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Shreyas

Chemistry Mock Test Result

Result	Marks	Percentage	Result Date
Fail	18	45%	13-04-2023

:- Result Stats

Score	18	**Accuracy %**	82
Avg Time Per Question	1:18 Min	**Total Question**	40
Total Question Attempted	23	**Total Question Answered**	22
Correct Answered	18	**Total Time of Test**	30 Min
Time Spend	29:51 Min	**Avg Time On Question**	1:18 Min
Non Productive Time	58 Sec	**Benchmark**	50

:- Subject Wise Stats

CHEMISTRY

Total Question	40	**Total Question Attempted**	40
Total Question Answered	22	**Correct Answered**	18
Wrong Answered	4	**Skipped Question**	18
Total Time Spend	29:51 Min	**Average Time Spend(per question)**	1:17 Min
Correct Answered Time	22:48 Min	**Wrong Answered Time**	6:5 Min
Skipped Question Time	58 Sec	-	-

:- Recommendation

Aww! shreyas you have not pass the exam . Keep your heads up and focus on below points :

- Try to complete the test , you left 17 question
- Increase your question attempt speed

:- Solutions

Q.No. 1

Which of the following has lowest boiling point ?

(A) p-nitrophenol

(B) m-nitrophenol

(C) o-nitrophenol

(D) Phenol

Status : Correct Answered **Correct Answer :** (C)

Q.No. 2

What is the conjugate base of OH^-?

(A) O_2

(B) H_2O

(C) O^-

(D) O^{2-}

Status : Correct Answered **Correct Answer :** (D)

Q.No. 3

In which of the following reactions will ΔU be equal to ΔH?

(A) $H_2\ (g) + ½\ O_2(g) \rightarrow H_2O(l)$

(B) $H_2\ (g) + I_2\ (g) \rightarrow 2HI(g)$

(C) $N_2O_4(g) \rightarrow 2NO_2(g)$

(D) $2SO_2\ (g) + O_2(g) \rightarrow 2SO_3(g)$

Status : Correct Answered **Correct Answer :** (B)

Q.No. 4

Which of the following is an organometallic compound ?

(A) Lithium methoxide

(B) Lithium acetate

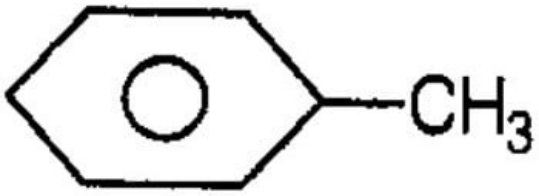
(C) Lithium dimethylamide

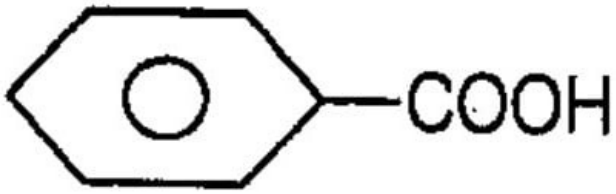
(D) Methyl lithium

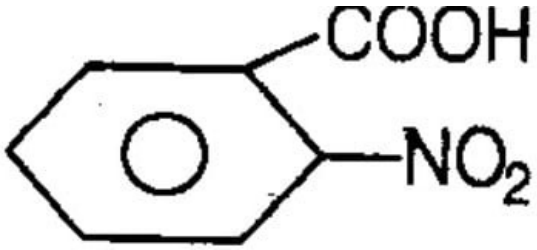
Status : Correct Answered **Correct Answer :** (D)

Q.No. 5

Which of the following is highly acidic in nature?

(A) 

(B) 

(C) 

(D) 

Status : Not Answered **Correct Answer : (D)**

Q.No. 6

With what velocity should an α-particle travel towards the nucleus of a copper atom to arrive at a distance of 10^{-13}m from the nucleus of the copper atom?
(K =9 x 10^{9}Nm²/C² (Mass of α-particle = 6.64 x 10^{-27}kg)

(A) 6.34 x 10^{-6} ms^{-1}

(B) 6.34 x 10^{-5} ms^{-1}

(C) 5.34 x 10^{6} ms^{-1}

(D) 5.34 x 10^{5} ms^{-1}

Status : Wrong Answered **Correct Answer : (A)**

Q.No. 7

Phenol is bifunctional compound because

(A) It is acidic and contain −OH

(B) It reacts with Na to give phenoxide

(C) It reacts with both Na and Zn to give phenoxide and benzene respectively

(D) both (a) and (c)

Status : Correct Answered **Correct Answer : (D)**

Q.No. 8

Which of the following reactions depict the oxidising behavior of H_2SO_4?

(A) $2PCl_5 + H_2SO_4 \rightarrow 2POCl_3 + 2HCl + SO_2Cl_2$

(B) $2NaOH + H_2SO_4 \rightarrow Na_2SO_4 + 2H_2O$

(C) $NaCl + H_2SO_4 \rightarrow NaHSO_4 + HCl$

(D) $2HI + H_2SO_4 \rightarrow I_2 + SO_2 + 2H_20$

Status : Correct Answered **Correct Answer : (D)**

Q.No. 9

One mole of an organic compound A with the formula C_3H_3O reacts completely with two moles of HI to form X and Y. When Y is boiled with aqueous alkali, it forms Z. Z answers the iodoform test. The compound A is

(A) propan-2-ol

(B) propan-1-ol

(C) ethoxyethane

(D) methoxyethane

Status : Correct Answered **Correct Answer : (D)**

Q.No. 10

Which of the following is a good reducing agent?

(A) Yb^{2+}

(B) Ce^{4+}

(C) Tb^{4+}

(D) La^{3+}

Status : Correct Answered **Correct Answer : (A)**

Q.No. 11

An amorphous solid (X) burns in air to form a gas (Y) which turns lime water milky. This gas decolarises aqueous solution of acidified $KMnO_4$. gas (Y)reacts with oxygen to give another gas (Z) which is responsible for acid rain. X, Y and Z are

(A) C CO CO_2

(B) S SO_2 SO_3

(C) P P_2O_3 P_2O_5

(D) S SO_3 H_2SO_4

Status : Correct Answered **Correct Answer :** (B)

Q.No. 12

The reaction of toluene with chlorine in presence of ferric chloride gives predominantly

(A) benzoyl chloride

(B) m - chlorotoluene

(C) benzyl chloride

(D) o - and p-chlorotoluene

Status : Wrong Answered **Correct Answer :** (D)

Q.No. 13

Which of the following will not give tests for free transition metal ion in solution ?

(A) K_2 $[Ni(CN)_4]$

(B) $FeSO_4$. K_2SO_4 . $24H_2O$

(C) Both of the above

(D) None of the above

Status : Correct Answered **Correct Answer :** (A)

Q.No. 14

Although zirconium belongs to 4d and hafnium belongs to 5d transition series even they show similar physical and chemical properties because both

(A) belong to d-block

(B) have same number of electrons

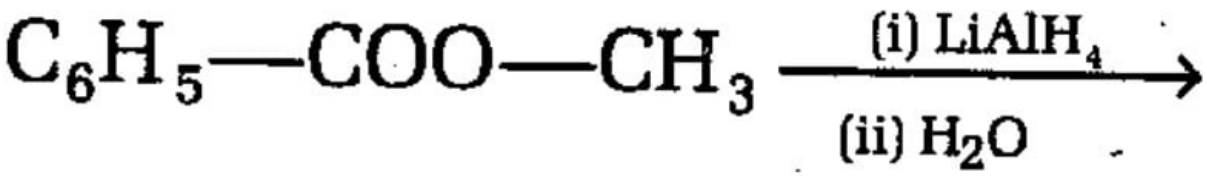
(C) belongs to the same group of the periodic table

(D) have similar atomic radius

Status : Correct Answered **Correct Answer :** (D)

Q.No. 15

What are the organic products formed in the following reaction ?



(A) C_6H_5—COOH and CH_4

(B) C_6H_5—CH_2—OH and CH_4

(C) C_6H_5—CH_3 and CH_3—OH

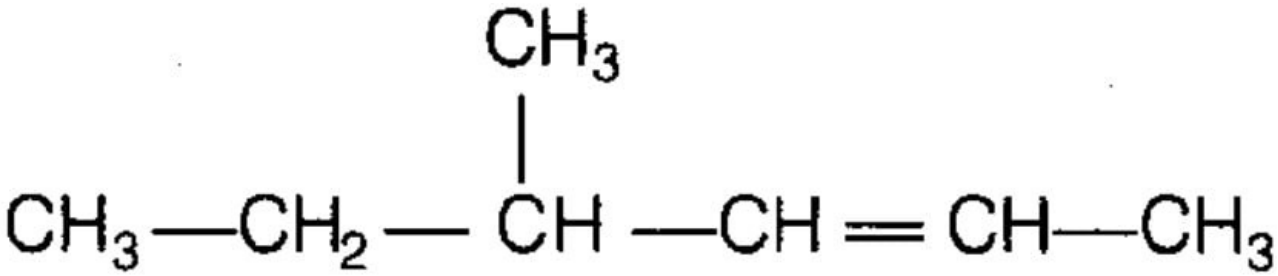
(D) C_6H_5—CH_2—OH and CH_3—OH

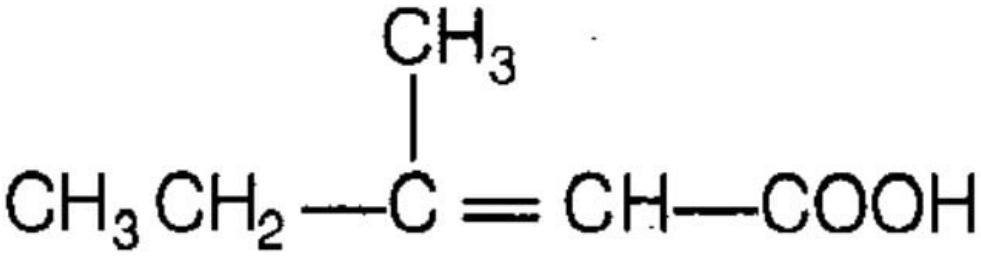
Status : **Correct Answered** **Correct Answer :** **(D)**

Q.No. 16

Which of the following compounds can exhibit both geometrical isomerism and enantiomerism ?

(A) 

(B) 

(C) 

(D) 

Status : **Correct Answered** **Correct Answer :** **(B)**

Q.No. 17

Give the IUPAC name of
m-$ClCH_2C_6H_4CH_2C(CH_3)_3$

(A) 1 - (3 - chloro-3-methylphenyl)-2, 2-diethyl propane

(B) 2 - (3 - chloromethyl propyl)-2, 2-dimethyl propane

(C) 1 - (3 - chloromethyl phenyl)-3, 3- dimethyl propane

(D) 1 - chloromethyl - 3- (2, 2 - dimethyl propyl) benzene

Status : Wrong Answered **Correct Answer :** (D)

Q.No. 18

A compound (A) $C_4H_8Cl_2$ on alkaline hydrolysis to give compound (B) C_4H_80 which gives an oxime and positive Tollen's reagent test. What is the structure of (A)?

(A) $CH_3CH_2CH_2CHCl_2$

(B) $CH_3CCl_2CH_2CH_3$

(C) $CH_3CH(Cl)CH(Cl)CH_3$

(D) $CH_2ClCH_2CH_2CH_2Cl$

Status : Wrong Answered **Correct Answer :** (A)

Q.No. 19

Glucose when treated with conc. HNO_3 gives

(A) acetic acid

(B) saccharic acid

(C) gluconic acid

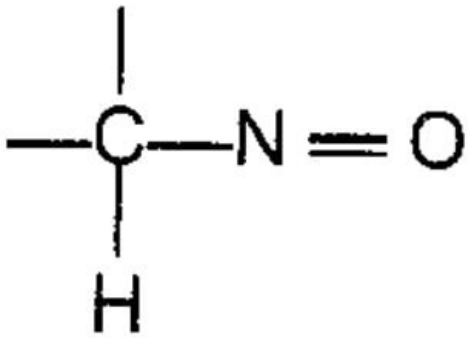
(D) sorbitol

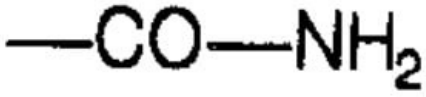
Status : Correct Answered **Correct Answer :** (B)

Q.No. 20

Which of the following is a peptide linkage ?

(A) −CO−NH

(B) 

(C) 

(D) −CO−O−NH_4

Status : Correct Answered **Correct Answer : (A)**

Q.No. 21

An organic compound X is oxidised by using acidified $K_2Cr_2O_7$. The product obtained reacts with phenyl hydrazine, but does not answer silver mirror test. The possible structure of X is

(A) CH_3COCH_3

(B) $(CH_3)_2CHOH$

(C) CH_3CHO

(D) CH_3CH_2OH

Status : Correct Answered **Correct Answer : (B)**

Q.No. 22

A black powder when heated with conc. HCl gives a greenish yellow gas. The gas acts as an oxidising and a bleaching agent. When it is passed are slaked lime, a white powder is formed which is a ready source of gas. The black powder and white powder respectively are

(A) $KClO_3$ and $NaClO_3$

(B) MnO_2 and $CaCOCl_2$

(C) MnO_2 and $KClO_3$

(D) MnCl and $COCl_2$

Status : Correct Answered **Correct Answer : (B)**

Q.No. 23

The increasing order of the rate of HCN addition to compound A−D is

A. HCHO

B. CH_3COCH_3

C. $PhCOCH_3$

D. PhCOPh

(A) A<B<C<D

(B) D<B<C<A

(C) D<C<B<A

(D) C<D<B<A

Status : Correct Answered **Correct Answer : (C)**

Q.No. 24

A solution of $KMnO_4$ is reduced to a various products depending upon its pH At pH<7, it is reduced to a colourless solution (A), at pH=7 it forms a brown precipitate (B) and at pH>7, it gives a green solution (C). (A), (B) and (C) are

(A) Mn^{2+} MnO_2 MnO_4^{2-}

(B) MnO_2 Mn^{2+} MnO_4^{2-}

(C) Mn^{2+} MnO_4^{2-} MnO_2

(D) MnO_4^{2-} Mn^{2+} MnO_2

Status : Not Answered **Correct Answer : (A)**

Q.No. 25

Aniline is resonance hybrid of __ structures.

(A) 1

(B) 3

(C) 5

(D) 7

Status : Not Answered **Correct Answer : (C)**

Q.No. 26

Zinc oxide loses oxygen on heating according to the reaction

$$ZnO \xrightarrow{Heat} Zn^{2+} + \frac{1}{2}O_2 + 2\bar{e}$$

It becomes yellow on heating because

(A) Zn^{2+} ions and electrons move too interstitial sites and F - centres are created

(B) Oxygen and electrons move at the crystal and ions become yellow

(C) Zn^{2+} again combine with oxygen to give yellow oxide

(D) Zn^{2+} are replaced by oxygen

Status : Not Answered **Correct Answer : (A)**

Q.No. 27

The standard reduction potentials at 298 K for the following half reactions are given against each
Which is the strongest reducing agent ?

$$Zn^{2+}(aq) + 2\bar{e} \rightleftharpoons Zn(s) - 0.762\ V$$

$$Cr^{3+}(aq) + 2\bar{e} \rightleftharpoons Cr(s) - 0.740\ V$$

$$2H^{+}(aq) + 2\bar{e} \rightleftharpoons H_2(s)\ 0.000\ V$$

$$Fe^{3+}(aq) + 2\bar{e} \rightleftharpoons Fe^{2+}(aq)\ 0.770\ V$$

(A) Zn(s)

(B) Cr(s)

(C) Hg(g)

(D) Fe^{2+} (aq)

Status : Not Answered **Correct Answer : (A)**

Q.No. 28

The unit cell length of sodium chloride crystal is 564 pm. Its density would be

(A) 1.082 g cm^{-3}

(B) 2.165 g cm^{-3}

(C) 3.247 g cm^{-3}

(D) 4.330 g cm^{-3}

Status : Not Answered **Correct Answer : (B)**

Q.No. 29

Among the following metal carbonyls, the C-O bond order is lowest in

(A) $[Mn(CO)_6]^+$

(B) $[Fe(CO)_5]$

(C) $[Cr(CO)_6]$

(D) $[V(CO)_6]^-$

Status : Not Answered **Correct Answer : (D)**

Q.No. 30

When 96.5 C of electricity is passed through a solution of silver nitrate (at wt. of Ag = 107.87≃108), the amount of silver deposited is

(A) 5.8 mg

(B) 10.8 mg

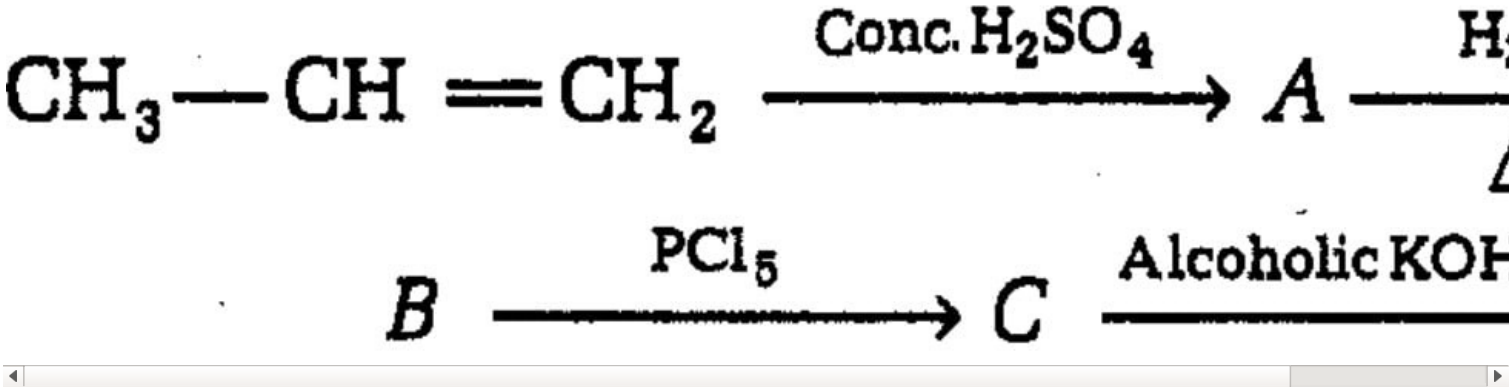
(C) 15.8 mg

(D) 20.8 mg

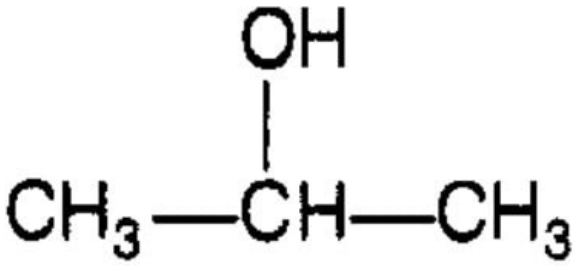
Status : Not Answered **Correct Answer : (B)**

Q.No. 31

Identify (D) in the following reaction series:



(A) CH_3-CH_2-OH

(B) 

(C) $CH_3-CH=CH_2$

(D) $CH_3CH_2CH_2OH$

Status : Not Answered **Correct Answer : (C)**

Q.No. 32

What is the ratio of the velocities of CH_4 and O_2 molecules so that they are associated with de-Broglie waves of equal wavelengths?

(A) 1:2

(B) 2:1

(C) 3:2

(D) 1:3

Status : Not Answered **Correct Answer : (B)**

Q.No. 33

For the reaction, $2NO_2 + F_2 \rightarrow 2NO_2F$, following mechanism has been provided.

$$NO_2 + F_2 \xrightarrow{\text{Slow}} NO_2F + F$$

$$NO_2 + F \xrightarrow{\text{Fast}} NO_2F$$

Thus, rate expression of the above reaction can be written as

(A) $r = k [NO_2]^2 [F_2]$

(B) $r = k [NO_2][F_2]$

(C) $r = k [NO_2]$

(D) $r = k [F_2]$

Status : Not Answered **Correct Answer : (B)**

Q.No. 34

If 'A' is $C_2H_5NH_2$, 'B' is $(C_2H_5)NH$, 'C' is $(C_2H_5)_3N$, then order of solubility in water is

(A) A>C>B

(B) B<A<C

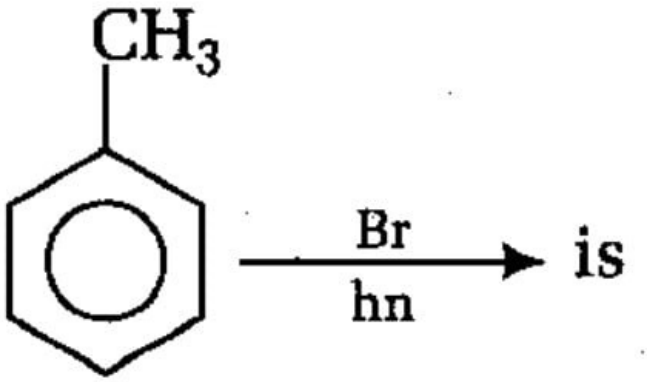
(C) C<B<A

(D) C>B<A

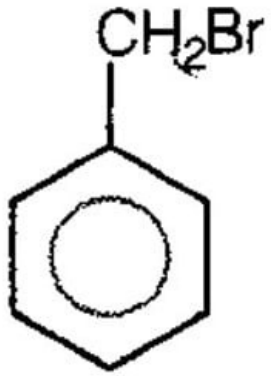
Status : Not Answered **Correct Answer : (C)**

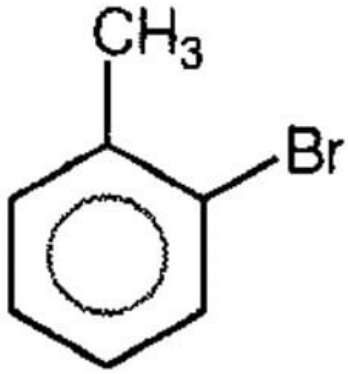
Q.No. 35

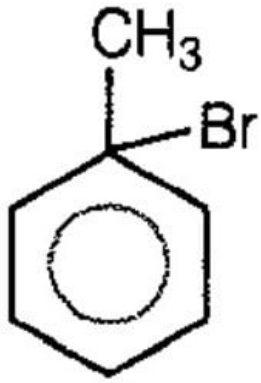
The major product obtained in the reaction

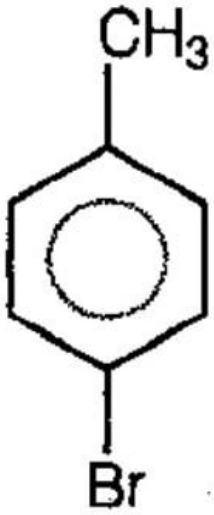


is

(A) 

(B) 

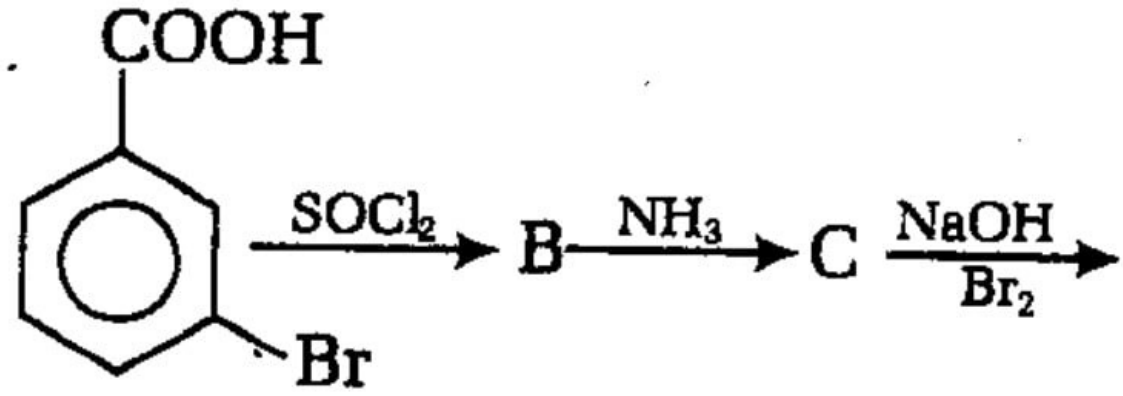
(C) 

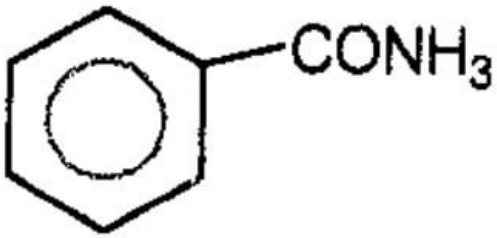
(D) 

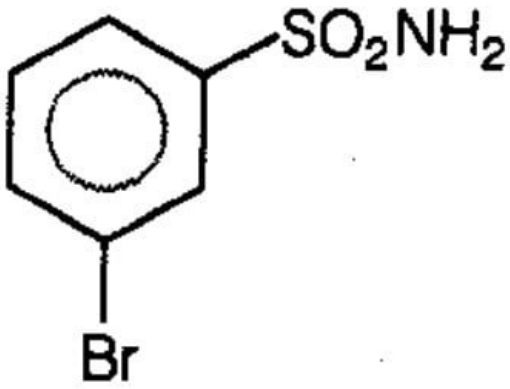
Status : Not Answered **Correct Answer :** (C)

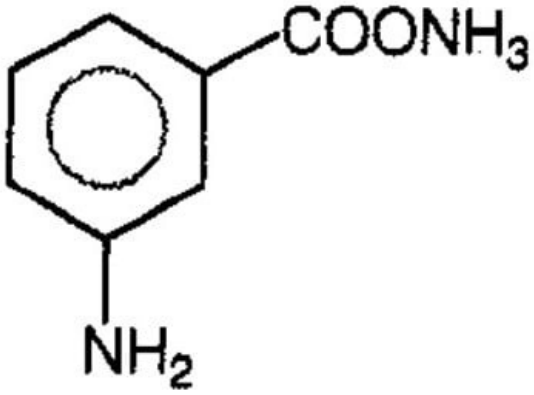
Q.No. 36

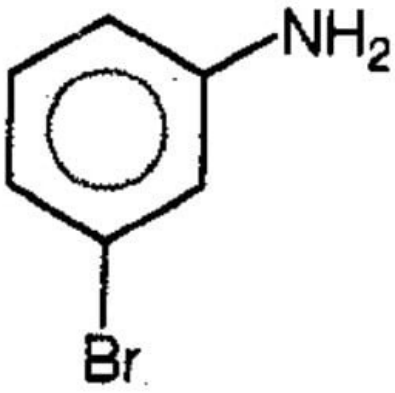
In a set of reactions m - bromobenzoic acid gave a product D. Identify the product D.



(A) 

(B) 

(C) 

(D) 

Status : Not Answered **Correct Answer : (D)**

Q.No. 37

Nitrogen forms stable N_2 molecule, but phosphorus is converted to P_4 from P_2 because

(A) pπ - pπ bonding is strong in phosphorus

(B) pπ- pπ bonding is weak in phosphorus

(C) double bond is present in phosphorus

(D) single P-P bond is weaker than N-N bond

Status : Not Answered **Correct Answer : (B)**

Q.No. 38

For a reaction, $I^- + OCl^- \rightarrow IO^- + Cl^-$ in an aqueous medium, the rate of reaction is given by:

$$\frac{d[IO^-]}{dt} = k\frac{[I^-][OCl^-]}{[OH^-]}$$

The overall order of reaction is

(A) -1

(B) 0

(C) 1

(D) 2

Status : Not Answered **Correct Answer : (C)**

Q.No. 39

What is the value of the spin quantum number of the last electron for d^9-configuration ?

(A) 0

(B) - ½

(C) ½

(D) 1

Status : Not Answered **Correct Answer : (B)**

Q.No. 40

The compound that is both paramagnetic and coloured is

(A) $K_2Cr_2O_7$

(B) $(NH_4)_2$ [$TiCl_6$]

(C) V_oSO_4

(D) K_3 [$Cu(CN)_4$]

Status : Not Answered **Correct Answer : (C)**