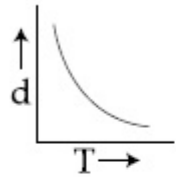
40503638588. III

40503638589. IV

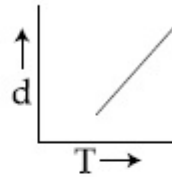
Question Number : 31 Question Id : 40503610586 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

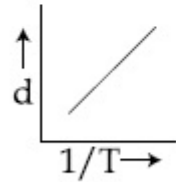
आदर्श गैस के लिए कौनसा ग्राफ सही नहीं है?



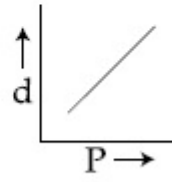
I



II



III



IV

d = घनत्व, P = दाब, T = ताप

Options :

40503638586. I

40503638587. II

40503638588. III

40503638589. IV

Question Number : 32 Question Id : 40503610587 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

In general, the property (magnitudes only) that shows an opposite trend in comparison to other properties across a period is :

Options :

40503638590. Electronegativity

40503638591. Atomic radius

40503638592. Ionization enthalpy

40503638593. Electron gain enthalpy

Question Number : 32 Question Id : 40503610587 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

आम तौर से, वह गुणधर्म (केवल परिमाण) जो एक आवर्त में अन्य गुणधर्मों की तुलना में विपरीत प्रवृत्ति दर्शाता है, है :

Options :

40503638590. इलेक्ट्रॉनऋणात्मकता

40503638591. परमाणु त्रिज्या

40503638592. आयतन एन्थैल्पी

40503638593. इलेक्ट्रॉन लब्धि एन्थैल्पी

Question Number : 33 Question Id : 40503610588 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

While titrating dilute HCl solution with aqueous NaOH, which of the following will not be required ?

Options :

40503638594. Burette and porcelain tile

40503638595. Pipette and distilled water

40503638596. Bunsen burner and measuring cylinder

40503638597. Clamp and phenolphthalein

Question Number : 33 Question Id : 40503610588 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

तनु HCl विलयन को जलीय NaOH के साथ अनुमापित करने में निम्न में से किसकी आवश्यकता नहीं पड़ेगी ?

Options :

40503638594. ब्यूरेट तथा पोर्सलीन टाइल

40503638595. पिपेट तथा आसुत जल

40503638596. बुन्सन बर्नर तथा मेजरिंग सिलिन्डर

40503638597. क्लैम्प एवं फीनाल्फ्थैलीन

Question Number : 34 Question Id : 40503610589 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

The metal mainly used in devising photoelectric cells is :

Options :

40503638598. Li

40503638599. Na

40503638600. Rb

40503638601. Cs

Question Number : 34 Question Id : 40503610589 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

प्रकाशविद्युत सेल (फोटोइलेक्ट्रिक सेल) के बनाने में मुख्यतया प्रयुक्त धातु है :

Options :

40503638598. Li

40503638599. Na

40503638600. Rb

40503638601. Cs

Question Number : 35 Question Id : 40503610590 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

On heating compound (A) gives a gas (B) which is a constituent of air. This gas when treated with H_2 in the presence of a catalyst gives another gas (C) which is basic in nature. (A) should not be :

Options :

40503638602. NH_4NO_2

40503638603. $(NH_4)_2Cr_2O_7$

40503638604. NaN_3

40503638605. $Pb(NO_3)_2$

Question Number : 35 Question Id : 40503610590 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

यौगिक (A) के गर्म करने पर एक गैस (B) प्राप्त होती है जो वायु का ही एक अवयव है। इस गैस को जब एक उत्प्रेरक की उपस्थिति में H_2 के साथ अभिकृत किया जाता है तो एक दूसरी गैस (C) प्राप्त होती है जिसकी प्रकृति क्षारीय है। (A) को नहीं होना चाहिए :

Options :

40503638602. NH_4NO_2

40503638603. $(NH_4)_2Cr_2O_7$

40503638604. NaN_3

40503638605. $Pb(NO_3)_2$

Question Number : 36 Question Id : 40503610591 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

For octahedral Mn(II) and tetrahedral Ni(II) complexes, consider the following statements :

- (I) both the complexes can be high spin.
- (II) Ni(II) complex can very rarely be low spin.
- (III) with strong field ligands, Mn(II) complexes can be low spin.
- (IV) aqueous solution of Mn(II) ions is yellow in color.

The correct statements are :

Options :

40503638606. (I), (III) and (IV) only

40503638607. (I), (II) and (III) only

40503638608. (II), (III) and (IV) only

40503638609. (I) and (II) only

Question Number : 36 Question Id : 40503610591 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

अष्टफलकीय मैंगनीज (II) तथा चतुष्फलकीय निकल (II) संकुलों के लिये, निम्न कथनों पर विचार कीजिए :

- (I) दोनों संकुल उच्च प्रचक्रण वाले हो सकते हैं।
- (II) निकल (II) संकुल बहुत कम ही निम्न प्रचक्रण का हो सकता है।
- (III) प्रबल क्षेत्र लिगण्ड के साथ मैंगनीज (II), निम्न प्रचक्रण का हो सकता है।
- (IV) मैंगनीज (II) का जलीय विलयन पीले रंग का होता है।

सही कथन हैं :

Options :

40503638606. (I), (III) तथा (IV) मात्र

40503638607. (I), (II) तथा (III) मात्र

40503638608. (II), (III) तथा (IV) मात्र

40503638609. (I) तथा (II) मात्र

Question Number : 37 Question Id : 40503610592 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Consider that a d^6 metal ion (M^{2+}) forms a complex with aqua ligands, and the spin only magnetic moment of the complex is 4.90 BM. The geometry and the crystal field stabilization energy of the complex is :

Options :

40503638610. octahedral and $-2.4\Delta_0 + 2P$

40503638611. tetrahedral and $-0.6\Delta_t$

40503638612. octahedral and $-1.6\Delta_0$

40503638613. tetrahedral and $-1.6\Delta_t + 1P$

Question Number : 37 Question Id : 40503610592 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

विचार करिये कि एक d^6 धातु आयन (M^{2+}) एक्वा लिगण्ड्स के साथ एक संकुल बनाता है तथा संकुल का प्रचक्रण मात्र चुम्बकीय आघूर्ण 4.90 BM है। संकुल की ज्यामिति तथा क्रिस्टल क्षेत्र स्थायीकरण ऊर्जा है :

Options :

40503638610. अष्टफलकीय तथा $-2.4\Delta_0 + 2P$

40503638611. चतुष्फलकीय तथा $-0.6\Delta_t$

40503638612. अष्टफलकीय तथा $-1.6\Delta_0$

40503638613. चतुष्फलकीय तथा $-1.6\Delta_t + 1P$

Question Number : 38 Question Id : 40503610593 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The statement that is not true about ozone is :

Options :

40503638614. in the stratosphere, it forms a protective shield against UV radiation.

40503638615. in the atmosphere, it is depleted by CFCs.

40503638616. it is a toxic gas and its reaction with NO gives NO_2 .

40503638617. in the stratosphere, CFCs release chlorine free radicals ($\text{Cl}\cdot$) which reacts with O_3 to give chlorine dioxide radicals.

Question Number : 38 Question Id : 40503610593 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

वह कथन जो ओज़ोन के बारे में सही नहीं है, है :

Options :

40503638614. स्ट्रेटोस्फियर में यह UV विकरण के विरुद्ध एक सुरक्षा कवच बनाती है।

40503638615. वायुमंडल में, यह CFCs के द्वारा क्षीण होती है।

40503638616. यह एक जहरीली गैस है तथा यह NO के साथ अभिक्रिया करके NO₂ देती है।

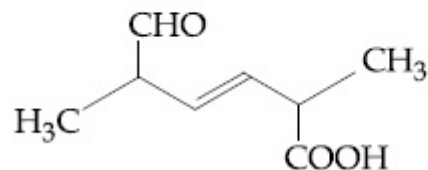
40503638617. स्ट्रेटोस्फियर में, CFCs क्लोरीन मुक्त मूलक (Cl·) निकालते हैं जो O₃ के साथ अभिक्रिया करके क्लोरीन डाइआक्साइड मूलक देते हैं।

Question Number : 39 Question Id : 40503610594 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The IUPAC name for the following compound is :



Options :

40503638618. 2, 5-dimethyl-6-oxo-hex-3-enoic acid

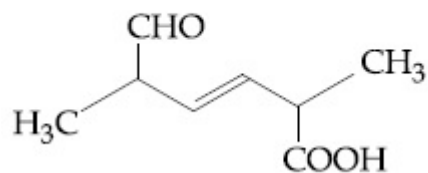
40503638619. 6-formyl-2-methyl-hex-3-enoic acid

40503638620. 2, 5-dimethyl-5-carboxy-hex-3-enal

40503638621. 2, 5-dimethyl-6-carboxy-hex-3-enal

Question Number : 39 Question Id : 40503610594 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

निम्न यौगिक के लिए IUPAC नाम होगा :



Options :

40503638618. 2, 5-डाइमेथिल-6-आक्सो-हेक्स-3-इनोइक एसिड

40503638619. 6-फार्मिल-2-मेथिल-हेक्स-3-इनोइक एसिड

40503638620. 2, 5-डाइमेथिल-5-कार्बोक्सी-हेक्स-3-ईनल

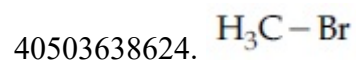
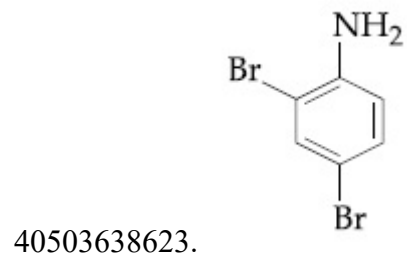
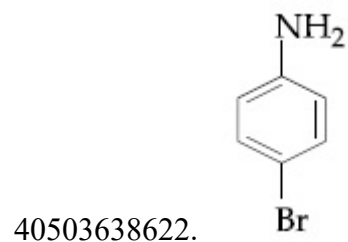
40503638621. 2, 5-डाइमेथिल-6-कार्बोक्सी-हेक्स-3-ईनल

Question Number : 40 Question Id : 40503610595 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In Carius method of estimation of halogen, 0.172 g of an organic compound showed presence of 0.08 g of bromine. Which of these is the correct structure of the compound ?

Options :



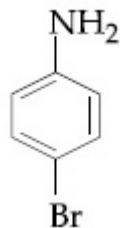
40503638625. $\text{H}_3\text{C}-\text{CH}_2-\text{Br}$

Question Number : 40 Question Id : 40503610595 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

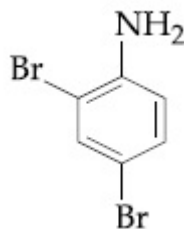
Correct Marks : 4 Wrong Marks : 1

हैलोजन के आकलन के कैरिअस विधि में, एक कार्बनिक यौगिक का 0.172 g, 0.08 g ब्रोमीन की उपस्थिति प्रदर्शित किया। निम्न में से यौगिक की सही संरचना कौन है?

Options :



40503638622.



40503638623.

40503638624. $\text{H}_3\text{C}-\text{Br}$

40503638625. $\text{H}_3\text{C}-\text{CH}_2-\text{Br}$

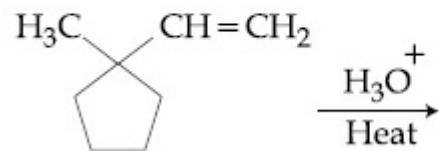
Question Number : 41 Question Id : 40503610596 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

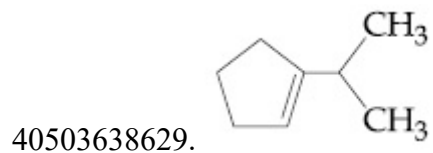
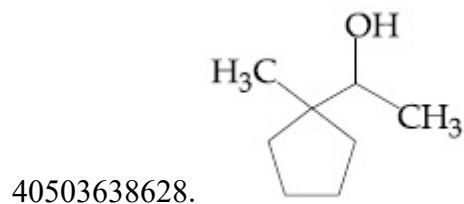
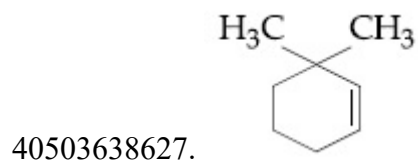
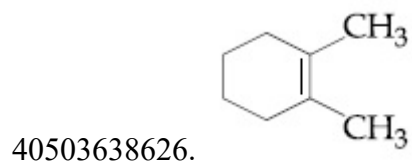
Correct Marks : 4 Wrong Marks : 1

The major product in the following reaction

is :



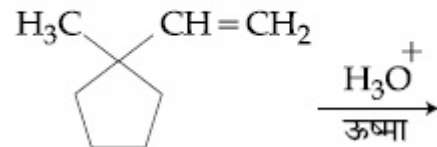
Options :



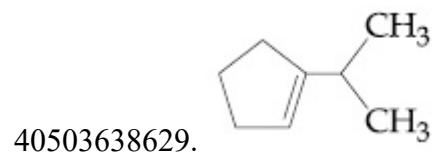
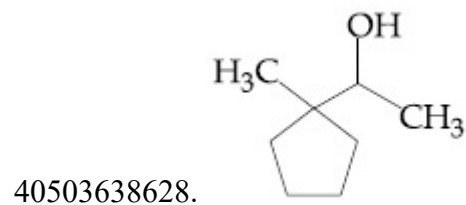
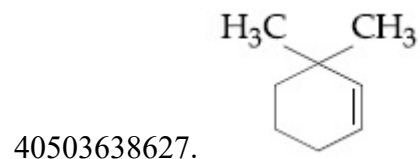
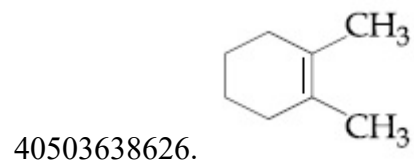
Question Number : 41 Question Id : 40503610596 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

निम्न अभिक्रिया में मुख्य उत्पाद है :



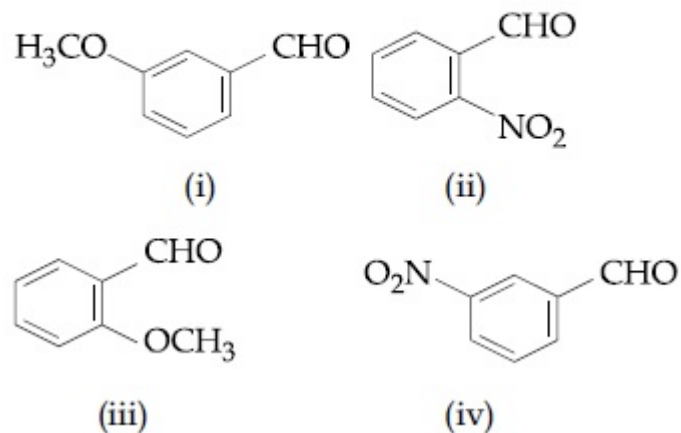
Options :



Question Number : 42 Question Id : 40503610597 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The increasing order of the following compounds towards HCN addition is :



Options :

40503638630. (iii) < (iv) < (i) < (ii)

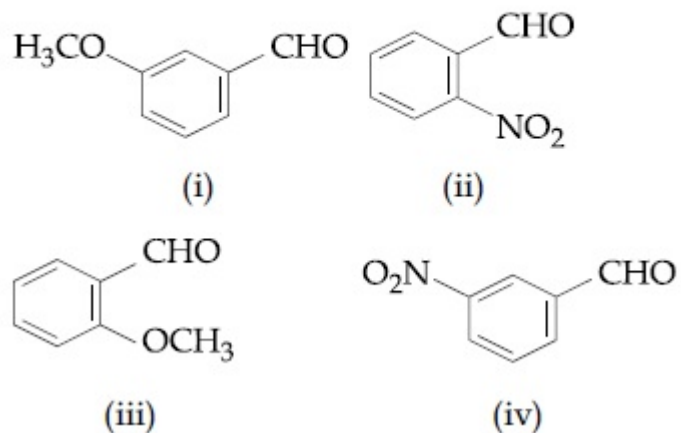
40503638631. (iii) < (i) < (iv) < (ii)

40503638632. (i) < (iii) < (iv) < (ii)

40503638633. (iii) < (iv) < (ii) < (i)

Question Number : 42 Question Id : 40503610597 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

निम्न यौगिकों का HCN के संकलन प्रति बढ़ता क्रम है :



Options :

40503638630. (iii) < (iv) < (i) < (ii)

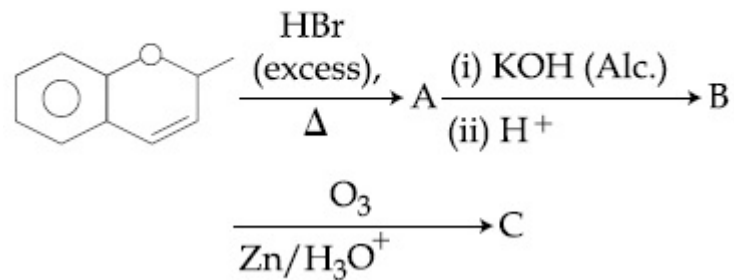
40503638631. (iii) < (i) < (iv) < (ii)

40503638632. (i) < (iii) < (iv) < (ii)

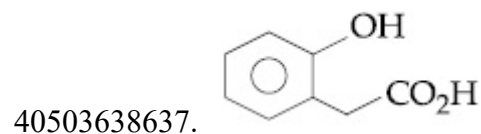
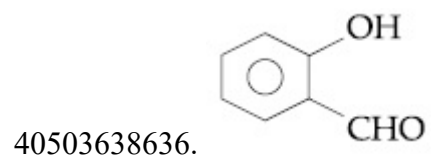
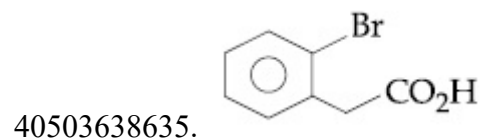
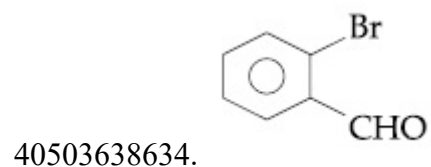
40503638633. (iii) < (iv) < (ii) < (i)

Question Number : 43 Question Id : 40503610598 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

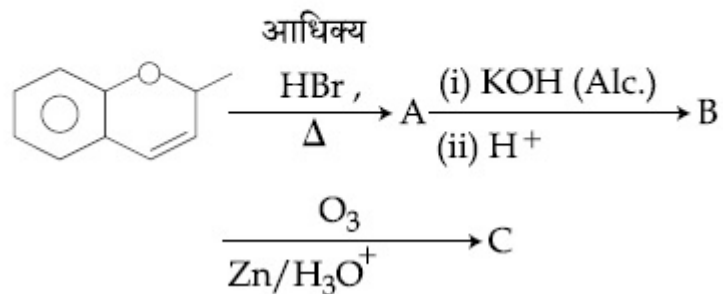
The major aromatic product C in the following reaction sequence will be :



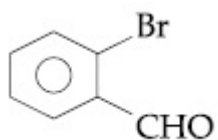
Options :



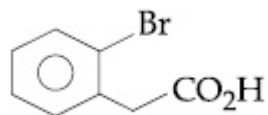
निम्न अभिक्रिया अनुक्रम में मुख्य ऐरोमैटिक उत्पाद C होगा :



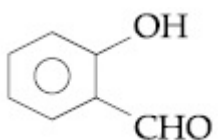
Options :



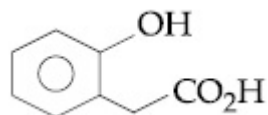
40503638634.



40503638635.



40503638636.

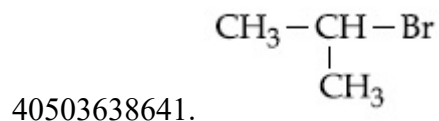
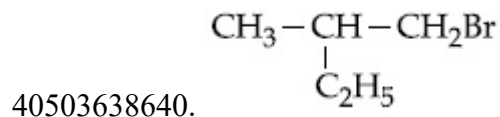
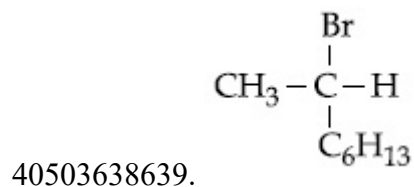
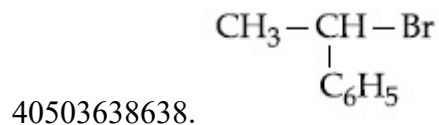


40503638637.

Correct Marks : 4 Wrong Marks : 1

Which of the following compounds will show retention in configuration on nucleophilic substitution by OH^- ion ?

Options :

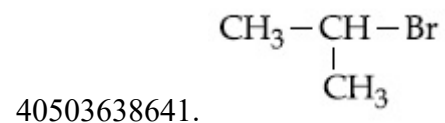
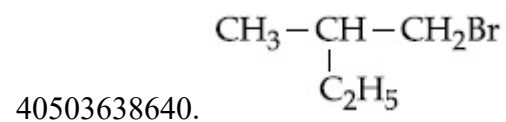
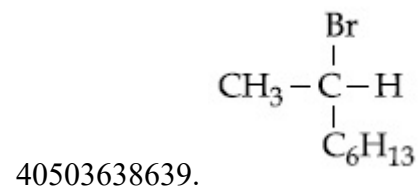
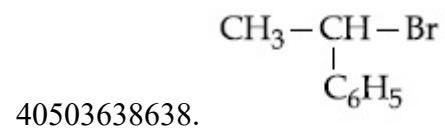


Question Number : 44 Question Id : 40503610599 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

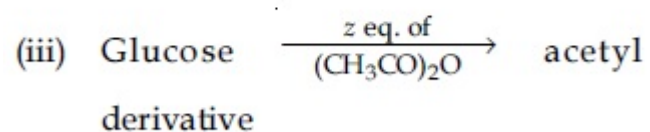
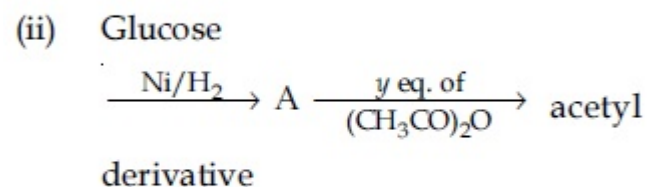
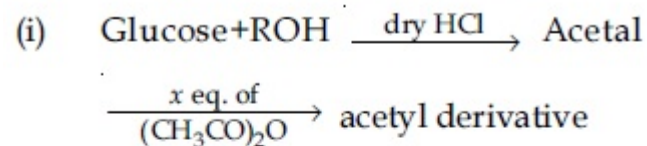
निम्न में से कौन-सा यौगिक OH^- द्वारा नाभिक स्नेही प्रतिस्थापन पर विन्यास में धारण प्रदर्शित करेगा ?

Options :



Question Number : 45 Question Id : 40503610600 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Consider the following reactions :



'x', 'y' and 'z' in these reactions are respectively.

Options :

40503638642. 4, 5 & 5

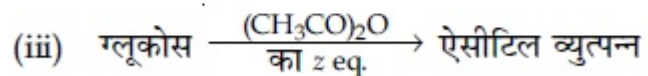
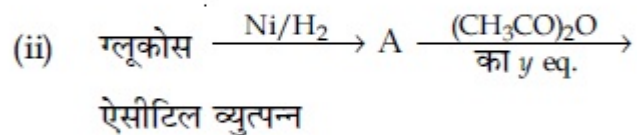
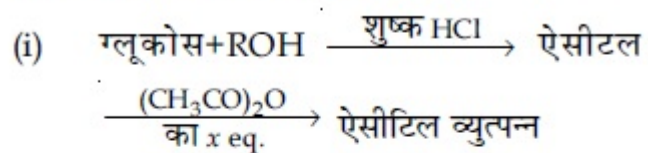
40503638643. 4, 6 & 5

40503638644. 5, 4 & 5

40503638645. 5, 6 & 5

Question Number : 45 Question Id : 40503610600 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

निम्न अभिक्रियाओं पर विचार कीजिए :



इन अभिक्रियाओं में 'x', 'y' तथा 'z' क्रमशः
हैं।

Options :

40503638642. 4, 5 तथा 5

40503638643. 4, 6 तथा 5

40503638644. 5, 4 तथा 5

40503638645. 5, 6 तथा 5

Sub-Section Number :

2

Sub-Section Id :

405036734

Question Shuffling Allowed :

Yes

Question Number : 46 Question Id : 40503610601 Question Type : SA Display Question Number : Yes

Correct Marks : 4 Wrong Marks : 0

The internal energy change (in J) when 90 g of water undergoes complete evaporation at 100°C is _____.
(Given : ΔH_{vap} for water at 373 K = 41 kJ/mol, $R = 8.314 \text{ JK}^{-1} \text{ mol}^{-1}$)

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

Possible Answers :

5 to 5.002

Question Number : 46 **Question Id :** 40503610601 **Question Type :** SA Display **Question Number :** Yes

Correct Marks : 4 **Wrong Marks :** 0

जब 90 g पानी का 100°C पर पूर्णरूप से वाष्पीकरण हो जाय तो आंतरिक ऊर्जा परिवर्तन (J में) होगी :
(दिया गया है : 373 K पर पानी के लिए $\Delta H_{\text{vap}} = 41 \text{ kJ/mol}$ तथा $R = 8.314 \text{ JK}^{-1} \text{ mol}^{-1}$)

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

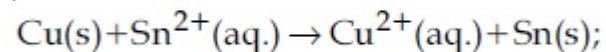
Possible Answers :

5 to 5.002

Question Number : 47 **Question Id :** 40503610602 **Question Type :** SA Display **Question Number :** Yes

Correct Marks : 4 Wrong Marks : 0

The Gibbs energy change (in J) for the given reaction at $[\text{Cu}^{2+}] = [\text{Sn}^{2+}] = 1 \text{ M}$ and 298 K is :



$$(E_{\text{Sn}^{2+}|\text{Sn}}^0 = -0.16 \text{ V}, E_{\text{Cu}^{2+}|\text{Cu}}^0 = 0.34 \text{ V},$$

Take $F = 96500 \text{ C mol}^{-1}$)

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

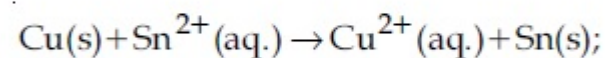
Possible Answers :

5 to 5.002

Question Number : 47 Question Id : 40503610602 Question Type : SA Display Question Number : Yes

Correct Marks : 4 Wrong Marks : 0

दिये गये अभिक्रिया के लिये गिब्स ऊर्जा परिवर्तन (J में) $[\text{Cu}^{2+}] = [\text{Sn}^{2+}] = 1 \text{ M}$ तथा 298 K पर होगी :



$$(E_{\text{Sn}^{2+}|\text{Sn}}^0 = -0.16 \text{ V}, E_{\text{Cu}^{2+}|\text{Cu}}^0 = 0.34 \text{ V}$$

तथा $F = 96500 \text{ C mol}^{-1}$)

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

Possible Answers :

5 to 5.002

Question Number : 48 Question Id : 40503610603 Question Type : SA Display Question Number : Yes

Correct Marks : 4 Wrong Marks : 0

The mass of gas adsorbed, x , per unit mass of adsorbate, m , was measured at various

pressures, p . A graph between $\log \frac{x}{m}$ and

$\log p$ gives a straight line with slope equal to 2 and the intercept equal to 0.4771. The

value of $\frac{x}{m}$ at a pressure of 4 atm is: (Given

$\log 3 = 0.4771$)

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

Possible Answers :

5 to 5.002

Question Number : 48 Question Id : 40503610603 Question Type : SA Display Question Number : Yes

Correct Marks : 4 Wrong Marks : 0

अधिशोष्य, m के प्रति इकाई द्रव्यमान पर अधिशोषित गैस के द्रव्यमान, x को विभिन्न दाबों p पर मापा गया।

$\log \frac{x}{m}$ तथा $\log p$ के बीच का ग्राफ एक सीधी रेखा है जिसकी ढाल 2 के बराबर तथा अंतःखंड 0.4771

के बराबर है, 4 atm के दाब पर $\frac{x}{m}$ का मान होगा :

($\log 3 = 0.4771$)

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

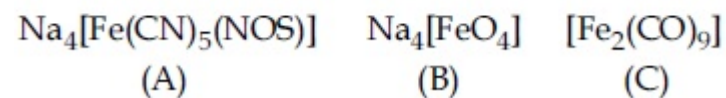
Possible Answers :

5 to 5.002

Question Number : 49 **Question Id :** 40503610604 **Question Type :** SA **Display Question Number :** Yes

Correct Marks : 4 **Wrong Marks :** 0

The oxidation states of iron atoms in compounds (A), (B) and (C), respectively, are x , y and z . The sum of x , y and z is _____.



Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

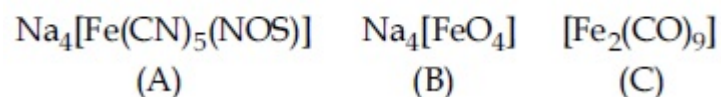
Possible Answers :

5 to 5.002

Question Number : 49 Question Id : 40503610604 Question Type : SA Display Question Number : Yes

Correct Marks : 4 Wrong Marks : 0

यौगिक (A), (B) तथा (C) में आयरन परमाणुओं की ऑक्सीकरण अवस्थाएँ क्रमशः x , y तथा z हैं। x , y तथा z का योग होगा _____.



Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

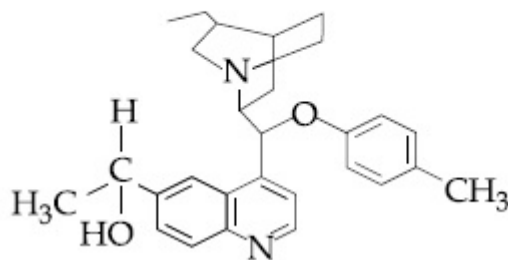
Possible Answers :

5 to 5.002

Question Number : 50 Question Id : 40503610605 Question Type : SA Display Question Number : Yes

Correct Marks : 4 Wrong Marks : 0

The number of chiral carbons present in the molecule given below is _____.



Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

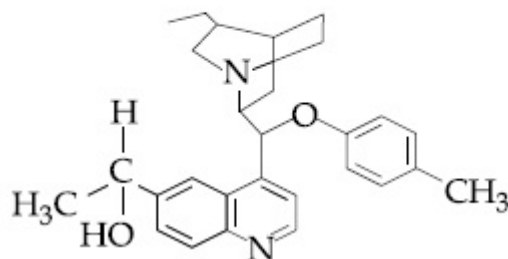
Possible Answers :

5 to 5.002

Question Number : 50 Question Id : 40503610605 Question Type : SA Display Question Number : Yes

Correct Marks : 4 Wrong Marks : 0

नीचे दिये गये अणु में उपस्थित काइरल कार्बनों की संख्या है _____।



Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

Possible Answers :

5 to 5.002