



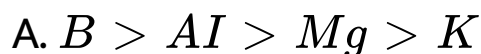
CHEMISTRY

BOOKS - OSWAL PUBLICATION

NTSE 2019 - 20

Chemistry Metal And Non Metals Stage 1

1. Identify the correct order of elements according to their metallic character.



B. $Al > Mg > B > K$

C. $Mg > Al > K > B$

D. $K > Mg > Al > B$

Answer: D



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Chemistry Metal And Non Metals Stage 2

1. Statement I : Sodium metal reacts violently with water to produce heat and fire.

Statement II : Potassium metal reacts violently with water to form potassium hydroxide and hydrogen gas.

Select the correct answer from the options given below :

A. Statement I is true, Statement II is false.

B. Statement I is false, Statement II is true

C. Both Statements are true and Statement II provides explanations to Statement I.

D. Both Statements are true but Statement II does not provide explanation to

Statement I.

Answer: D



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2. The following observations are given for four metals :

(I) Metal H does not react with dilute HCl.

(II) Metal K reacts with warm water.

(III) Metal L does not react with water but displaces metal H from its aqueous salt solution.

(IV) Metal M reacts with cold water.

Choose the correct decreasing order of reactivity of the metals amongst among the following :

A. $M > L > H > K$

B. $K > M > H > L$

C. $M > K > L > H$

D. $L > H > K > M$

Answer: C



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1. Reaction with sodium hydrogen carbonate can be used to distinguish between :

A. Ethanoic acid and Methanoic acid

B. Ethanol and Methanol

C. Ethanol and Ethanoic acid

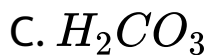
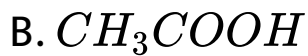
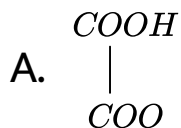
D. Ethylacetate and Ethanol

Answer: C



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2. Identify the solid acid at room temperature.



Answer: A



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3. When water gas mixed with half its volume of hydrogen and the mixture is compressed to 300 atm. Pressure and passed over $ZnO - Cr_2O_3$ catalyst. A coloured liquid is obtained which is used as solvent for paints and varnishes. The liquid will be :

A. Methanol

B. Ethanol and Methanol

C. ether

D. acetone

Answer: A



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Chemistry Carbon And Its Compounds Stage 2

1. An organic compound A on heating with concentrated H_2SO_4 gave product B and on warming with alkaline $KMnO_4$ gave compound C. Compound A on heating with compound C in presence of concentrated H_2SO_4 formed

Compound D, which has fruity smell, Identify the compounds A,B,C and D :

A. A = Alcohol, B = Carboxylic acid,

C = Alkane, D = Ester,

B. A = Carboxylic acid, B = Ester,

C = Alkene , D = Alcohol.

C. A = Alcohol, B = Alkene,

C = Carboxylic acid, D = Ester.

D. A = Alkene, B = Alcohol, C = Ester,

D = Carboxylic acid.

Answer: C



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2. Two organic compounds 'A' and 'B' react with sodium metal and both produce the same gas 'X', but with sodium hydrogen carbonate only compound B reacts to give a gas 'Y'. Identify 'A', 'B', 'X' and 'Y'.

A. A = Ethylene, B = Ethyl alcohol,

X - Carbon dioxide, Y - Hydrogen.

B. A = Ethyl alcol, B = Acertic acid,

X = Hydrogen, Y = Carbon diocxide.

C. A = Hydrogen, Y = Carbon dioxide.

X = Hydrogen, Y = Carbon dioxide.

D. X = Carbon dioxide, Y = Hydrogen.

Answer: B



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Chemistry Periodic Classification Of Elements Stage

1

1. Which block elements are called transition elements ?

A. s - block

B. p - block

C. d - block

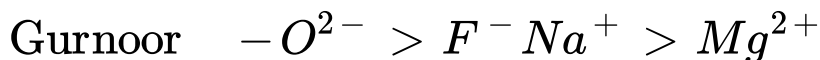
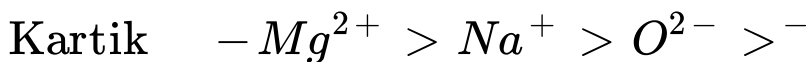
D. f - block

Answer: C



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2. Manya, Kartik, Gurnoor and Sheena had arranged the ions F^- , Na^+ , O^{2-} and Mg^{2+} in decreasing orders of their ionic radii.



Who had provided the correct order of their decreasing ionic radii ?

A. Manya

B. Kartik

C. Gunoor

D. Sheena

Answer: D



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3. Consider the elements A,B,C and D with atomic numbers 11,12,16 and 17, respectively. Which among the following statements regarding these elements are correct ?

(I) The element C will gain electron more easily than element D.

(II) The element B tends to lose electron more readily than C.

(III) The oxide of A will be least basic while that of D will be most basic.

(IV) The energy required to remove an electron from outermost shell from A will be minimum while that from D will be maximum.

A. I and III only

B. I and IV only

C. II and III only

D. II and IV only

Answer: D



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4. Select the correct set of statements regarding change in properties, as we move down the second group in periodic table.

(I) Atomic size increases.

(II) Electronegativity increases.

(III) Tendency to loose electrons increases.

(IV) Valency remain same.

A. I,II and III

B. II,III and IV0

C. I,II and IV

D. I,III and IV

Answer: D



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5. Which of the following options containing formula, bonding and nature of aqueous solution respectively is correct for the compound formed

by two elements A and B having atomic numbers 1 and 17 , respectively?

A. AB, Ionic, Acidic

B. AB_2 , Ionic, Basic

C. AB, Covalent Acidic

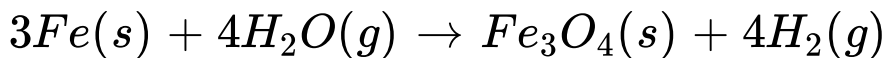
D. AB_2 , Covalent, Neutral

Answer: C



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1. Choose the correct statements about the given chemical reaction.



1. Iron is getting oxidised.
2. Water is getting reduced.
3. Water is acting as reducing agent.
4. Water is acting as oxidising agent.

A. 1,2 and 3

B. 3 and 4

C. 1,2 and 4

D. 2 and 3

Answer: C



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2. 15 ml of NaOH solution gets complete neutralised with 10 ml of HCl solution. What volume of the same HCl solution will be required to neutralise 30 ml of same NaOH solution ?

A. 5 ml

B. 10 ml

C. 15 ml

D. 20 ml

Answer: D



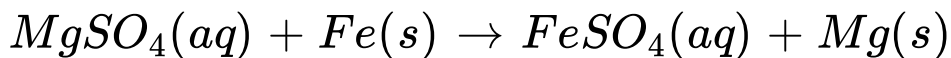
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Chemistry Chemical Reaction And Equations Stage

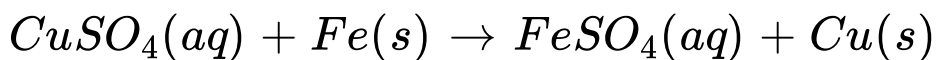
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1. Which of the following set of reactions will Not occur ?

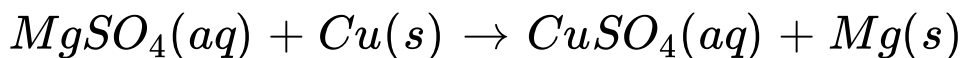
(I)



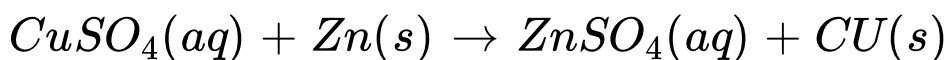
(II)



(III)



(IV)



A. I and III

B. II and IV

C. I, II and III

D. II, III and IV

Answer: A



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2. Match chemical reactions given in the List I with the type chemical reactions given in List II and select the correct answer using the option

given below :

List I (Chemical reactions)	List II (Type of Chemical reactions)
A. Formation of NH_3 from N_2 and H_2	I. Decomposition
B. Calcination of zinc carbonate.	II. Double displacement
C. Reaction of aqueous BaCl_2 solution with dilute H_2SO_4	III. Combination
D. Rancidity of oils	IV. Redox V. Displacement

A. A-I, B-V,C-III,D-IV

B. A-III,B-IV,C-V,D-I

C. A-IV,B-III,C-V,D-I

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

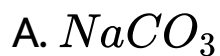
Answer: D



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Chemistry Acids Bases And Salts Stage 1

1. Which of these salts will give an acidic solution ?



Answer: C



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2. pH is defined as :

A. $-\log[H_3O^+]$

B. $-\log[H_2O]$

C. $-\log[OH^-]$

D. $-\log[H^2][OH^-]$

Answer: A





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3. A solution turns methyl orange into yellow. The approximate pH of solution is : \

A. 1.2 - 2.8

B. 3.1 - 4.4

C. 6.0 - 7.6

D. 8.3 - 10.00

Answer: D



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4. Aqueous solution of SO_2 is :

A. Acidic

B. Basic

C. Neutral

D. Amphoteric

Answer: A



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5. In which of the following ink silver nitrate is used ?

A. Voting ink

B. Writing ink

C. Printing ink

D. Marker pen ink

Answer: A



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Chemistry Acids Bases And Salts Stage 2

1. You are provided with aqueous solutions of three salts - A,B and C,2-3 drops of blue litmus solution, red litmus solution and phenolphthalein were added to each of these solution in separate experiment. The change in colour of different indicators were recorded in the following table :

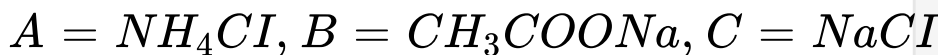
Sample	With blue litmus solution	With red litmus solution	With phenolphthalein solution
A	No change	No change	No change
B	Turns red	No change	No change
C	No change	Turns blue	Turns pink

On the basis of above observation, identify A,B,
and C from the following options :

A.



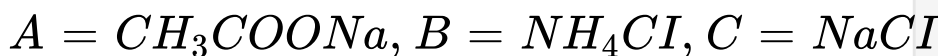
B.



C.



D.



Answer: C



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Chemistry Matter In Our Surroundings Stage 2

1. Material I (Mixture) and List - II (type) with the List-III (I-sample) and select the correct answer from the confirmation given below :

	List-I (Mixture)	List-II (Type)	List-III (Example)
A.	Liquid in gas	1. Emulsion	I. Mist
B.	Liquid in liquid	2. Aerosol	II. Sponge
C.	Gas in solid	3. Foam	III. Face cream
		4. Gel	IV. butter

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

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

C. A-I-III,B-2,II,C-3-I

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

Answer: B



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Chemistry Structure Of Atom Stage 1

1. Element having highest atomic radius among the following is :

A. Li

B. Be

C. B

D. C

Answer: A



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2. Number of valence electrons in Cl^- ion are:

A. 16

B. 8

C. 17

D. 18

Answer: B



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3. Isoelectronic species are :

a. Na^+ b. Al^{3+} c. Mg^{2+} d. Ca^{2+}

A. a,b and c

B. a,c and d

C. a,b and d

D. a,b,c and d

Answer: A



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Chemistry Atoms And Molecules Stage 1

1. Number of neutrons in isotope of hydrogen, tritium is :

A. 0

B. 1

C. 2

D. 3

Answer: C



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2. Molecule containing coordinate covalent bond among the following is :



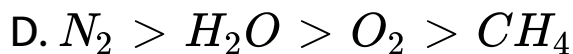
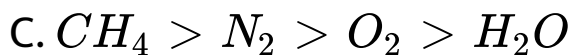
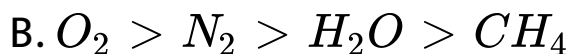
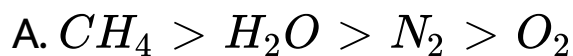
Answer: B



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Chemistry Atoms And Molecules Stage 2

1. You are provided with 18 g each of O_2 , N_2 , CH_4 and H_2O . Which of the following is the correct decreasing order of number of atoms present in these samples ?



Answer: A



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