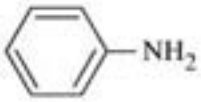
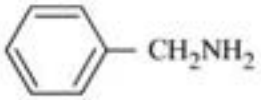
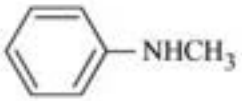
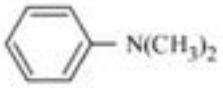
Q.1

Which of the following compounds possess the highest pk_b value?

1. 

2. 

3. 

4. 

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

Question Type : **MCQ**
Question ID : **4855841947**
Option 1 ID : **4855847785**
Option 2 ID : **4855847786**
Option 3 ID : **4855847787**
Option 4 ID : **4855847788**
Status : **Answered**
Chosen Option : **1**

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Q.2

Identify the incorrect statement about glucose.

1. Glucose exist as a 5-membered ring

2. It forms n-hexane on prolonged heating With HI

3. Acetylation of glucose takes place with acetic anhydride

4. It does not give 2,4-DNP test.

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

Question Type : **MCQ**
Question ID : **4855841933**
Option 1 ID : **4855847729**
Option 2 ID : **4855847730**
Option 3 ID : **4855847731**
Option 4 ID : **4855847732**
Status : **Answered**
Chosen Option : **1**

Q.3

Which of the following reagents can bring about the given conversion ?

3-Nitrobromobenzene to 3-Nitrobenzoic acid.

1. (a) Mg-dry ether (b) CO_2 (c) H^+ -H_2O

2. (a) KCN (b) H_3O^+

3. (a) $KMnO_4/OH^-$ (b) H^+ -H_2O

4. (a) CrO_3/H_2SO_4 followed by H^+ -H_2O

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

Question Type : **MCQ**
Question ID : **4855841931**
Option 1 ID : **4855847721**
Option 2 ID : **4855847722**
Option 3 ID : **4855847723**
Option 4 ID : **4855847724**
Status : **Not Answered**
Chosen Option : **--**

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Q.4

$[Ag(NH_3)_2]OH$ forms silver when it reacts with

1. CH_3CH_2OH
2. CH_3OCH_3
3. HCOOH
4. CH_3COCH_3

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

Question Type : **MCQ**
Question ID : **4855841927**
Option 1 ID : **4855847705**
Option 2 ID : **4855847706**
Option 3 ID : **4855847707**
Option 4 ID : **4855847708**
Status : **Answered**
Chosen Option : **3**

Q.5

Which of the following statements about hormones is not correct?

1. They are secreted in the blood stream or lymph by ductless glands
2. They stimulate the activity of certain organs
3. They may be proteins, steroids or amino acid derivatives
4. Insulin hormone regulates blood sugar level and is secreted by the pituitary gland

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

Question Type : **MCQ**
Question ID : **4855841948**
Option 1 ID : **4855847789**
Option 2 ID : **4855847790**
Option 3 ID : **4855847791**
Option 4 ID : **4855847792**
Status : **Answered**
Chosen Option : **3**

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Q.6

Which of the following does not belong to the first transition series?

1. Ni

2. Zn

3. Cr

4. Ag

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

Question Type : **MCQ**
Question ID : **4855841949**
Option 1 ID : **4855847793**
Option 2 ID : **4855847794**
Option 3 ID : **4855847795**
Option 4 ID : **4855847796**
Status : **Answered**
Chosen Option : **4**

Q.7

Match List I with List II

LIST I		LIST II	
A.	XeF_6	I.	Distorted octahedral
B.	XeO_3	II.	Square planar
C.	$XeOF_4$	III.	Pyramidal
D.	XeF_4	IV.	Square pyramidal

Choose the correct answer from the options given below:

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

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

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

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

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

Question Type : **MCQ**
Question ID : **4855841918**
Option 1 ID : **4855847669**
Option 2 ID : **4855847670**
Option 3 ID : **4855847671**
Option 4 ID : **4855847672**
Status : **Answered**
Chosen Option : **3**

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Q.8

Arrange the following compounds in the increasing order of their boiling points.

A. $CH_3CH_2CH_2COOH$
B. $CH_3CH_2CH_2CH_2OH$
C. $CH_3CH_2OCH_2CH_3$
D. $CH_3CH_2CH_2CH_3$
E. $CH_3CH_2CH_2CHO$

Choose the correct answer from the options given below:

1. D < E < C < B < A

2. D < C < E < B < A

3. D < B < A < C < E

4. D < B < A < E < C

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

Question Type : **MCQ**
Question ID : **4855841911**
Option 1 ID : **4855847641**
Option 2 ID : **4855847642**
Option 3 ID : **4855847643**
Option 4 ID : **4855847644**
Status : **Not Answered**
Chosen Option : **--**

Q.9

Identify the correct statement(s):

A. Bakelite and urea formaldehyde resin are elastomers
B. Poly amides like nylon 6, nylon 6,6 are the examples of fibres.
C. Polystyrene, polyvinyl and polythene are thermoplastic polymers
D. Thermoplastic polymers have intermdecular forces between elastomers and fibres.

Choose the correct answer from the options given below:

1. B, C and D only

2. A, B and C only

3. C, D and A only

4. B, C and A only

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

Question Type : **MCQ**
Question ID : **4855841926**
Option 1 ID : **4855847701**
Option 2 ID : **4855847702**
Option 3 ID : **4855847703**
Option 4 ID : **4855847704**
Status : **Answered**
Chosen Option : **4**

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Q.10

When a mixture of $K_2Cr_2O_7$ and NaCl is warmed with concentrated H_2SO_4, red vapours of (A) are evolved, which turn NaOH yellowish due to formation of compound (B). A and B respectively are:

1. A: $CrOCl_2$ and B: Na_2CrO_4
2. A: CrO_3 and B: $Na_2Cr_2O_7$
3. A: CrO_2Cl_2 and B: Na_2CrO_4
4. A: CrO_3 and B: $Na_2Cr_2O_4$

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

Question Type : **MCQ**
Question ID : **4855841932**
Option 1 ID : **4855847725**
Option 2 ID : **4855847726**
Option 3 ID : **4855847727**
Option 4 ID : **4855847728**
Status : **Not Answered**
Chosen Option : **--**

Q.11

Among the following statements on the nitration of aromatic compounds, the false one is:

1. The nitration of benzene is almost the same as that of hexadeutereo benzene
2. The rate of nitration of toulene is greater than that of benzene
3. The rate of nitration of benzene is greater than that of hexadeutereo benzene
4. Nitration is an electrophilic substitution reaction.

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

Question Type : **MCQ**
Question ID : **4855841929**
Option 1 ID : **4855847713**
Option 2 ID : **4855847714**
Option 3 ID : **4855847715**
Option 4 ID : **4855847716**
Status : **Answered**
Chosen Option : **4**

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Q.12

The correct statement(s) about O_3 is (are)

A. O — O bond length are equal
B. Thermal decomposition of O_3 is endothermic
C. O_3 is diamagnetic in nature
D. O_3 has bent structure

Choose the correct answer from the options given below:

1. A, C, D

2. A, B, D

3. B, C, D

4. A, B, C

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

Question Type : **MCQ**
Question ID : **4855841922**
Option 1 ID : **4855847685**
Option 2 ID : **4855847686**
Option 3 ID : **4855847687**
Option 4 ID : **4855847688**
Status : **Answered**
Chosen Option : **3**

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Q.13

Arrange the following in increasing order of their melting points.

A. H_2O
B. CCl_4
C. SiO_2
D. Mg
E. NaCl

Choose the correct answer from the options given below:

1. B < A < E < D < C

2. E < D < C < B < A

3. D < E < C < B < A

4. B < C < A < D < E

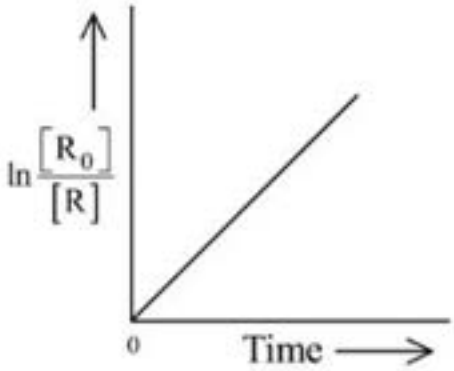
Options 1. 1
2. 2
3. 3
4. 4

Question Type : **MCQ**
Question ID : **4855841923**
Option 1 ID : **4855847689**
Option 2 ID : **4855847690**
Option 3 ID : **4855847691**
Option 4 ID : **4855847692**
Status : **Answered**
Chosen Option : **2**

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Q.14

For the graphical representation of a first order reaction



The slope of the straight line is

1. k
2. –k
3. $\frac{k}{2.303}$
4. $-\frac{k}{2.303}$

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

Question Type : **MCQ**
Question ID : **4855841915**
Option 1 ID : **4855847657**
Option 2 ID : **4855847658**
Option 3 ID : **4855847659**
Option 4 ID : **4855847660**
Status : **Answered**
Chosen Option : **3**

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Q.15

Physical adsorption of a gaseous species may change to chemical adsorption with

1. Decrease in temperature

2. Increase in temperature

3. Increase in surface area of adsorbent

4. Decrease in surface area of adsorbent

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

Question Type : **MCQ**
Question ID : **4855841928**
Option 1 ID : **4855847709**
Option 2 ID : **4855847710**
Option 3 ID : **4855847711**
Option 4 ID : **4855847712**
Status : **Answered**
Chosen Option : **2**

Q.16

Which of the following compound will not undergo Azo coupling reaction with benzene diazonium chloride?

1. Aniline

2. Nitrobenzene

3. Phenol

4. Anisole

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

Question Type : **MCQ**
Question ID : **4855841934**
Option 1 ID : **4855847733**
Option 2 ID : **4855847734**
Option 3 ID : **4855847735**
Option 4 ID : **4855847736**
Status : **Answered**
Chosen Option : **4**

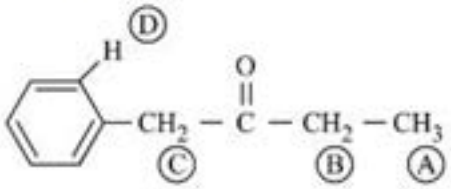
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Q.17

Among the following hydrogens which one is most acidic?



1. A

2. B

3. C

4. D

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

Question Type : **MCQ**
Question ID : **4855841914**
Option 1 ID : **4855847653**
Option 2 ID : **4855847654**
Option 3 ID : **4855847655**
Option 4 ID : **4855847656**
Status : **Answered**
Chosen Option : **4**

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Q.18

Match List I with List II

LIST I		LIST II	
A.	Haemoglobin	I.	Negatively charged sol
B.	Acid dye stuff	II.	Methylene blue sol
C.	Gold solution	III.	positively charged sol
D.	Basic dye stuff	IV.	Eosin

Choose the correct answer from the options given below:

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

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

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

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

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

Question Type : **MCQ**
Question ID : **4855841935**
Option 1 ID : **4855847737**
Option 2 ID : **4855847738**
Option 3 ID : **4855847739**
Option 4 ID : **4855847740**
Status : **Answered**
Chosen Option : **3**

Q.19

The rate constant for a first order reaction becomes 2 times when the temperature is raised from 310 K to 320 K. Then energy of activation for the reaction will be:

[log 2 = 0.3010]

1. 14.49 kJ mol
2. 41.71 kJ mol^{-1}
3. 40.39 kJ mol
4. 18.38 kJ mol^{-1}

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

Question Type : **MCQ**
Question ID : **4855841912**
Option 1 ID : **4855847645**
Option 2 ID : **4855847646**
Option 3 ID : **4855847647**
Option 4 ID : **4855847648**
Status : **Not Answered**
Chosen Option : **--**

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Q.20

Match List I with List II

LIST I (Complex species)		LIST II (Isomerism)	
A.	$[Co(NH_3)_4Cl_2]^+$	I.	Optical
B.	cis-$[Co(en)_2Cl_2]$	II.	Ionisation
C.	$[Co(NH_3)_5SO_4]Br$	III.	Coordination
D.	$[Co(NH_3)_6][Cr(CN)_6]$	IV.	Geometrical

Choose the correct answer from the options given below:

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

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

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

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

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

Question Type : **MCQ**
Question ID : **4855841913**
Option 1 ID : **4855847649**
Option 2 ID : **4855847650**
Option 3 ID : **4855847651**
Option 4 ID : **4855847652**
Status : **Answered**
Chosen Option : **3**

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Q.21

Dispersed phase and dispersion medium for fog are:

1. solid, liquid

2. liquid, liquid

3. liquid, gas

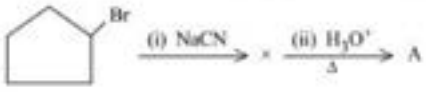
4. gas, liquid

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

Question Type : **MCQ**
Question ID : **4855841925**
Option 1 ID : **4855847697**
Option 2 ID : **4855847698**
Option 3 ID : **4855847699**
Option 4 ID : **4855847700**
Status : **Answered**
Chosen Option : **3**

Q.22

What will be the major product formed in the following reaction



1. 

2. 

3. 

4. 

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

Question Type : **MCQ**
Question ID : **4855841938**
Option 1 ID : **4855847749**
Option 2 ID : **4855847750**
Option 3 ID : **4855847751**
Option 4 ID : **4855847752**
Status : **Not Answered**
Chosen Option : **--**

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Q.23

What will happen during the electrolysis of aqueous solution of $CuSO_4$ by using platinum electrodes ?

A. Copper will deposit at cathode.
B. Copper will deposit at anode.
C. Oxygen will be released at anode
D. Oxygen will be released at cathode.

Choose the correct answer from the options given below:

1. B and D

2. C and D

3. A and C

4. B and C

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

Question Type : **MCQ**
Question ID : **4855841943**
Option 1 ID : **4855847769**
Option 2 ID : **4855847770**
Option 3 ID : **4855847771**
Option 4 ID : **4855847772**
Status : **Answered**
Chosen Option : **3**

Q.24

Match List I with List II

LIST I		LIST II	
A.	Triclinic	I.	$BaSO_4$
B.	Monoclinic	II.	$K_2Cr_2O_7$
C.	Rhombohedral	III.	$Na_2SO_4.10H_2O$
D.	Orthorhombic	IV.	$CaCO_3$

Choose the correct answer from the options given below:

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

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

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

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

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

Question Type : **MCQ**
Question ID : **4855841940**
Option 1 ID : **4855847757**
Option 2 ID : **4855847758**
Option 3 ID : **4855847759**
Option 4 ID : **4855847760**
Status : **Not Answered**
Chosen Option : **--**

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Q.25

In the complex ions $[Fe(C_2O_4)_3]^{3-}$. The coordination number of Fe is:

1. 6
2. 3
3. 4
4. 2

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

Question Type : **MCQ**
Question ID : **4855841917**
Option 1 ID : **4855847665**
Option 2 ID : **4855847666**
Option 3 ID : **4855847667**
Option 4 ID : **4855847668**
Status : **Answered**
Chosen Option : **3**

Q.26

Match List I with List II

LIST I		LIST II	
A.	Anti-histamines	I.	Meprobamate
B.	Tranquilizers	II.	Arsphenamine
C.	Antifertility drugs	III.	Seldane
D.	Antibiotics	IV.	Norethindrone

Choose the correct answer from the options given below:

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

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

Question Type : **MCQ**
Question ID : **4855841916**
Option 1 ID : **4855847661**
Option 2 ID : **4855847662**
Option 3 ID : **4855847663**
Option 4 ID : **4855847664**
Status : **Not Answered**
Chosen Option : **--**

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Q.27

Equilibrium constant is 2×10^{37} at 298K for $Zn(s) + Cu^{2+}(aq) \rightarrow Zn^{2+}(aq) + Cu(s)$. Predict the spontaneity of cell and calculate E°_{cell}. [log 2 = 0.3010]

1. Spontaneous, 1.103 V
2. Non spontaneous, 1.103 V
3. Spontaneous, 2.206 V
4. Non spontaneous, 2.206 V

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

Question Type : **MCQ**
Question ID : **4855841921**
Option 1 ID : **4855847681**
Option 2 ID : **4855847682**
Option 3 ID : **4855847683**
Option 4 ID : **4855847684**
Status : **Not Answered**
Chosen Option : **--**

Q.28

In the extraction of Al metal from Bauxite ore, the correct sequence of various processes involved is :

A. Heating the ore to remove volatile impurities.
B. Electrolysis of molten ore-mixture
C. Leaching of alumina with concentrated NaOH
D. Grading and crushing of big ore particles.
E. Mixing alumina with CaF_2 or Na_3AlF_6

Choose the correct answer from the options given below:

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

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

Question Type : **MCQ**
Question ID : **4855841939**
Option 1 ID : **4855847753**
Option 2 ID : **4855847754**
Option 3 ID : **4855847755**
Option 4 ID : **4855847756**
Status : **Not Answered**
Chosen Option : **--**

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Q.29

Complete the reaction

$NH_2CONH_2 + H_2O \rightarrow$

1. NO, H_2O, CO

2. N_2O, CO_2, H_2O

3. HNO_3, CO_2

4. NH_3, CO_2, H_2O

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

Question Type : **MCQ**
Question ID : **4855841950**
Option 1 ID : **4855847797**
Option 2 ID : **4855847798**
Option 3 ID : **4855847799**
Option 4 ID : **4855847800**
Status : **Answered**
Chosen Option : **4**

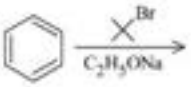
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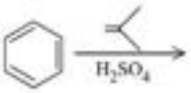
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Q.30

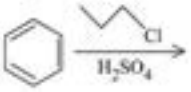
Among the following reaction(s) which gives (give) tert-butylbenzene as the major product

A. 

B. 

C. 

D. 

E. 

Choose the correct answer from the options given below:

1. B, C and D

2. A, C and D

3. A, D and E

4. B, D and E

Options 1. 1

2. 2

3. 3

4. 4

Question Type : **MCQ**
Question ID : **4855841942**
Option 1 ID : **4855847765**
Option 2 ID : **4855847766**
Option 3 ID : **4855847767**
Option 4 ID : **4855847768**
Status : **Not Answered**
Chosen Option : --

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Q.31

Match List I with List II

	LIST I		LIST II
A.	Benzophenone → Diphenylmethane	I.	$LiAlH_4$
B.	Benzaldehyde → 1-phenylethanol	II.	DIBAL-H
C.	Cyclohexanone → Cyclohexanol	III.	NH_2NH_2, KOH
D.	Methylbenzoate → Benzaldehyde	IV.	CH_3MgBr, H_2O

Choose the correct answer from the options given below:

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

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

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

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

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

Question Type : **MCQ**
Question ID : **4855841919**
Option 1 ID : **4855847673**
Option 2 ID : **4855847674**
Option 3 ID : **4855847675**
Option 4 ID : **4855847676**
Status : **Not Answered**
Chosen Option : --

Q.32

Units of molar conductance is:

1. ohm cm^{-2} mol^{-1}

2. ohm^{-1} cm mol^{-2}

3. ohm cm^2 mol^{-1}

4. ohm^{-1} cm^2 mol^{-1}

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

Question Type : **MCQ**
Question ID : **4855841937**
Option 1 ID : **4855847745**
Option 2 ID : **4855847746**
Option 3 ID : **4855847747**
Option 4 ID : **4855847748**
Status : **Answered**
Chosen Option : **3**

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Q.33

Which of the following statements are correct ?

A. CuI_2 is not known

B. Cu_2I_2 is known

C. Cu^{2+} ion oxidises I^- to I_2

D. Cu^{2+} ion doesnot oxidise I^- to I_2

1. B and C only

2. A, C and D only

3. B, C and D only

4. A, B, C and D only

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

Question Type : **MCQ**
Question ID : **4855841941**
Option 1 ID : **4855847761**
Option 2 ID : **4855847762**
Option 3 ID : **4855847763**
Option 4 ID : **4855847764**
Status : **Not Answered**
Chosen Option : --

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Q.34

Match List I with List II

LIST I		LIST II	
A.	Hall Heroult process	I.	$Ni + 4CO \xrightarrow{350K} Ni(CO)_4 \xrightarrow{\Delta, 450K} Ni + 4CO$
B.	Mond process	II.	$Zr + 2I_2 \rightarrow ZrI_4$
C.	Leaching	III.	$4Au + 8CN^- + 2H_2O + O_2 \rightarrow 4[Au(CN)_2]^- + 4OH^-$
D.	Van Arkel method	IV.	$2Al_2O_3 + 3C \rightarrow 4Al + 3CO_2$

Choose the correct answer from the options given below:

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

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

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

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

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

Question Type : **MCQ**
Question ID : **4855841920**
Option 1 ID : **4855847677**
Option 2 ID : **4855847678**
Option 3 ID : **4855847679**
Option 4 ID : **4855847680**
Status : **Not Answered**
Chosen Option : --

Q.35

Which of the following oxides is most basic?

1. Mn_2O_7

2. Mn_2O_3

3. MnO_2

4. MnO

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

Question Type : **MCQ**
Question ID : **4855841946**
Option 1 ID : **4855847781**
Option 2 ID : **4855847782**
Option 3 ID : **4855847783**
Option 4 ID : **4855847784**
Status : **Not Answered**
Chosen Option : --

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Q.36

During the process of digestion, the proteins present in food material are hydrolysed to amino acid. The two enzymes involved in the process are:

Proteins $\xrightarrow[(A)]{\text{enzyme}}$ Polypeptides $\xrightarrow[(B)]{\text{enzyme}}$ aminoacids

1. invertase and zymase
2. amylase and maltose
3. diatase and lipase
4. pepsin and tripsin

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

Question Type : **MCQ**
Question ID : **4855841945**
Option 1 ID : **4855847777**
Option 2 ID : **4855847778**
Option 3 ID : **4855847779**
Option 4 ID : **4855847780**
Status : **Answered**
Chosen Option : **3**

Q.37

A brown ring is formed in the ring test for NO_3^- ion. It is due to the formation of:

1. $[Fe(H_2O)_4(NO)_2]^{2+}$
2. $[Fe(H_2O)_5(NO)]^{2+}$
3. $FeSO_4.NO_2$
4. $FeSO_4.HNO_3$

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

Question Type : **MCQ**
Question ID : **4855841944**
Option 1 ID : **4855847773**
Option 2 ID : **4855847774**
Option 3 ID : **4855847775**
Option 4 ID : **4855847776**
Status : **Answered**
Chosen Option : **2**

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Q.38

Which of the following statements are correct?

A. F_2 is less reactive than ClF
B. F_2 is more reactive than ClF
C. F–F bond is weaker than Cl–F bond
D. F–F bond is stronger than Cl–F bond

Choose the correct answer from the options given below:

1. A, B and C only

2. B and D only

3. B, C and D only

4. B and C only

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

Question Type : **MCQ**
Question ID : **4855841924**
Option 1 ID : **4855847693**
Option 2 ID : **4855847694**
Option 3 ID : **4855847695**
Option 4 ID : **4855847696**
Status : **Answered**
Chosen Option : **2**

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Q.39

Match List I with List II

LIST I		LIST II	
A.	Elementary reactions	I.	No energy of activation
B.	Complex reactions	II.	Single step
C.	Free radical combination	III.	High energy of activation
D.	Slow reactions	IV.	Several elementary steps

Choose the correct answer from the options given below:

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

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

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

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

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

Question Type : **MCQ**
Question ID : **4855841930**
Option 1 ID : **4855847717**
Option 2 ID : **4855847718**
Option 3 ID : **4855847719**
Option 4 ID : **4855847720**
Status : **Answered**
Chosen Option : **3**

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Q.40

Match List I with List II

LIST I		LIST II	
A.	$[Co(NH_3)_6]^{3+}$	I.	sp^3
B.	$[CoF_6]^{3-}$	II.	dsp^2
C.	$[NiCl_4]^{2-}$	III.	d^2sp^3
D.	$[Ni(CN)_4]^{2-}$	IV.	sp^3d^2

Choose the correct answer from the options given below:

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

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

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

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

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

Question Type : **MCQ**
Question ID : **4855841936**
Option 1 ID : **4855847741**
Option 2 ID : **4855847742**
Option 3 ID : **4855847743**
Option 4 ID : **4855847744**
Status : **Not Answered**
Chosen Option : --

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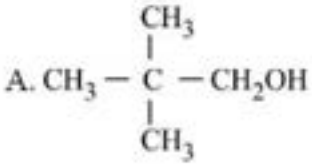
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Q.41

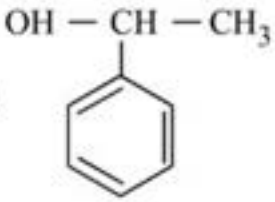
Benzene ring in phenol is expected to give the characteristic substitution or replacement reactions i.e. halogenation, nitration, sulphonation, alkylation etc. In these reactions, the attacking reagent is electrophile. The phenolic group activates the ortho and para positions in the ring due to conjugation. Disubstitution reactions are quite fast as the electron density in the ring has increased considerably. Phenols do not respond to nucleophilic substitution reactions as it is influenced by phenolic group.

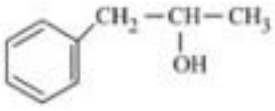
Secondary alcohol among the following is:

A. 

B. $H_2C{=}CH_2{-}CH_2OH$

C. $H_3C{-}CH_2{-}CH_2OH$

D. 

E. 

Choose the correct answer from the options given below:

1. D and E only

2. D and B only

3. B and C only

4. A and D only

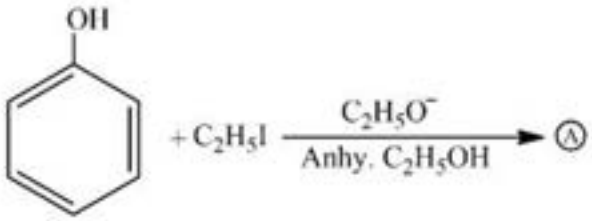
Options 1. 1
2. 2
3. 3
4. 4

Question Type : **MCQ**
Question ID : **4855841951**
Option 1 ID : **4855847801**
Option 2 ID : **4855847802**
Option 3 ID : **4855847803**
Option 4 ID : **4855847804**
Status : **Not Answered**
Chosen Option : --

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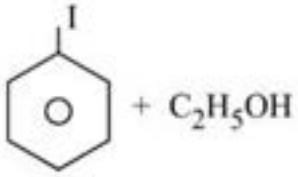
Q.42

Benzene ring in phenol is expected to give the characteristic substitution or replacement reactions i.e. halogenation, nitration, sulphonation, alkylation etc. In these reactions, the attacking reagent is electrophile. The phenolic group activates the ortho and para positions in the ring due to conjugation. Disubstitution reactions are quite fast as the electron density in the ring has increased considerably. Phenols do not respond to nucleophilic substitution reactions as it is influenced by phenolic group.



(A) is :

1. $C_2H_5OC_2H_5$

2. 

3. $C_6H_5OC_2H_5$

4. $C_6H_5OC_6H_5$

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

Question Type : **MCQ**
Question ID : **4855841952**
Option 1 ID : **4855847805**
Option 2 ID : **4855847806**
Option 3 ID : **4855847807**
Option 4 ID : **4855847808**
Status : **Not Answered**
Chosen Option : **--**

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Q.43

Benzene ring in phenol is expected to give the characteristic substitution or replacement reactions i.e. halogenation, nitration, sulphonation, alkylation etc. In these reactions, the attacking reagent is electrophile. The phenolic group activates the ortho and para positions in the ring due to conjugation. Disubstitution reactions are quite fast as the electron density in the ring has increased considerably. Phenols do not respond to nucleophilic substitution reactions as it is influenced by phenolic group.

Victor meyer test gives following observations
Match List I with List II

LIST I		LIST II	
A.	Blood red colouration	I.	Tertiary alcohol
B.	Blue colouration	II.	Phenols
C.	Colourless solution	III.	Primary alcohol
D.	Violet colouration with $FeCl_3$	IV.	Secondary alcohol

Choose the correct answer from the options given below:

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

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

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

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

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

Question Type : **MCQ**
Question ID : **4855841953**
Option 1 ID : **4855847809**
Option 2 ID : **4855847810**
Option 3 ID : **4855847811**
Option 4 ID : **4855847812**
Status : **Answered**
Chosen Option : **3**

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Q.44

Benzene ring in phenol is expected to give the characteristic substitution or replacement reactions i.e. halogenation, nitration, sulphonation, alkylation etc. In these reactions, the attacking reagent is electrophile. The phenolic group activates the ortho and para positions in the ring due to conjugation. Disubstitution reactions are quite fast as the electron density in the ring has increased considerably. Phenols do not respond to nucleophilic substitution reactions as it is influenced by phenolic group.

Picric acid is very strong acid due to presence of :

1. COOH group
2. Three NO_2 groups
3. H^+ group
4. OH group

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

Question Type : **MCQ**
Question ID : **4855841954**
Option 1 ID : **4855847813**
Option 2 ID : **4855847814**
Option 3 ID : **4855847815**
Option 4 ID : **4855847816**
Status : **Answered**
Chosen Option : **3**

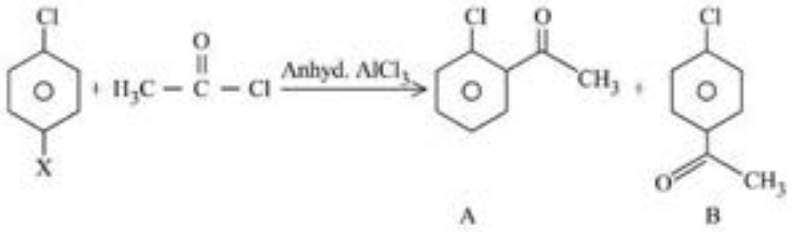
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Q.45

Benzene ring in phenol is expected to give the characteristic substitution or replacement reactions i.e. halogenation, nitration, sulphonation, alkylation etc. In these reactions, the attacking reagent is electrophile. The phenolic group activates the ortho and para positions in the ring due to conjugation. Disubstitution reactions are quite fast as the electron density in the ring has increased considerably. Phenols do not respond to nucleophilic substitution reactions as it is influenced by phenolic group.



Minor product in above reaction is:

1. A
2. B
3. A and B in same quantity
4. Depends on quantity of X

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

Question Type : **MCQ**
Question ID : **4855841955**
Option 1 ID : **4855847817**
Option 2 ID : **4855847818**
Option 3 ID : **4855847819**
Option 4 ID : **4855847820**
Status : **Not Answered**
Chosen Option : --

Q.46

Osmotic pressure measurements are less accurate and difficult to carry out. Therefore, this method is not useful for measuring molecular weights. But it is used to find out molecular weights of polymers eg. plastics, proteins and starch having many monomer units. Knowing the value of osmotic pressure of a given solution, molecular weight of the solute can be calculated using Van't Hoff equation.

An aqueous solution of salt contains 20 g of NaCl per liter. The pressure of solution at 35 °C will be:

1. 8.622 atm
2. 7.398 atm
3. 2.79 atm
4. 4.43 atm

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

Question Type : **MCQ**
Question ID : **4855841956**
Option 1 ID : **4855847821**
Option 2 ID : **4855847822**
Option 3 ID : **4855847823**
Option 4 ID : **4855847824**
Status : **Not Answered**
Chosen Option : --

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Q.47

Osmotic pressure measurements are less accurate and difficult to carry out. Therefore, this method is not useful for measuring molecular weights. But it is used to find out molecular weights of polymers eg. plastics, proteins and starch having many monomer units. Knowing the value of osmotic pressure of a given solution, molecular weight of the solute can be calculated using Van't Hoff equation.

When osmotic pressure and temperature for two solutions are same, equal volumes of solutions would contain same number of:

1. Moles of solute
2. Moles of solvent
3. Moles of solution
4. Molecules of solutions

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

Question Type : **MCQ**
Question ID : **4855841957**
Option 1 ID : **4855847825**
Option 2 ID : **4855847826**
Option 3 ID : **4855847827**
Option 4 ID : **4855847828**
Status : **Not Answered**
Chosen Option : **--**

Q.48

Osmotic pressure measurements are less accurate and difficult to carry out. Therefore, this method is not useful for measuring molecular weights. But it is used to find out molecular weights of polymers eg. plastics, proteins and starch having many monomer units. Knowing the value of osmotic pressure of a given solution, molecular weight of the solute can be calculated using Van't Hoff equation.

A solution which shows deviations from Roult's law is called :

1. Ideal solution
2. Real solution
3. Saturated solution
4. Uniform solution

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

Question Type : **MCQ**
Question ID : **4855841958**
Option 1 ID : **4855847829**
Option 2 ID : **4855847830**
Option 3 ID : **4855847831**
Option 4 ID : **4855847832**
Status : **Answered**
Chosen Option : **1**

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Q.49

Osmotic pressure measurements are less accurate and difficult to carry out. Therefore, this method is not useful for measuring molecular weights. But it is used to find out molecular weights of polymers eg: plastics, proteins and starch having many monomer units. Knowing the value of osmotic pressure of a given solution, molecular weight of the solute can be calculated using Van't Hoff equation.

Determine the molarity of a solution containing 4 g of NaOH in 1L solution

1. 4 M
2. 100 M
3. 0.1 M
4. 0.4 M

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

Question Type : **MCQ**
Question ID : **4855841959**
Option 1 ID : **4855847833**
Option 2 ID : **4855847834**
Option 3 ID : **4855847835**
Option 4 ID : **4855847836**
Status : **Not Answered**
Chosen Option : --

Q.50

Osmotic pressure measurements are less accurate and difficult to carry out. Therefore, this method is not useful for measuring molecular weights. But it is used to find out molecular weights of polymers eg: plastics, proteins and starch having many monomer units. Knowing the value of osmotic pressure of a given solution, molecular weight of the solute can be calculated using Van't Hoff equation.

In a nearly saturated solution, which of the following statements are correct?

A. If dissolution process is endothermic, solubility increases with increase in temperature.
B. If dissolution process is endothermic, solubility decreases with increase in temperature.
C. If dissolution process is exothermic, solubility decreases with increase in temperature.
D. If dissolution process is exothermic, solubility increases with increase in temperature.

Choose the correct answer from the options given below:

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

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

Question Type : **MCQ**
Question ID : **4855841960**
Option 1 ID : **4855847837**
Option 2 ID : **4855847838**
Option 3 ID : **4855847839**
Option 4 ID : **4855847840**
Status : **Answered**
Chosen Option : **3**

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Q.1

Which of the following ion is colourless?

1. Zn^{2+}

2. Ti^{3+}

3. Mn^{3+}

4. Cr^{3+}

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

Question Type : **MCQ**
Question ID : **48558420246**
Option 1 ID : **48558480981**
Option 2 ID : **48558480982**
Option 3 ID : **48558480983**
Option 4 ID : **48558480984**
Status : **Answered**
Chosen Option : **2**

Q.2

निम्न में से कौनसे यौगिकों को स्वचलित वाहनों के रेडिएटर में शीतलन की तरह प्रयोग कर सकते हैं?

1. मेथिल ऐल्कोहॉल

2. ग्लाइकॉल

3. नाइट्रोफीनॉल

4. एथिल ऐल्कोहॉल

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

Question Type : **MCQ**
Question ID : **48558420243**
Option 1 ID : **48558480969**
Option 2 ID : **48558480970**
Option 3 ID : **48558480971**
Option 4 ID : **48558480972**
Status : **Not Answered**
Chosen Option : **--**

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Q.3

Process of zone refining is used in the purification of

1. Al

2. Cu

3. Ge

4. Ag

Options 1. 1

2. 2

3. 3

4. 4

Question Type : **MCQ**
Question ID : **48558420223**
Option 1 ID : **48558480889**
Option 2 ID : **48558480890**
Option 3 ID : **48558480891**
Option 4 ID : **48558480892**
Status : **Answered**
Chosen Option : **3**

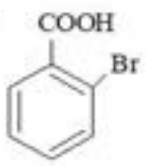
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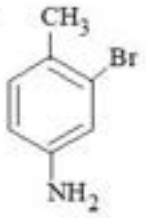
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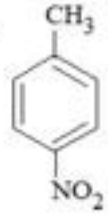
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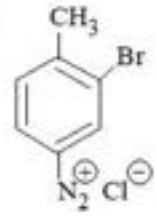
Q.4

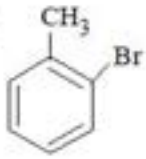
Correct sequence of conversion of 4-nitrotoluene to 2-bromobenzoic acid is

A. 

B. 

C. 

D. 

E. 

Choose the correct answer from the options given below:

1. C→B→D→E→A
2. B→C→D→E→A
3. A→B→C→D→E
4. C→D→E→B→A

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

Question Type : **MCQ**
Question ID : **48558420238**
Option 1 ID : **48558480949**
Option 2 ID : **48558480950**
Option 3 ID : **48558480951**
Option 4 ID : **48558480952**
Status : **Answered**
Chosen Option : **1**

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Q.5

Chlorine containing antibiotic produced by soil microorganisms which is effective for the treatment of typhoid fever is:

1. Chloroquine
2. Chloramphenicol
3. Halothane
4. Tetra chloromethane

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

Question Type : **MCQ**
Question ID : **48558420213**
Option 1 ID : **48558480849**
Option 2 ID : **48558480850**
Option 3 ID : **48558480851**
Option 4 ID : **48558480852**
Status : **Not Answered**
Chosen Option : **--**

Q.6

What is the order of hydrolysis of methyl acetate in acidic medium ?

1. Zero order
2. Pseudo First order
3. First order
4. Second order

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

Question Type : **MCQ**
Question ID : **48558420241**
Option 1 ID : **48558480961**
Option 2 ID : **48558480962**
Option 3 ID : **48558480963**
Option 4 ID : **48558480964**
Status : **Answered**
Chosen Option : **2**

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Q.7

According to the Raoult's law, vapour pressure of a solution is directly proportional to:

1. Mole fraction
2. Part per million
3. Mass percentage
4. Molality

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

Question Type : **MCQ**
Question ID : **48558420214**
Option 1 ID : **48558480853**
Option 2 ID : **48558480854**
Option 3 ID : **48558480855**
Option 4 ID : **48558480856**
Status : **Answered**
Chosen Option : **1**

Q.8

Match List I with List II

	LIST I		LIST II
A.	Mg in solid state	I.	p-type Semiconductor
B.	$MgCl_2$ in molten state	II.	n-type Semiconductor
C.	Silicon with phosphorus	III.	Electrolytic Conductor
D.	Germanium with boron	IV.	Electronic Conductor

Choose the correct answer from the options given below:

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

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

Question Type : **MCQ**
Question ID : **48558420211**
Option 1 ID : **48558480841**
Option 2 ID : **48558480842**
Option 3 ID : **48558480843**
Option 4 ID : **48558480844**
Status : **Answered**
Chosen Option : **4**

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Q.9

Reaction occurring at cathode is

$HgO + H_2O + 2e^- \longrightarrow Hg(l) + 2\,OH^-$

Above reaction is found in :

1. Leclanche cell
2. Mercury cell
3. Fuel cell
4. Ni-Cd-cell

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

Question Type : **MCQ**
Question ID : **48558420244**
Option 1 ID : **48558480973**
Option 2 ID : **48558480974**
Option 3 ID : **48558480975**
Option 4 ID : **48558480976**
Status : **Answered**
Chosen Option : **1**

Q.10

Insulin is the example of

1. Peptide Hormones
2. Amino acid derived hormones
3. Steroidal hormones
4. Adrenal Cortical hormones

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

Question Type : **MCQ**
Question ID : **48558420234**
Option 1 ID : **48558480933**
Option 2 ID : **48558480934**
Option 3 ID : **48558480935**
Option 4 ID : **48558480936**
Status : **Answered**
Chosen Option : **2**

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Q.11

Yellow colour in NaCl is due to

1. Schottky defect

2. Metal excess defect due to anionic vacancies

3. Frenkel defect

4. Metal deficiency defect

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

Question Type : **MCQ**
Question ID : **48558420222**
Option 1 ID : **48558480885**
Option 2 ID : **48558480886**
Option 3 ID : **48558480887**
Option 4 ID : **48558480888**
Status : **Answered**
Chosen Option : **3**

Q.12

20 g of a binary electrolyte (Molecular mass = 100) are dissolved in 500 g of water. The freezing point of the solution is $-0.74^{\circ}C$ and k_f is 1.86 K kg mol^{-1}. The degree of ionisation of electrolyte is:

1. 0.5

2. 0.75

3. 1.0

4. 0.0

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

Question Type : **MCQ**
Question ID : **48558420216**
Option 1 ID : **48558480861**
Option 2 ID : **48558480862**
Option 3 ID : **48558480863**
Option 4 ID : **48558480864**
Status : **Not Answered**
Chosen Option : **--**

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Q.13

$[Cu(en)_2]^{2+}$ is more stable than $[Cu(NH_3)_4]^{2+}$ because

1. It is a heteroleptic complex
2. Ethylene diamine has an alkyl group
3. Copper in +2 oxidation state is more stable
4. Ligand is didentate and form chelate complex

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

Question Type : **MCQ**
Question ID : **48558420224**
Option 1 ID : **48558480893**
Option 2 ID : **48558480894**
Option 3 ID : **48558480895**
Option 4 ID : **48558480896**
Status : **Answered**
Chosen Option : **4**

Q.14

Alum helps in purifying water by :

A. Coagulation of mud particles
B. Sedimentation of mud particles.
C. Dialysis
D. forming true solution with water

1. A & C only
2. A & D only
3. B & C only
4. A & B only

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

Question Type : **MCQ**
Question ID : **48558420219**
Option 1 ID : **48558480873**
Option 2 ID : **48558480874**
Option 3 ID : **48558480875**
Option 4 ID : **48558480876**
Status : **Answered**
Chosen Option : **2**

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Q.15

Match List I with List II

LIST I		LIST II	
A.	Cr^{3+}	I.	d^3 configuration
B.	Mn^{4+}	II.	d^{10} configuration
C.	Cu^{+}	III.	Paramagnetic
D.	Ti^{4+}	IV.	Diamagnetic

Choose the correct answer from the options given below:

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

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

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

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

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

Question Type : **MCQ**
Question ID : **48558420226**
Option 1 ID : **48558480901**
Option 2 ID : **48558480902**
Option 3 ID : **48558480903**
Option 4 ID : **48558480904**
Status : **Answered**
Chosen Option : **3**

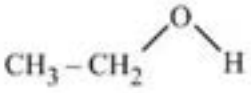
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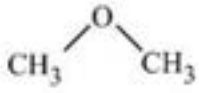
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Q.16

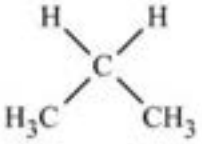
Arrange the following in decreasing order of their boiling point



(I)



(II)



(III)

1. I > II > III
2. II > III > I
3. III > I > II
4. II > I > III

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

Question Type : **MCQ**
Question ID : **48558420245**
Option 1 ID : **48558480977**
Option 2 ID : **48558480978**
Option 3 ID : **48558480979**
Option 4 ID : **48558480980**
Status : **Answered**
Chosen Option : **3**

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Q.17

Match List I with List II

	LIST I		LIST II
A.	Artificial Sweetner	I.	Furacine
B.	Antihistamines	II.	Non-narcotic
C.	Aspirin	III.	Alitame
D.	Antiseptics	IV.	Terfenadine

Choose the correct answer from the options given below:

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

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

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

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

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

Question Type : **MCQ**
Question ID : **48558420221**
Option 1 ID : **48558480881**
Option 2 ID : **48558480882**
Option 3 ID : **48558480883**
Option 4 ID : **48558480884**
Status : **Not Answered**
Chosen Option : --

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Q.18

In the following sequence of reaction :

$$CH_3Br \xrightarrow{KCN} A \xrightarrow{H_3O^+} B \xrightarrow[ether]{LiAlH_4} C$$

The end product (C) is

1. Acetone
2. Methane
3. Acetaldehyde
4. Ethyl alcohol

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

Question Type : **MCQ**
Question ID : **48558420218**
Option 1 ID : **48558480869**
Option 2 ID : **48558480870**
Option 3 ID : **48558480871**
Option 4 ID : **48558480872**
Status : **Answered**
Chosen Option : **4**

Q.19

Which is not the limitation of valence bond theory involving coordination compound.

1. It involves a number of assumptions
2. It does not give quantitative interpretation of magnetic data
3. It does not distinguish between weak & strong ligands
4. It does not explain the formation of coordination compounds

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

Question Type : **MCQ**
Question ID : **48558420250**
Option 1 ID : **48558480997**
Option 2 ID : **48558480998**
Option 3 ID : **48558480999**
Option 4 ID : **48558481000**
Status : **Answered**
Chosen Option : **1**

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Q.20

A solution of $CuSO_4$ is electrolysed for 10 minutes using a current of 1.5 amperes. (1 mol of Cu = 63 g). How much copper is deposited at cathode. 1F = 96487 $Cmol^{-1}$

1. 0.2938 g
2. 2.938 g
3. 29.38 g
4. 0.02938 g

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

Question Type : **MCQ**
Question ID : **48558420247**
Option 1 ID : **48558480985**
Option 2 ID : **48558480986**
Option 3 ID : **48558480987**
Option 4 ID : **48558480988**
Status : **Not Answered**
Chosen Option : --

Q.21

Match List I with List II

LIST I		LIST II	
A.	Lanthanum	I.	+3, +4
B.	Praseodymium	II.	+3
C.	Neodymium	III.	+2, +3, +4
D.	Samarium	IV.	+2, +3

Choose the correct answer from the options given below:

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

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

Question Type : **MCQ**
Question ID : **48558420248**
Option 1 ID : **48558480989**
Option 2 ID : **48558480990**
Option 3 ID : **48558480991**
Option 4 ID : **48558480992**
Status : **Not Answered**
Chosen Option : --

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Q.22

p-Hydroxyazobenzene is also called as

1. Yellow dye
2. Red dye
3. Orange dye
4. Violet dye

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

Question Type : **MCQ**
Question ID : **48558420236**
Option 1 ID : **48558480941**
Option 2 ID : **48558480942**
Option 3 ID : **48558480943**
Option 4 ID : **48558480944**
Status : **Answered**
Chosen Option : **1**

Q.23

The pair in which both the species have the same magnetic moment (spin only value) is:

1. $[Cr(H_2O)_6]^{2+}$, $[CoCl_4]^{2-}$
2. $[Cr(H_2O)_6]^{2+}$, $[Fe(H_2O)_6]^{2+}$
3. $[Mn(H_2O)_6]^{2+}$, $[Cr(H_2O)_6]^{2+}$
4. $[CoCl_4]^{2-}$, $[Fe(H_2O)_6]^{2+}$

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

Question Type : **MCQ**
Question ID : **48558420212**
Option 1 ID : **48558480845**
Option 2 ID : **48558480846**
Option 3 ID : **48558480847**
Option 4 ID : **48558480848**
Status : **Answered**
Chosen Option : **2**

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Q.24

In a thermite process, the reducing agent is

1. C
2. Zn
3. Na
4. Al

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

Question Type : **MCQ**
Question ID : **48558420239**
Option 1 ID : **48558480953**
Option 2 ID : **48558480954**
Option 3 ID : **48558480955**
Option 4 ID : **48558480956**
Status : **Answered**
Chosen Option : **3**

Q.25

The electrochemical cells $Zn \mid Zn^{2+} \parallel Cu^{2+} \mid Cu$ and $Fe \mid Fe^{2+} \parallel Cu^{2+} \mid Cu$ are connected in series. What will be the net emf of the cell at 25°C?

Given : E° of $Zn^{2+} \mid Zn = -0.76V$
E° of $Cu^{2+} \mid Cu = +0.34\ V$
E° of $Fe^{2+} \mid Fe = -0.41\ V$

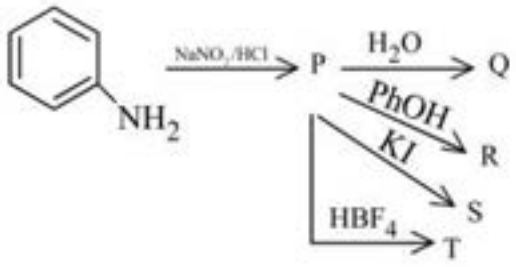
1. +1.85 V
2. −1.85 V
3. + 0.83 V
4. −0.83 V

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

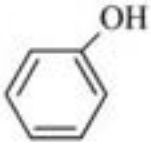
Question Type : **MCQ**
Question ID : **48558420242**
Option 1 ID : **48558480965**
Option 2 ID : **48558480966**
Option 3 ID : **48558480967**
Option 4 ID : **48558480968**
Status : **Answered**
Chosen Option : **1**

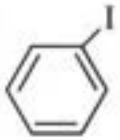
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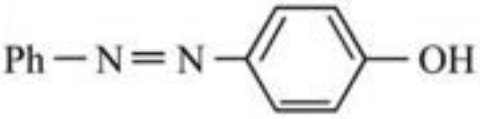
Q.26



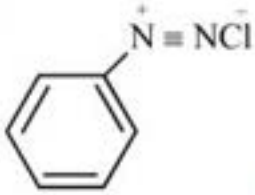
Predict P, Q, R, S and T in a correct sequence :

A. 

B. 

C. 

D. Ph — F

E. 

Choose the correct answer from the options given below:

1. A, B, C, D, E

2. B, A, C, D, E

3. E, A, C, B, D

4. A, C, D, B, E

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

Question Type : MCQ
Question ID : 48558420240
Option 1 ID : 48558480957
Option 2 ID : 48558480958
Option 3 ID : 48558480959
Option 4 ID : 48558480960
Status : Answered

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Chosen Option : 3

Q.27

Match List I with List II

LIST I		LIST II	
A.	Soda Water	I.	A solution of gas in gas
B.	Sugar Solution	II.	A solution of solid in solid
C.	German Silver	III.	A solution of solid in liquid
D.	Air	IV.	A solution of gas in liquid

Choose the correct answer from the options given below:

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

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

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

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

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

Question Type : **MCQ**
Question ID : **48558420227**
Option 1 ID : **48558480905**
Option 2 ID : **48558480906**
Option 3 ID : **48558480907**
Option 4 ID : **48558480908**
Status : **Answered**
Chosen Option : **3**

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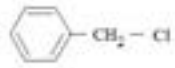
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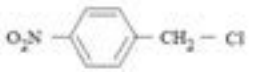
Q.28

Which of the following compounds undergo predominantly S_N2 reaction with NaOH in a polar aprotic solvent?

A. 

B. 

C. 

D. 

Choose the most most appropriate answer from the options given below:

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

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

Question Type : **MCQ**
Question ID : **48558420228**
Option 1 ID : **48558480909**
Option 2 ID : **48558480910**
Option 3 ID : **48558480911**
Option 4 ID : **48558480912**
Status : **Answered**
Chosen Option : **3**

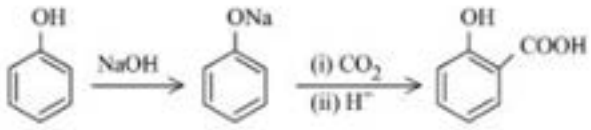
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Q.29

Given reaction is the example of -



1. Kolbe's reaction

2. Reimer-Tiemann reaction

3. Williamson Synthesis

4. Friedel Craft reaction

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

Question Type : **MCQ**
Question ID : **48558420220**
Option 1 ID : **48558480877**
Option 2 ID : **48558480878**
Option 3 ID : **48558480879**
Option 4 ID : **48558480880**
Status : **Answered**
Chosen Option : **2**

Q.30

The edge lengths of the unit cells in terms of the radius of spheres constituting fcc, bcc & simple cubic unit cell respectively are:

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

2. $\frac{4r}{\sqrt{3}}, 2\sqrt{2}r, 2r$

3. $2r, 2\sqrt{2}r, \frac{4r}{\sqrt{3}}$

4. $2r, \frac{4r}{\sqrt{3}}, 2\sqrt{2}r$

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

Question Type : **MCQ**
Question ID : **48558420237**
Option 1 ID : **48558480945**
Option 2 ID : **48558480946**
Option 3 ID : **48558480947**
Option 4 ID : **48558480948**
Status : **Answered**
Chosen Option : **2**

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Q.31

Mohr's salt is _____ is colour

1. Yellow

2. Blue

3. Green

4. Colourless

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

Question Type : **MCQ**
Question ID : **48558420230**
Option 1 ID : **48558480917**
Option 2 ID : **48558480918**
Option 3 ID : **48558480919**
Option 4 ID : **48558480920**
Status : **Answered**
Chosen Option : **2**

Q.32

Match List I with List II

LIST I		LIST II	
A.	Vitamin A	I.	Rickets
B.	Vitamin C	II.	Xerophthalmia
C.	Vitamin B_1	III.	Scurvy
D.	Vitamin D	IV.	Beri-Beri

Choose the correct answer from the options given below:

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

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

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

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

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

Question Type : **MCQ**
Question ID : **48558420232**
Option 1 ID : **48558480925**
Option 2 ID : **48558480926**
Option 3 ID : **48558480927**
Option 4 ID : **48558480928**
Status : **Answered**
Chosen Option : **1**

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Q.33

Choose the incorrect statement.

1. In endothermic reaction reactant molecules have lower energy than product molecules
2. Energy of activated complex is higher than the energy of reactants
3. Energy of activation of a reaction is different from energy of activation with catalyst for the same reaction
4. Rate of reaction decreases with rise in temperature

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

Question Type : **MCQ**
Question ID : **48558420235**
Option 1 ID : **48558480937**
Option 2 ID : **48558480938**
Option 3 ID : **48558480939**
Option 4 ID : **48558480940**
Status : **Answered**
Chosen Option : **4**

Q.34

Fog is a colloidal solution of

1. Solid in gas
2. Gas in gas
3. Liquid in gas
4. Gas in liquid

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

Question Type : **MCQ**
Question ID : **48558420231**
Option 1 ID : **48558480921**
Option 2 ID : **48558480922**
Option 3 ID : **48558480923**
Option 4 ID : **48558480924**
Status : **Answered**
Chosen Option : **3**

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Q.35

Identify the incorrect statement

A. Bakelite and urea-formaldehyde resins are elastomers
B. Polyamides like nylon 6, nylon 6, 6 are the examples of fibers.
C. Polystyrene, polyvinylchloride and polythene are thermoplastic polymers.
D. Thermoplastic polymers have intermolecular force between elastomers and fibers.

Choose the most appropriate answer from the options given below:

1. B and C only

2. D and A only

3. A only

4. C and D only

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

Question Type : **MCQ**
Question ID : **48558420229**
Option 1 ID : **48558480913**
Option 2 ID : **48558480914**
Option 3 ID : **48558480915**
Option 4 ID : **48558480916**
Status : **Answered**
Chosen Option : **2**

Q.36

The isotope $_{19}K^{42}$ has a half life of about 12 hours. What fraction of the initial concentration of $_{19}K^{42}$ remains after 48 hours.

1. $\frac{1}{4}$
2. $\frac{1}{8}$
3. $\frac{1}{12}$
4. $\frac{1}{16}$

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

Question Type : **MCQ**
Question ID : **48558420233**
Option 1 ID : **48558480929**
Option 2 ID : **48558480930**
Option 3 ID : **48558480931**
Option 4 ID : **48558480932**
Status : **Answered**
Chosen Option : **1**

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Q.37

Which among the following is not a broad spectrum antibiotic?

1. Ofloxacin

2. Vancomycin

3. Penicillin

4. Chloramphenicol

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

Question Type : **MCQ**
Question ID : **48558420225**
Option 1 ID : **48558480897**
Option 2 ID : **48558480898**
Option 3 ID : **48558480899**
Option 4 ID : **48558480900**
Status : **Answered**
Chosen Option : **2**

Q.38

Butanone is less reactive than propanal towards nucleophilic addition reaction because:

1. more +I effect found in butanone

2. less +I effect found in butanone

3. more +I effect found in propanal

4. less +ve charge found on carbonyl group of propanal

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

Question Type : **MCQ**
Question ID : **48558420217**
Option 1 ID : **48558480865**
Option 2 ID : **48558480866**
Option 3 ID : **48558480867**
Option 4 ID : **48558480868**
Status : **Answered**
Chosen Option : **1**

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Q.39

Which of the following statements are not correct?

A. Phenol is used to prepare analgesic drugs.
B. Solubility of phenol in water is more than that of chlorobenzene.
C. Phenol is neutralised by sodium carbonate.
D. Boiling point of *o*- nitrophenol is lower than that of *p*-nitrophenol.

Choose the most appropriate answer from the options given below:

1. A & B only

2. C only

3. B & D only

4. C & D only

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

Question Type : **MCQ**
Question ID : **48558420249**
Option 1 ID : **48558480993**
Option 2 ID : **48558480994**
Option 3 ID : **48558480995**
Option 4 ID : **48558480996**
Status : **Answered**
Chosen Option : **2**

Q.40

Select the incorrect statement(s)

A. Surface active agents like soaps and synthetic detergents form micelles in water.
B. Soaps are emulsifying agents.
C. $C_{17}H_{35}$ (hydrocarbon) and $-COO^-$(Carboxylate) part of stearate ion ($C_{17}H_{35}COO^-$) both are hydrophobic.
D. Surfactants are basic in nature.

Choose the most appropriate answer from the options given given below:

1. A and B only

2. C only

3. C and A only

4. D and B only

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

Question Type : **MCQ**
Question ID : **48558420215**
Option 1 ID : **48558480857**
Option 2 ID : **48558480858**
Option 3 ID : **48558480859**
Option 4 ID : **48558480860**
Status : **Answered**
Chosen Option : **2**

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Q.41

Answer the question on the basis of passage given below :

There are some deposits of nitrates and phosphates in the earth's crust. Nitrates are more soluble in water. Nitrates are difficult to reduce under laboratory conditions, but microbes do it easily. Ammonia, forms a large number of complexes with transition metals. Hybridisation easily explains the ease of sigma donation capability of NH_3 and PH_3.

Phosphine is an inflammable gas, it is prepared from white phosphorus

Which of the following is the correct statement?

1. Phosphates have no biological significance in humans.
2. Between nitrates and phosphates, phosphates are less abundant in the earth's crust.
3. Between nitrates and phosphates, nitrates are less abundant in the earth's crust
4. Oxidation of nitrates is possible in soil.

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

Question Type : **MCQ**
Question ID : **48558420251**
Option 1 ID : **48558481001**
Option 2 ID : **48558481002**
Option 3 ID : **48558481003**
Option 4 ID : **48558481004**
Status : **Answered**
Chosen Option : **3**

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Q.42

Answer the question on the basis of passage given below :

There are some deposits of nitrates and phosphates in the earth's crust. Nitrates are more soluble in water. Nitrates are difficult to reduce under laboratory conditions, but microbes do it easily. Ammonia, forms a large number of complexes with transition metals. Hybridisation easily explains the ease of sigma donation capability of NH_3 and PH_3.

Phosphine is an inflammable gas, it is prepared from white phosphorus

Among the following the correct statement is

A. Between NH_3 and PH_3, NH_3 is a better electron donor because the lone pair of electrons occupy spherical 's' orbital and is less directional.
B. Between NH_3 and PH_3, NH_3 is a better electron donor because the lone pair of electrons occupies sp^3 orbital and is more directional.
C. Between NH_3 & PH_3, PH_3 is a better electron donor because the lone pair of electrons occupies sp^3 orbital and is more directional.
D. Between NH_3 & PH_3, PH_3 is a better electron donor because the lone pair of electrons occupies 's' orbital and is less directional.

Choose the most appropriate answer from the options given below:

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

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

Question Type : **MCQ**
Question ID : **48558420252**
Option 1 ID : **48558481005**
Option 2 ID : **48558481006**
Option 3 ID : **48558481007**
Option 4 ID : **48558481008**
Status : **Answered**
Chosen Option : **3**

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Q.43

Answer the question on the basis of passage given below :

There are some deposits of nitrates and phosphates in the earth's crust. Nitrates are more soluble in water. Nitrates are difficult to reduce under laboratory conditions, but microbes do it easily. Ammonia, forms a large number of complexes with transition metals. Hybridisation easily explains the ease of sigma donation capability of NH_3 and PH_3.

Phosphine is an inflammable gas, it is prepared from white phosphorus

White phosphorus on reacting with NaOH gives NaH_2PO_2 and PH_3 as products . This is an example of.

1. Dimerisation reaction
2. Disproportionation reaction
3. Condensation reaction
4. Precipitation reaction

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

Question Type : **MCQ**
Question ID : **48558420253**
Option 1 ID : **48558481009**
Option 2 ID : **48558481010**
Option 3 ID : **48558481011**
Option 4 ID : **48558481012**
Status : **Answered**
Chosen Option : **3**

Q.44

Answer the question on the basis of passage given below :

There are some deposits of nitrates and phosphates in the earth's crust. Nitrates are more soluble in water. Nitrates are difficult to reduce under laboratory conditions, but microbes do it easily. Ammonia, forms a large number of complexes with transition metals. Hybridisation easily explains the ease of sigma donation capability of NH_3 and PH_3.

Phosphine is an inflammable gas, it is prepared from white phosphorus

PH_3 is a better reducing agent than NH_3 because:

1. PH_3 can give its lone pair of electron easily
2. Bond dissociation enthalpy of P-H is low
3. Bond dissociation enthalpy of P-H is high
4. PH_3 is tetrahedral is shape

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

Question Type : **MCQ**
Question ID : **48558420254**
Option 1 ID : **48558481013**
Option 2 ID : **48558481014**
Option 3 ID : **48558481015**
Option 4 ID : **48558481016**
Status : **Answered**
Chosen Option : **3**

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Q.45

Answer the question on the basis of passage given below :

There are some deposits of nitrates and phosphates in the earth's crust. Nitrates are more soluble in water. Nitrates are difficult to reduce under laboratory conditions, but microbes do it easily. Ammonia, forms a large number of complexes with transition metals. Hybridisation easily explains the ease of sigma donation capability of NH_3 and PH_3.

Phosphine is an inflammable gas, it is prepared from white phosphorus

NH_3 is a stronger base than PH_3

1. Phosphorus is smaller in size than nitrogen
2. Nitrogen is smaller in size than phosphorus
3. PH_3 does not have lone pair of electron
4. NH_3 does not have lone pair of electron

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

Question Type : **MCQ**
Question ID : **48558420255**
Option 1 ID : **48558481017**
Option 2 ID : **48558481018**
Option 3 ID : **48558481019**
Option 4 ID : **48558481020**
Status : **Answered**
Chosen Option : **3**

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Q.46

Answer the question on the basis of passage given below :

Aldehydes and ketones are two important classes of organic compounds which are widely used in the synthesis of a variety of other organic compounds. Due to the polarity of the carbonyl group, they undergo nucleophilic addition reactions. Broadly speaking, these addition reactions are of two types-one in which simply the addition of the nucleophilic reagent occurs across $>C=O$ bond and the other in which addition is followed by the elimination of a molecule of water. A number of ammonia derivates such as hydroxylamine, hydrazine, phenylhydrazine, 2, 4-dinitrophenylhydrazine and semicarbazide belong to the second category of reactions. These derivates are used for identification and characterization of aldehydes/ketones. Both types of nucleophilic addition reactions are influenced by steric and electronic factors. In general, aliphatic aldehydes are more reactive than aromatic aldehydes. The aliphatic aldehydes reduce both Fehling's solution and Tollen's reagent but aromatic aldehydes reduce only Tollen's reagent. Like aldehydes, aromatic ketones are less reactive than aliphatic ketones towards nucleophilic addition reactions.

Phenols and carboxylic acids are acidic in nature. Both dissolve in NaOH solution and turn blue litmus red. However carboxylic acids are much stronger acids than phenols and decompose $NaHCO_3$ with the evolution of CO_2 but phenols do not. Both electron- donating and electron -withdrawing substituents influence the acid strength of aliphatic as well as aromatic acids. Unlike all other aliphatic acids, formic acid has reducing properties and also does not show reactions of the alkyl group.

Which of the following statement/s is /are correct?

A. Aldeydes give positive test with Tollen's reagent.
B. Ketones give positive test with Fehling's solution
C. Ketones do not react with Fehling's solution.
D. Aldehydes with Schiff's reagent restore pink colour
E. Ketones with Schiff's reagent restore pink colour.

Choose the correct answer from the options given below:

1. A, C only

2. A, E only

3. A, C, D only

4. A, C, B only

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

Question Type : **MCQ**
Question ID : **48558420256**
Option 1 ID : **48558481021**
Option 2 ID : **48558481022**
Option 3 ID : **48558481023**
Option 4 ID : **48558481024**
Status : **Answered**
Chosen Option : **3**

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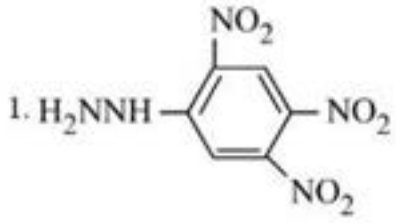
Q.47

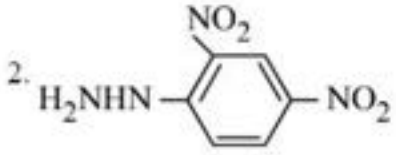
Answer the question on the basis of passage given below :

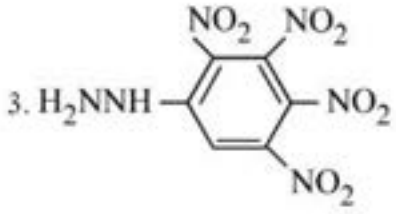
Aldehydes and ketones are two important classes of organic compounds which are widely used in the synthesis of a variety of other organic compounds. Due to the polarity of the carbonyl group, they undergo nucleophilic addition reactions. Broadly speaking, these addition reactions are of two types-one in which simply the addition of the nucleophilic reagent occurs across $>C=O$ bond and the other in which addition is followed by the elimination of a molecule of water. A number of ammonia derivates such as hydroxylamine, hydrazine, phenylhydrazine, 2, 4-dinitrophenylhydrazine and semicarbazide belong to the second category of reactions. These derivates are used for identification and characterization of aldehydes/ketones. Both types of nucleophilic addition reactions are influenced by steric and electronic factors. In general, aliphatic aldehydes are more reactive than aromatic aldehydes. The aliphatic aldehydes reduce both Fehling's solution and Tollen's reagent but aromatic aldehydes reduce only Tollen's reagent. Like aldehydes, aromatic ketones are less reactive than aliphatic ketones towards nucleophilic addition reactions.

Phenols and carboxylic acids are acidic in nature. Both dissolve in NaOH solution and turn blue litmus red. However carboxylic acids are much stronger acids than phenols and decompose $NaHCO_3$ with the evolution of CO_2 but phenols do not. Both electron- donating and electron -withdrawing substituents influence the acid strength of aliphatic as well as aromatic acids. Unlike all other aliphatic acids, formic acid has reducing properties and also does not show reactions of the alkyl group.

Structure of Brady's reagent is _____

1. 

2. 

3. 

4. 

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

Question Type : **MCQ**
Question ID : **48558420257**
Option 1 ID : **48558481025**
Option 2 ID : **48558481026**
Option 3 ID : **48558481027**
Option 4 ID : **48558481028**
Status : **Not Answered**
Chosen Option : --

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Q.48

Answer the question on the basis of passage given below :

Aldehydes and ketones are two important classes of organic compounds which are widely used in the synthesis of a variety of other organic compounds. Due to the polarity of the carbonyl group, they undergo nucleophilic addition reactions. Broadly speaking, these addition reactions are of two types-one in which simply the addition of the nucleophilic reagent occurs across $>C=O$ bond and the other in which addition is followed by the elimination of a molecule of water. A number of ammonia derivates such as hydroxylamine, hydrazine, phenylhydrazine, 2, 4-dinitrophenylhydrazine and semicarbazide belong to the second category of reactions. These derivates are used for identification and characterization of aldehydes/ketones. Both types of nucleophilic addition reactions are influenced by steric and electronic factors. In general, aliphatic aldehydes are more reactive than aromatic aldehydes. The aliphatic aldehydes reduce both Fehling's solution and Tollen's reagent but aromatic aldehydes reduce only Tollen's reagent. Like aldehydes, aromatic ketones are less reactive than aliphatic ketones towards nucleophilic addition reactions.

Phenols and carboxylic acids are acidic in nature. Both dissolve in NaOH solution and turn blue litmus red. However carboxylic acids are much stronger acids than phenols and decompose $NaHCO_3$ with the evolution of CO_2 but phenols do not. Both electron- donating and electron -withdrawing substituents influence the acid strength of aliphatic as well as aromatic acids. Unlike all other aliphatic acids, formic acid has reducing properties and also does not show reactions of the alkyl group.

Which of the following compound most readily undergoes nucleophilic addition reaction?

1. Formaldehyde
2. Acetone
3. Acetaldehyde
4. Di-tert-butyl ketone

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

Question Type : **MCQ**
Question ID : **48558420258**
Option 1 ID : **48558481029**
Option 2 ID : **48558481030**
Option 3 ID : **48558481031**
Option 4 ID : **48558481032**
Status : **Not Attempted and Marked For Review**
Chosen Option : --

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Q.49

Answer the question on the basis of passage given below :

Aldehydes and ketones are two important classes of organic compounds which are widely used in the synthesis of a variety of other organic compounds. Due to the polarity of the carbonyl group, they undergo nucleophilic addition reactions. Broadly speaking, these addition reactions are of two types-one in which simply the addition of the nucleophilic reagent occurs across $>C=O$ bond and the other in which addition is followed by the elimination of a molecule of water. A number of ammonia derivates such as hydroxylamine, hydrazine, phenylhydrazine, 2, 4-dinitrophenylhydrazine and semicarbazide belong to the second category of reactions. These derivates are used for identification and characterization of aldehydes/ketones. Both types of nucleophilic addition reactions are influenced by steric and electronic factors. In general, aliphatic aldehydes are more reactive than aromatic aldehydes. The aliphatic aldehydes reduce both Fehling's solution and Tollen's reagent but aromatic aldehydes reduce only Tollen's reagent. Like aldehydes, aromatic ketones are less reactive than aliphatic ketones towards nucleophilic addition reactions.

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Carboxylic acid do not give the characteristic reaction of carbonyl group because :

1. the oxygen atom of the OH group does not contain lone pair of electrons
2. carbonyl carbon of carboxyl group is more electrophilic
3. carbonyl carbon of carboxyl group is more nucleophilic
4. carbonyl carbon of carboxyl group is less electrophilic

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

Question Type : **MCQ**
Question ID : **48558420259**
Option 1 ID : **48558481033**
Option 2 ID : **48558481034**
Option 3 ID : **48558481035**
Option 4 ID : **48558481036**
Status : **Not Answered**
Chosen Option : --

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