

Adabistan-e-Soophia

Code: 2010

Test No.: 1

Paper: Chemistry

Name: _____

Class: X Sec: _____

Syllabus: Ch. 9, 11

Question Numbers	1	2	3			Total	Grade	%age
Maximum Marks	09	22	09			40		
Marks Obtained								

Remarks: _____

A	B	C	D	Write Correct option	A	B	C	D	Write Correct option	A	B	C	D	Write Correct option			
1	A	B	C	D		7	A	B	C	D		13	A	B	C	D	
2	A	B	C	D		8	A	B	C	D		14	A	B	C	D	
3	A	B	C	D		9	A	B	C	D		15	A	B	C	D	
4	A	B	C	D		10	A	B	C	D		16	A	B	C	D	
5	A	B	C	D		11	A	B	C	D		17	A	B	C	D	
6	A	B	C	D		12	A	B	C	D		18	A	B	C	D	

Note: Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that question with Marker or Pen ink. Cutting or filling two or more times result in zero mark in that question.

Q.1	Questions	(A)	(B)	(C)	(D)
1.	In the lime kiln, the reaction $CaCO_{3(s)} \rightarrow CaO_{(s)} + CO_{2(g)}$ goes to completion because:	Of high temperature	CaO is more stable than $CaCO_3$	CO_2 escapes continuously	CaO is not dissociated
2.	For the reaction, $2A + B \rightleftharpoons 3C$ the expression for the equilibrium constant is:	$\frac{[2A][B]}{[3C]}$	$\frac{[A^2][B]}{[C]^3}$	$\frac{[3C]}{[2A][B]}$	$\frac{[C]^3}{[A]^2[B]}$
3.	A reversible reaction is shown by:	A single arrow (\rightarrow)	A double arrow (\rightleftharpoons)	Both (A) & (B)	None of these
4.	A forward reaction moves from:	Left to right	Right to left	On both sides	None of these
5.	Dynamic equilibrium is established when a system is:	Closed	Open	In both conduction	None of these
6.	It is conventional to write the products as:	Numerators	Denominator	Decimal	Fractions
7.	A reverse reaction is one:	Which proceeds from left to right	In which reactants react to form products	Which slows down gradually	Which speeds up gradually
8.	Nitrogen and hydrogen were reacted together to make ammonia: $N_2 + 3H_2 \rightleftharpoons 2NH_3$ $K_c = 2.86 \text{ mol}^{-2} \text{ dm}^6$ Which will be present in the equilibrium mixture?	NH_3 only	N_2, H_2 and NH_3	N_2 and H_2 only	H_2 only

9.	For a reaction between PCl_3 and Cl_2 to form PCl_5 , the units of K_c are:	$mol\ dm^{-3}$	$mol^{-1}dm^{-3}$	$mol^{-1}dm^3$	$mol\ dm^3$
10.	Main component of natural gas is:	Propene	Propane	Methane	Butane
11.	General formula of alky radical is:	C_nH_{2n+2}	C_nH_{2n-2}	C_nH_{2n+1}	C_nH_{2n}
12.	The functional group-COOH is found in:	Carboxylic acid	Aldehydes	Alcohols	Esters
13.	Molecular formula of butane is:	C_2H_6	C_4H_8	C_4H_{10}	C_4H_{12}
14.	The compounds contains rings which are made up of only one kind of atoms are called:	Homocyclic	Heterocyclic	Carbocyclic	Both (A) & (C)
15.	Successive members of homologous series differ by one unit of:	C_2H	CH_2	CH	C_2H_2
16.	Formula of acetaldehyde is:	$CH_3 - CH_2OH$	$\begin{array}{c} O \\ \\ CH_3 - C - OH \end{array}$	$\begin{array}{c} O \\ \\ CH_3 - C - H \end{array}$	$\begin{array}{c} O \\ \\ H - C - H \end{array}$
17.	Naphthalene is:	An aromatic compound	Alicyclic compound	Non benzenoid compound	A cyclic compound
18.	The formula which represents the actual number of atoms in one molecule of the organic compound is called:	Condensed formula	Molecular formula	Structural formula	Electronic formula

(Section - I)

2. Write short answers to the following questions.

(11×2=22)

- i. What are irreversible reactions? Give a few characteristics of them.
- ii. How is dynamic equilibrium established?
- iii. What is relationship between active mass and rate of reaction?
- iv. What are the characteristics of forward reactions?
- v. Write the equilibrium constant expression for the following reactions:
 - a. $H_{2(g)} + I_{2(g)} \rightleftharpoons 2HI_{(g)}$
 - b. $CO_{(g)} + 3H_{2(g)} \rightleftharpoons CH_{4(g)} + H_2O_{(g)}$
- vi. Write few macroscopic characteristics of dynamic equilibrium.
- vii. Write molecular and structural formula of propane.
- viii. Define heterocyclic compounds.
- ix. What are alkyl radicals? Give alkyl radicals of n-butane?
- x. Define functional group. Also give functional groups of ester linkage and ether linkage.
- xi. Write functional group containing carbon, hydrogen and nitrogen.

(Section - II)

Note: Give detailed answers of the following questions.

(5+4=09)

3. a) State the law of mass action and derive the expression for equilibrium constant for a general reaction. (5)
- b) Write tests for unsaturation of organic compound and alcoholic group. (4)