

National Testing Agency

Question Paper Name :	BTECH E 4th Sep 2020 Shift 2
Subject Name :	BTECH E
Creation Date :	2020-09-04 20:46:11
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 :	405036123
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 :	405036410
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 :	405036787
Question Shuffling Allowed :	Yes

Question Number : 26 Question Id : 40503611256 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

A sample of red ink (a colloidal suspension)
is prepared by mixing eosin dye, egg white,
HCHO and water. The component which
ensures stability of the ink sample is :

Options :

40503640861. Eosin dye

40503640862. Egg white

40503640863. HCHO

40503640864. Water

**Question Number : 26 Question Id : 40503611256 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

लाल स्याही (एक कोलाइडी निलंबन) के एक प्रतिदर्श को इओसिन रंजक, अंडे का सफेद भाग, HCHO तथा जल को मिश्रित करके बनाया जाता है। स्याही प्रतिदर्श के स्थायित्व को सुनिश्चित करने वाला जो घटक है, वह है :

Options :

40503640861. इओसिन रंजक

40503640862. अंडे का सफेद भाग

40503640863. HCHO

40503640864. जल

**Question Number : 27 Question Id : 40503611257 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

250 mL of a waste solution obtained from the workshop of a goldsmith contains 0.1 M AgNO_3 and 0.1 M AuCl . The solution was electrolyzed at 2 V by passing a current of 1 A for 15 minutes. The metal/metals electrodeposited will be :

$$\left(E^0_{\text{Ag}^+/\text{Ag}} = 0.80 \text{ V}, E^0_{\text{Au}^+/\text{Au}} = 1.69 \text{ V} \right)$$

Options :

40503640865. only silver
40503640866. silver and gold in equal mass proportion
40503640867. silver and gold in proportion to their atomic weights
40503640868. only gold

Question Number : 27 Question Id : 40503611257 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 सुनार की कार्यशाला से प्राप्त एक अपशिष्ट विलयन के 250 mL में 0.1 M AgNO_3 तथा 0.1 M AuCl हैं। इस विलयन को 2 V पर एक 1 A की विद्युत धारा 15 मिनट तक प्रवाहित करके वैद्युत अपघटित किया गया। धातु/धातुएँ जो वैद्युत निक्षेपित होंगी/होंगे, है/हैं :

$$\left(E^0_{\text{Ag}^+/\text{Ag}} = 0.80 \text{ V}, E^0_{\text{Au}^+/\text{Au}} = 1.69 \text{ V} \right)$$

Options :

40503640865. मात्र चांदी
40503640866. चांदी तथा सोना समान संहति के समानुपात में

चांदी तथा सोना, उनके परमाणु भार के समानुपात
40503640867. में

40503640868. मात्र सोना

Question Number : 28 Question Id : 40503611258 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 the equilibrium constant for $A \rightleftharpoons B + C$
is $K_{eq}^{(1)}$ and that of $B + C \rightleftharpoons P$ is $K_{eq}^{(2)}$, the
equilibrium constant for $A \rightleftharpoons P$ is :

Options :

40503640869. $K_{eq}^{(1)} + K_{eq}^{(2)}$

40503640870. $K_{eq}^{(1)} / K_{eq}^{(2)}$

40503640871. $K_{eq}^{(1)} K_{eq}^{(2)}$

40503640872. $K_{eq}^{(2)} - K_{eq}^{(1)}$

Question Number : 28 Question Id : 40503611258 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 $A \rightleftharpoons B + C$ के लिए साम्य स्थिरांक $K_{eq}^{(1)}$
तथा $B + C \rightleftharpoons P$ के लिए वह $K_{eq}^{(2)}$ है, $A \rightleftharpoons P$
के लिए साम्य स्थिरांक है :

Options :

40503640869. $K_{eq}^{(1)} + K_{eq}^{(2)}$

40503640870. $K_{eq}^{(1)} / K_{eq}^{(2)}$

40503640871. $K_{eq}^{(1)} K_{eq}^{(2)}$

40503640872. $K_{eq}^{(2)} - K_{eq}^{(1)}$

Question Number : 29 Question Id : 40503611259 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

Five moles of an ideal gas at 1 bar and 298 K is expanded into vacuum to double the volume. The work done is :

Options :

40503640873. zero

40503640874. $-RT \ln V_2/V_1$

40503640875. $-RT (V_2 - V_1)$

40503640876. $C_V(T_2 - T_1)$

Question Number : 29 Question Id : 40503611259 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 आदर्श गैस के पाँच मोल को 1 bar तथा 298 K पर निर्वात में उसके आयतन के दुगुने तक प्रसारित किया गया। किया गया कार्य है :

Options :

40503640873. शून्य

40503640874. $-RT \ln V_2/V_1$

40503640875. $-RT (V_2 - V_1)$

40503640876. $C_V(T_2 - T_1)$

Question Number : 30 Question Id : 40503611260 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 molecule in which hybrid MOs involve
only one d-orbital of the central atom is :

Options :

40503640877. $[\text{Ni}(\text{CN})_4]^{2-}$

40503640878. BrF_5

40503640879. $[\text{CrF}_6]^{3-}$

40503640880. XeF_4

Question Number : 30 Question Id : 40503611260 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

अणु, जिसके संकरित MO में केन्द्रीय परमाणु के
मात्र एक d-कक्षक सम्मिलित हैं, है :

Options :

40503640877. $[\text{Ni}(\text{CN})_4]^{2-}$

40503640878. BrF_5

40503640879. $[\text{CrF}_6]^{3-}$

40503640880. XeF_4

Question Number : 31 Question Id : 40503611261 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 shortest wavelength of H atom in the Lyman series is λ_1 . The longest wavelength in the Balmer series of He^+ is :

Options :

40503640881. $\frac{36\lambda_1}{5}$

40503640882. $\frac{5\lambda_1}{9}$

40503640883. $\frac{9\lambda_1}{5}$

40503640884. $\frac{27\lambda_1}{5}$

Question Number : 31 Question Id : 40503611261 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

H परमाणु का सबसे छोटा तरंगदैर्घ्य लाइमैन श्रेणी में λ_1 है। He^+ का बामर श्रेणी में सबसे लम्बा तरंगदैर्घ्य है :

Options :

40503640881. $\frac{36\lambda_1}{5}$

40503640882. $\frac{5\lambda_1}{9}$

40503640883. $\frac{9\lambda_1}{5}$

40503640884. $\frac{27\lambda_1}{5}$

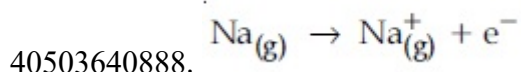
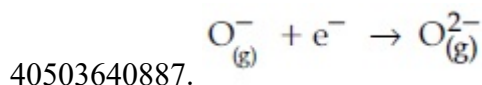
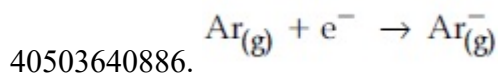
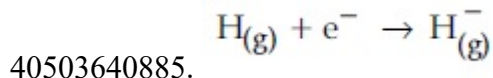
Question Number : 32 Question Id : 40503611262 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option
Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The process that is NOT endothermic in nature is :

Options :

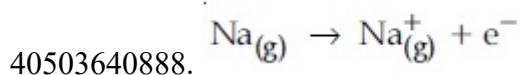
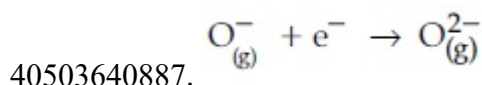
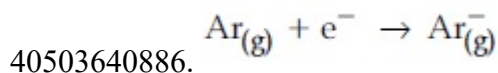
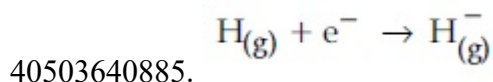


Question Number : 32 Question Id : 40503611262 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option
Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

प्रक्रम जो स्वभावतः ऊष्मा शोषी नहीं है :

Options :



Question Number : 33 Question Id : 40503611263 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 alkaline earth metal 'M' readily forms water soluble sulphate and water insoluble hydroxide. Its oxide MO is very stable to heat and does not have rock-salt structure. M is :

Options :

40503640889. Mg

40503640890. Be

40503640891. Ca

40503640892. Sr

Question Number : 33 Question Id : 40503611263 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 क्षारीय मृदा धातु 'M' शीघ्रतापूर्वक जल-विलेय सल्फेट तथा जल-अविलेय हाइड्राक्साइड बनाती है। इसकी आक्साइड MO ऊष्मा के प्रति अतिस्थायी है तथा खनिज नमक संरचना में नहीं होती है। M है :

Options :

40503640889. Mg

40503640890. Be

40503640891. Ca

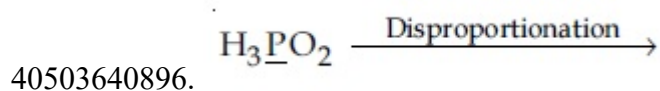
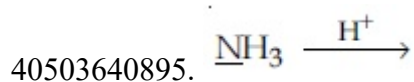
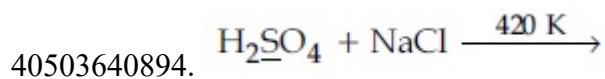
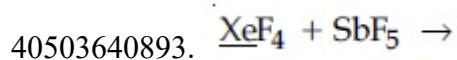
40503640892. Sr

Question Number : 34 Question Id : 40503611264 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 reaction in which the hybridisation of the underlined atom is affected is :

Options :

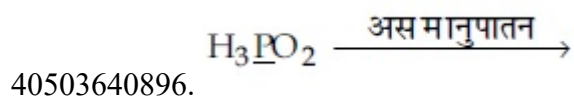
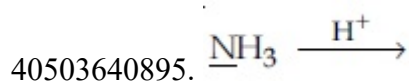
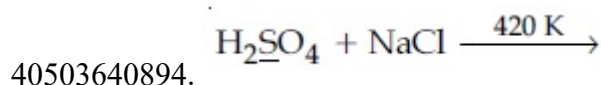
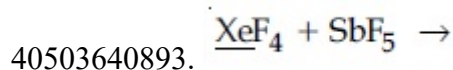


Question Number : 34 Question Id : 40503611264 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

अभिक्रिया जिसमें रेखांकित परमाणु का संकरण प्रभावित होता है, है :

Options :



Question Number : 35 Question Id : 40503611265 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 incorrect statement(s) among (a) - (c) is (are) :

- (a) W(VI) is more stable than Cr(VI).
- (b) in the presence of HCl, permanganate titrations provide satisfactory results.
- (c) some lanthanoid oxides can be used as phosphors.

Options :

40503640897. (a) only

40503640898. (b) only

40503640899. (a) and (b) only

40503640900. (b) and (c) only

Question Number : 35 Question Id : 40503611265 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

कथनों (a) - (c) में से गलत कथन है/हैं :

- (a) Cr(VI) की अपेक्षा W(VI) अधिक स्थायी है।
- (b) HCl की उपस्थिति में, परमैंगनेट अनुमापन संतोषप्रद परिणाम देते हैं।
- (c) कुछ लैन्थेनायड आक्साइडों को फॉस्फरों की तरह उपयोग में ला सकते हैं।

Options :

40503640897. (a) मात्र

40503640898. (b) मात्र

40503640899. (a) तथा (b) मात्र

40503640900. (b) तथा (c) मात्र

Question Number : 36 Question Id : 40503611266 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 Crystal Field Stabilization Energy
(CFSE) of $[\text{CoF}_3(\text{H}_2\text{O})_3]$ ($\Delta_0 < P$) is :

Options :

40503640901. $-0.8 \Delta_0$

40503640902. $-0.4 \Delta_0$

40503640903. $-0.8 \Delta_0 + 2P$

40503640904. $-0.4 \Delta_0 + P$

Question Number : 36 Question Id : 40503611266 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

$[\text{CoF}_3(\text{H}_2\text{O})_3]$ की क्रिस्टल क्षेत्र स्थायीकरण ऊर्जा
(CFSE) ($\Delta_0 < P$) है :

Options :

40503640901. $-0.8 \Delta_0$

40503640902. $-0.4 \Delta_0$

40503640903. $-0.8 \Delta_0 + 2P$

40503640904. $-0.4 \Delta_0 + P$

Question Number : 37 Question Id : 40503611267 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 one that can exhibit highest paramagnetic behaviour among the following is :

gly = glycinato; bpy = 2, 2'-bipyridine

Options :

40503640905. $[\text{Pd}(\text{gly})_2]$

40503640906. $[\text{Fe}(\text{en})(\text{bpy})(\text{NH}_3)_2]^{2+}$

40503640907. $[\text{Co}(\text{OX})_2(\text{OH})_2]^- (\Delta_0 > P)$

40503640908. $[\text{Ti}(\text{NH}_3)_6]^{3+}$

Question Number : 37 Question Id : 40503611267 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 में से वह जो सबसे अधिक अनुचुंबकीय व्यवहार प्रदर्शित करता है, है :

gly = ग्लाइसिनेटो; bpy = 2, 2'-बाईपिरिडीन

Options :

40503640905. $[\text{Pd}(\text{gly})_2]$

40503640906. $[\text{Fe}(\text{en})(\text{bpy})(\text{NH}_3)_2]^{2+}$

40503640907. $[\text{Co}(\text{OX})_2(\text{OH})_2]^- (\Delta_0 > P)$

40503640908. $[\text{Ti}(\text{NH}_3)_6]^{3+}$

Question Number : 38 Question Id : 40503611268 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 processes of calcination and roasting in metallurgical industries, respectively, can lead to :

Options :

40503640909. Global warming and acid rain
40503640910. Global warming and photochemical smog
40503640911. Photochemical smog and global warming
40503640912. Photochemical smog and ozone layer depletion

Question Number : 38 Question Id : 40503611268 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

धातुकर्मीय उद्योग में, निस्तापन तथा भर्जन के प्रक्रम क्रमशः पैदा करते हैं :

Options :

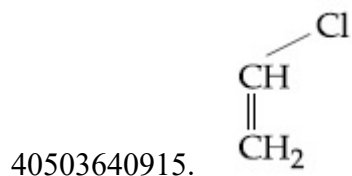
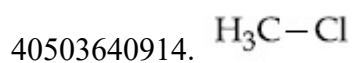
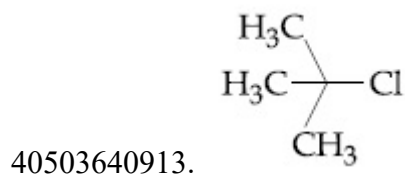
40503640909. वैश्विक तापन तथा अम्ल वर्षा
40503640910. वैश्विक तापन तथा प्रकाशरासायनिक धूमकुहा
40503640911. प्रकाशरासायनिक धूमकुहा तथा वैश्विक तापन
40503640912. प्रकाशरासायनिक धूमकुहा तथा ओजोन परत का अवक्षय

Question Number : 39 Question Id : 40503611269 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

Among the following compounds, which one has the shortest C – Cl bond ?

Options :

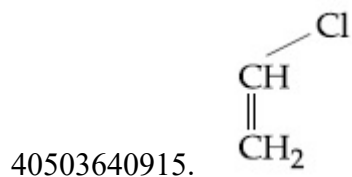
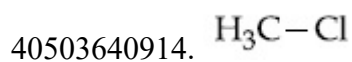
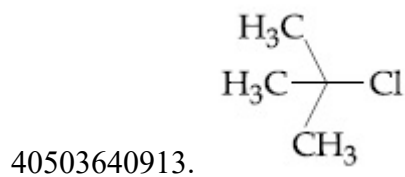


Question Number : 39 Question Id : 40503611269 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

निम्नलिखित यौगिकों में से किसमें C-Cl आबंध सबसे छोटा है?

Options :

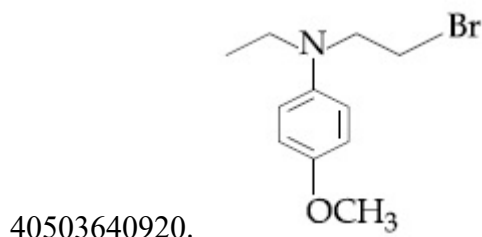
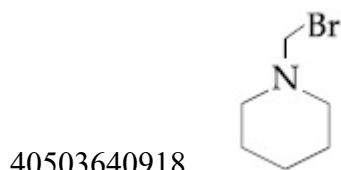
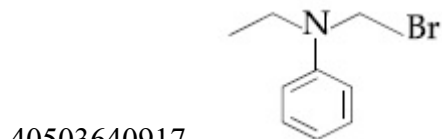


Question Number : 40 Question Id : 40503611270 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option
Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following compounds will
form the precipitate with aq. AgNO_3
solution most readily ?

Options :

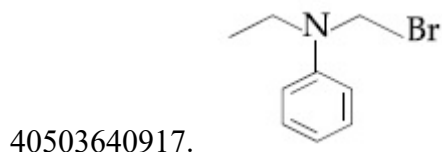


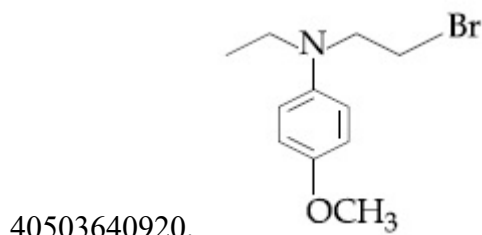
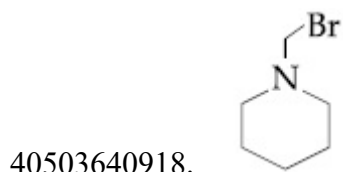
Question Number : 40 Question Id : 40503611270 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option
Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

निम्नलिखित यौगिकों में से कौन जलीय AgNO_3
विलयन के साथ सबसे शीघ्रतापूर्वक अवक्षेप देगा ?

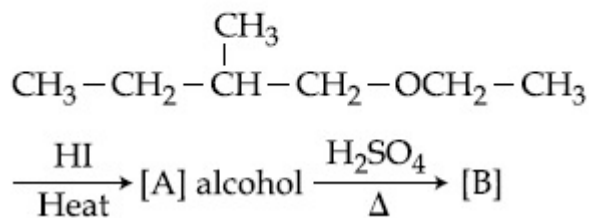
Options :



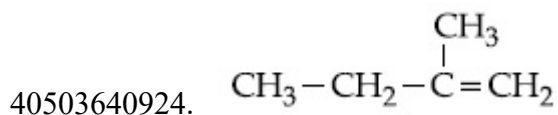
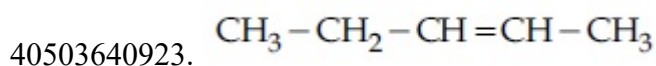
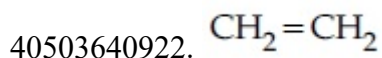
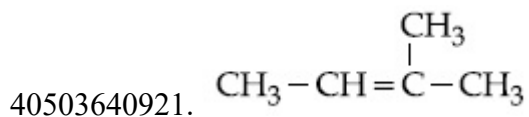


Question Number : 41 Question Id : 40503611271 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

The major product [B] in the following reactions is :



Options :

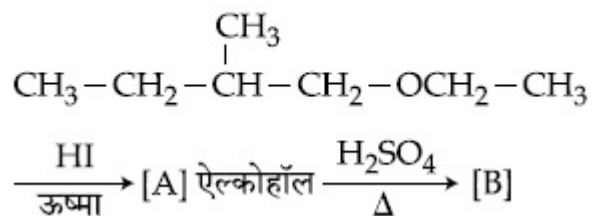


Question Number : 41 Question Id : 40503611271 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

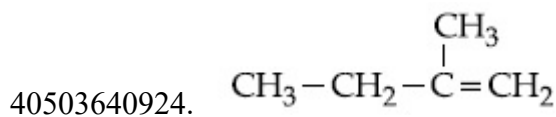
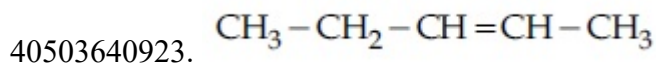
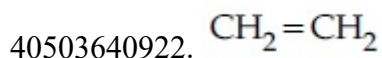
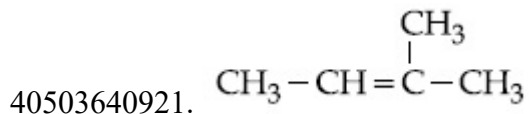
Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

निम्नलिखित अभिक्रियाओं में मुख्य उत्पाद [B] है :



Options :



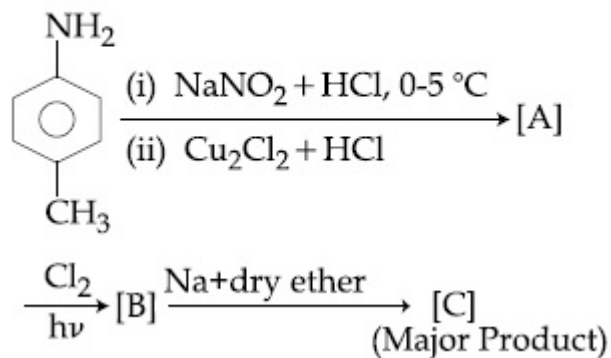
Question Number : 42 Question Id : 40503611272 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

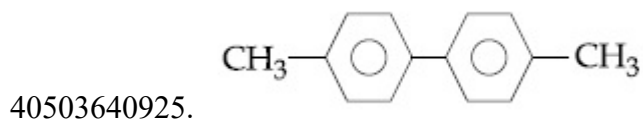
Orientation : Vertical

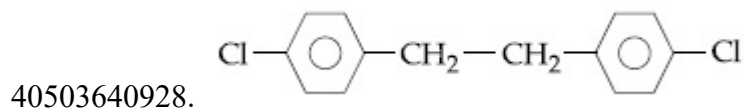
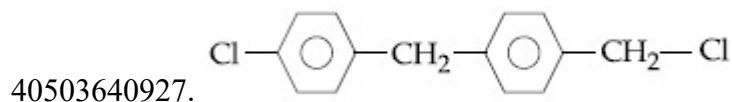
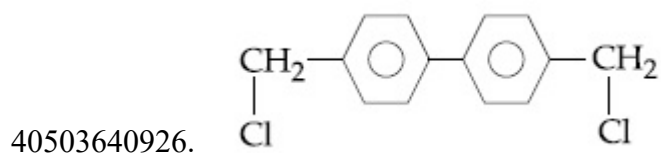
Correct Marks : 4 Wrong Marks : 1

In the following reaction sequence, [C] is :



Options :

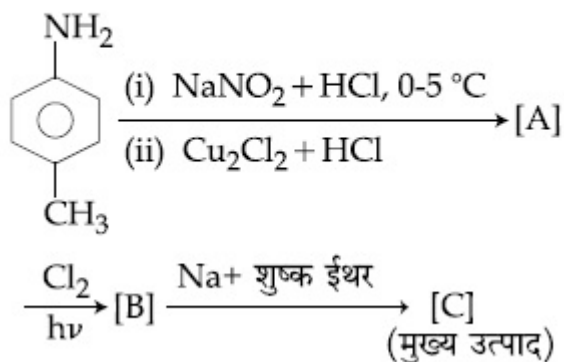




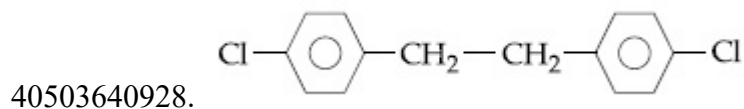
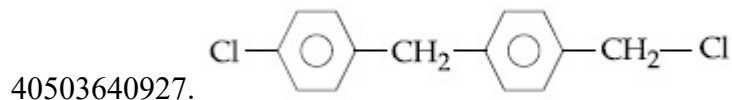
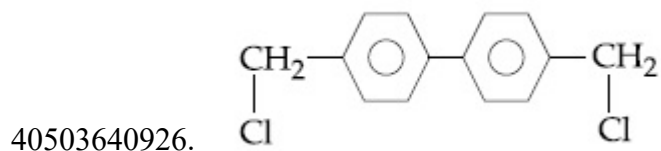
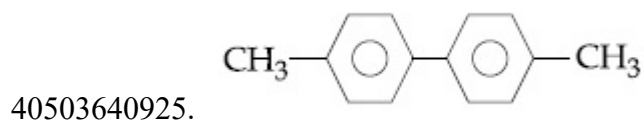
Question Number : 42 Question Id : 40503611272 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

निम्नलिखित अभिक्रिया अनुक्रम में, [C] है :



Options :



Question Number : 43 Question Id : 40503611273 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 mechanism of action of "Terfenadine"
(Seldane) is :

Options :

40503640929. Inhibits the secretion of histamine
40503640930. Helps in the secretion of histamine
40503640931. Activates the histamine receptor
40503640932. Inhibits the action of histamine receptor

Question Number : 43 Question Id : 40503611273 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

"टरफेनाडीन" (सेल्डेन) के कार्य करने की क्रियाविधि
है :

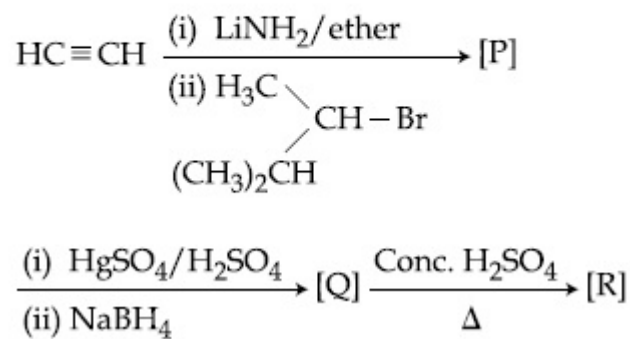
Options :

40503640929. हिस्टैमिन के स्त्राव को निरोधित करता है।
40503640930. हिस्टैमिन के स्त्राव में सहायता करता है।
40503640931. हिस्टैमिन-अभिग्राही को सक्रिय करता है।
40503640932. हिस्टैमिन-अभिग्राही की क्रिया को निरोधित करता है।

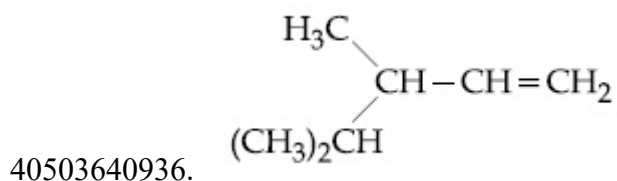
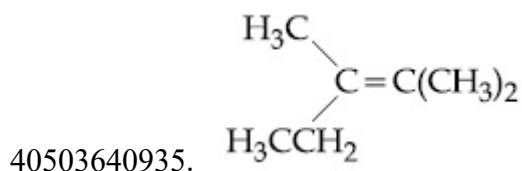
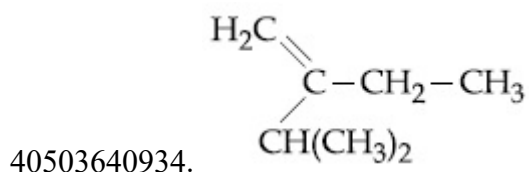
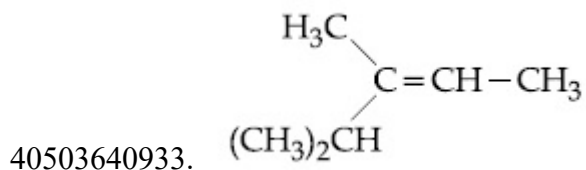
Question Number : 44 Question Id : 40503611274 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The major product [R] in the following sequence of reactions is :

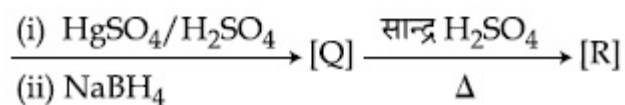
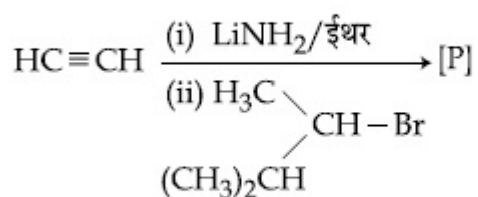


Options :

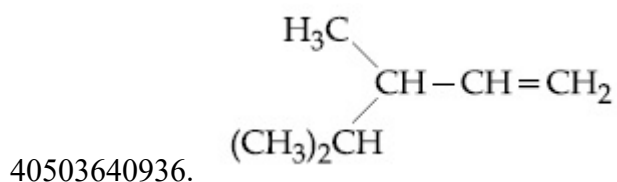
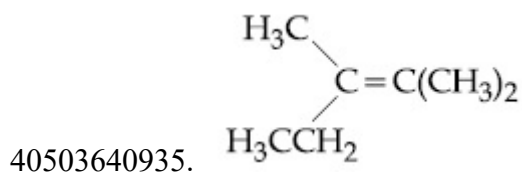
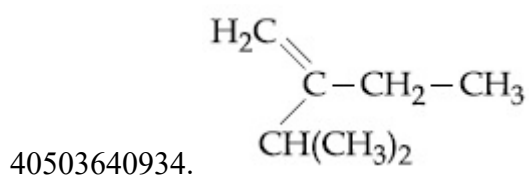
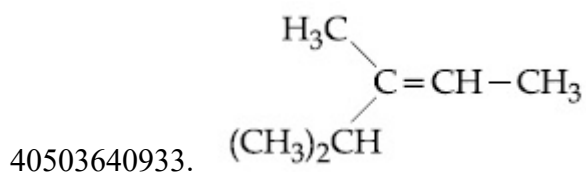


Question Number : 44 Question Id : 40503611274 Question Type : MCQ Option Shuffling : Yes
 Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option
 Orientation : Vertical
 Correct Marks : 4 Wrong Marks : 1

निम्नलिखित अभिक्रिया-अनुक्रम में मुख्य उत्पाद [R]
है :

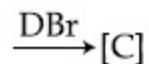
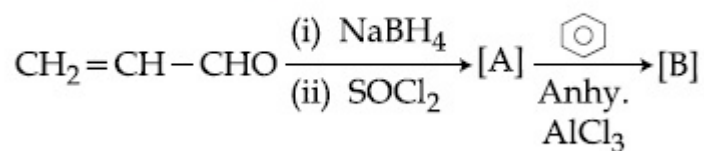


Options :

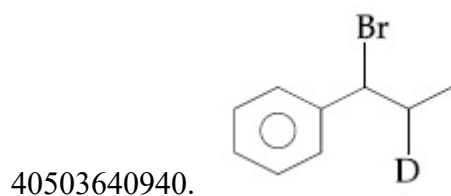
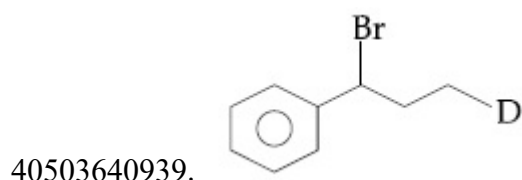
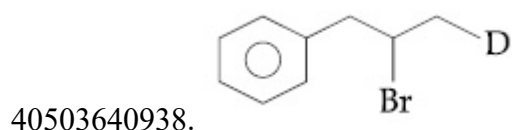
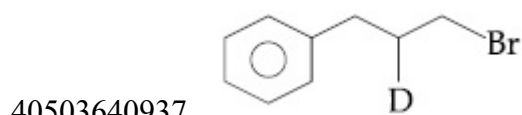


Question Number : 45 Question Id : 40503611275 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option
Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

The major product [C] of the following reaction sequence will be :



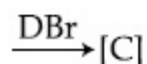
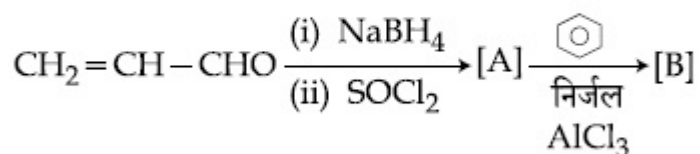
Options :



Question Number : 45 Question Id : 40503611275 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option
Orientation : Vertical

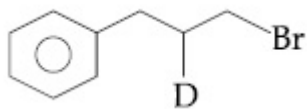
Correct Marks : 4 Wrong Marks : 1

निम्नलिखित अभिक्रिया-अनुक्रम में मुख्य उत्पाद [C]
है :

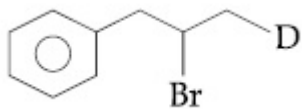


Options :

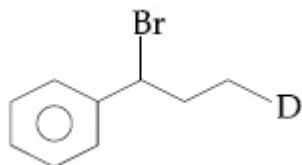
40503640937.



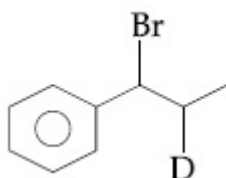
40503640938.



40503640939.



40503640940.



Sub-Section Number :

2

Sub-Section Id :

405036788

Question Shuffling Allowed :

Yes

Question Number : 46 Question Id : 40503611276 Question Type : SA Display Question Number : Yes

Correct Marks : 4 Wrong Marks : 0

A 100 mL solution was made by adding 1.43 g of $\text{Na}_2\text{CO}_3 \cdot x\text{H}_2\text{O}$. The normality of the solution is 0.1 N. The value of x is _____.

(The atomic mass of Na is 23 g/mol)

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 : 40503611276 Question Type : SA Display Question Number : Yes

Correct Marks : 4 Wrong Marks : 0

$\text{Na}_2\text{CO}_3 \cdot x\text{H}_2\text{O}$ के 1.43 g को मिलाकर 100 mL का एक विलयन बनाया गया। विलयन की नार्मलिटी 0.1 N है। x का मान है _____।
(Na की परमाणु संहति 23 g/mol 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

Question Number : 47 **Question Id :** 40503611277 **Question Type :** SA Display **Question Number :** Yes

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

The osmotic pressure of a solution of NaCl is 0.10 atm and that of a glucose solution is 0.20 atm. The osmotic pressure of a solution formed by mixing 1 L of the sodium chloride solution with 2 L of the glucose solution is $x \times 10^{-3}$ atm. x is _____. (nearest integer)

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 :** 40503611277 **Question Type :** SA Display **Question Number :** Yes

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

NaCl के एक विलयन का परासरण दाब 0.10 atm है तथा ग्लूकोस के एक विलयन का परासरण दाब 0.20 atm है। सोडियम क्लोराइड के विलयन के 1 L को ग्लूकोस के विलयन के 2 L में मिलाकर बनाये गये विलयन का परासरण दाब है $x \times 10^{-3}$ atm. x है _____ (निकटतम पूर्णांक)।

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 : 40503611278 Question Type : SA Display Question Number : Yes

Correct Marks : 4 Wrong Marks : 0

The number of molecules with energy greater than the threshold energy for a reaction increases five fold by a rise of temperature from 27 °C to 42 °C. Its energy of activation in J/mol is _____. (Take $\ln 5 = 1.6094$; $R = 8.314 \text{ J mol}^{-1}\text{K}^{-1}$)

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 : 40503611278 Question Type : SA Display Question Number : Yes

Correct Marks : 4 Wrong Marks : 0

एक अभिक्रिया में, अणुओं, जिनकी ऊर्जा, देहली ऊर्जा की अपेक्षा अधिक है, उसकी संख्या ताप के 27 °C से 42 °C तक बढ़ने से पाँच गुना बढ़ जाती है। इसकी सक्रियण ऊर्जा (J/mol में) है _____. (मानें, $\ln 5 = 1.6094$; $R = 8.314 \text{ J mol}^{-1}\text{K}^{-1}$)

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

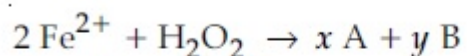
Possible Answers :

5 to 5.002

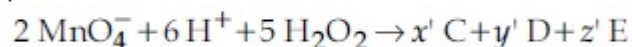
Question Number : 49 Question Id : 40503611279 Question Type : SA Display Question Number : Yes

Correct Marks : 4 Wrong Marks : 0

Consider the following equations :



(in basic medium)



(in acidic medium)

The sum of the stoichiometric coefficients x, y, x', y' and z' for products A, B, C, D and E, respectively, is _____.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

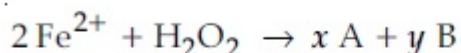
Possible Answers :

5 to 5.002

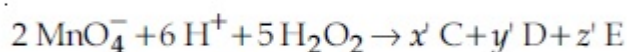
Question Number : 49 **Question Id :** 40503611279 **Question Type :** SA Display **Question Number :** Yes

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

निम्नलिखित समीकरणों पर विचार कीजिए :



(क्षारीय माध्यम में)



(अम्लीय माध्यम में)

A, B, C, D तथा E उत्पादों के लिए क्रमशः स्टाइकियोमित्री गुणांकों x, y, x', y' तथा z' का योग 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

Question Number : 50 **Question Id :** 40503611280 **Question Type :** SA Display **Question Number :** Yes

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

The number of chiral centres present in threonine 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 : 40503611280 Question Type : SA Display Question Number : Yes

Correct Marks : 4 Wrong Marks : 0

थ्रिऑनीन में उपस्थित काइरल केन्द्रों 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