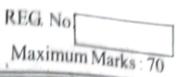
Define the term mole.

16.

QUARTERLY EXAMINATION - 2024

CLASS : 11 Time : 3.00 Hours

CHEMISTRY



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PART - I

Answer all the que	estions with choose th	e correct option:	15x1 = 15
Oxidation number of ox a) -2	cygen in oxygen difluoride (C b) -1		d) +2
The maximum number a) 2 n ²	of electrons in a subshell is gi b) 21+1	ven by the expression	d) None of these
Which one of the follow a) Bromine	ving is the least electronegative b) Chlorine	, , , , , , , , , , , , , , , , , , , ,	d) Hydrogen
Water is a a) Basic oxide	b) Acidic oxide	c) Amphoteric oxide	d) None of these
Which one of the follow a) Heavy water	ving is used to restore the whi b) Hydrogen peroxide	te colour of the old paintings. c) Water gas	d) Sodium chloride
If the temperature and v a) 4P	olume of an ideal gas is increa	ased to twice its values, the ini	tial pressure P becomes d) 3P
System is			heat is given out by the
a) +1 KJ	b) -5 KJ	c) +3 KJ	d) -3 KJ
Which of the following a) Be and Mg	pairs of elements exhibit diago b) Li and Be	onal realtionship? c) Be and B	d) Be and Al
In adiabatic process, wh	nich one of the following mag	netic material is used to produ	ice cooling by removing
a) Ferrous sulphate	b) Copper sulphate	c) Gadolinium sulphate	d) Zinc sulphate
$\frac{Kc}{Kp}$ for the reaction, N	$N_2(g) + 3H_2(g) \rightleftharpoons 2NH_3(g)$) is	
a) $\frac{1}{RT}$	b) \sqrt{RT}	c) RT	d) (RT) ²
		c) Equilibrium state	d) None of these
Nitrogen detection in an	n organic compound is carried	d out by Lassaigne's test. The	
due to the formation of a) Fe ₃ [Fe (CN) ₆] ₂			d) Fe ₃ [Fe (CN) ₆] ₃
Which one of the follow a) Ethylene	ring shows functional isomeris b) Propane	m? c) Ethanol	d) CH,Cl,
What is the hybridisatio a) sp ²	n state of benzyl carbonium b) spd ²	ion. c) sp ³	d) sp ² d
Homolytic fission of co	valent bond leads to the form	ation of	-, -,
a) Electophile	b) Nuceophile	c) Carbo cation	d) Free radical
-		1.00	
	questions :	<i>।</i>	6 x 2 = 12
	Oxidation number of or a) 2 n² The maximum number a) 2 n² Which one of the follow a) Bromine Water is a a) Basic oxide Which one of the follow a) Heavy water If the temperature and v a) 4P Change in internal enersystem is a) +1 KJ Which of the following a) Be and Mg In adiabatic process, who magnetic property a) Ferrous sulphate \[\frac{Kc}{Kp} \] for the reaction, \frac{N}{RT} \] If Q < Kc, the reaction Nitrogen detection in at due to the formation of a) Fe ₃ [Fe (CN) ₆] ₂ Which one of the follow a) Ethylene What is the hybridisation a) Sp² Homolytic fission of core a) Electophile Answer any SIX (**)	Civilation number of expension expendiffuoride (Ca) b) =1 The maximum number of electrons in a subshell is given by 21+1 Which one of the following is the least electronegative b) Chlorine Water is a a) Basic exide Which one of the following is used to restore the which a) Heavy water b) Hydrogen peroxide If the temperature and volume of an ideal gas is increased b) 2P Change in internal energy, when 4 KJ of work is done system is a) +1 KJ b) -5 KJ Which of the following pairs of elements exhibit diagonal Be and Mg b) Li and Be In adiabatic process, which one of the following magnagnetic property a) Ferrous sulphate b) Copper sulphate $\frac{Kc}{Kp}$ for the reaction, $N_2(g) + 3H_2(g) \rightleftharpoons 2NH_3(g)$ a) $\frac{1}{RT}$ b) \sqrt{RT} If $Q < Kc$, the reaction will proceed in the a) Forward direction Nitrogen detection in an organic compound is carried due to the formation of a) Fe ₃ [Fe (CN) ₆] ₂ b) Fe ₄ [Fe (CN) ₆] ₃ Which one of the following shows functional isomerisal Ethylene b) Propane What is the hybridisation state of benzyl carbonium a) sp ² b) spd ² Homolytic fission of covalent bond leads to the formal all Electophile PA	The maximum number of electrons in a subshell is given by the expression a) $2n^2$ b) $21+1$ c) $2(21+1)$ Which one of the following is the least electronegative element? a) Bromine b) Chlorine c) Iodine water is a a) Basic oxide b) Acidic oxide c) Amphoteric oxide which one of the following is used to restore the white colour of the old paintings a) Heavy water b) Hydrogen peroxide c) Water gas if the temperature and volume of an ideal gas is increased to twice its values, the ini a) $4P$ b) $2P$ c) P Change in internal energy, when 4 KJ of work is done on the system and 1 KJ of system is a) $+1$ KJ b) -5 KJ c) $+3$ KJ which of the following pairs of elements exhibit diagonal realtionship? a) Be and Mg b) Li and Be c) Be and B In adiabatic process, which one of the following magnetic material is used to produng the property a) Ferrous sulphate b) Copper sulphate c) Gadolinium sulphate $\frac{Kc}{Kp}$ for the reaction, $N_2(g) + 3H_2(g) \rightleftharpoons 2NH_3(g)$ is $\frac{1}{RT}$ b) \sqrt{RT} c) RT If $Q < Kc$, the reaction will proceed in the a) Forward direction b) Reverse direction c) Equilibrium state Nitrogen detection in an organic compound is carried out by Lassaigne's test. The due to the formation of a) $Fe_3[Fe(CN)_6]_2$ b) $Fe_4[Fe(CN)_6]_3$ c) $Fe_4[Fe(CN)_6]_2$ Which one of the following shows functional isomerism? a) Ethylene b) Propane c) Ethanol What is the hybridisation state of benzyl carbonium ion. a) Sp^2 b) Spd^2 c) Sp^3 Homolytic fission of covalent bond leads to the formation of a) Electophile b) Nuccophile c) Carbo cation $PART-B$

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17.	State Hund's rule of maximum multiplicity.		
18.	What are isoelectronic ions? Give example.		
19.	What is water-gas shift reaction?		
20.	Define Dalton's law of partial pressures.		
21.	Write the Kp and Ke for the following reaction.		
£1.	$2SO_{s}(g) + O_{s}(g) \rightleftharpoons 2SO_{s}(g)$		
2.2	What is sublimation?		
22.			
23.	What are Hyperconjucation? It an automobile engine burns petrol at a temperature of 816°C and if the surrounding temperature is		
24.	21°C, Calculate its maximum possible efficiency.		
	PART-C	$6 \times 3 = 18$	
III.	Answer any SIX questions : -	O A S	
	Question No. 33 is Compulsory		
25.	Find the molar mass of the following		
	(a) Urea (NH ₂ CONH ₂) (b) Boric acid (H ₃ BO ₃)	(c) Sulphuric acid (H ₂ SO ₄)	
26.	What is exchange energy?		
27.	Explain diagonal relationship.		
28.	What are ortho and para hydrogen?		
29.	What is entropy? Give its unit.		
30.	Distiguish between diffusion and effusion.		
31.	State Le-Chatelier principle.		
32.	Explain electromeric effect.		
33.	Give the structure for the following compound.		
33.	(i) 3 - ethyl - 2 - methyl - 1 - Pentene (ii) 3 - Chorobut	anal. (iii) 3 - methylbutan -2 - ol.	
,	PART-D		
		$5 \times 5 = 25$	
IV.	Answer all questions:	(2)	
34.	(a) (i) Define equivalent mass.	her method (3)	
	(ii) Balance the following equation by oxidation num	ibel illetiled.	
	$K_2Cr_2O_7 + KI + H_2SO_4 \rightarrow K_2SO_4 + Cr_2(SO_4)_3$	$+ 1_2 + 11_2 O [OR] $ (2)	
\	(b) (i) Write a note on Aufbau principle	(3)	
	(ii) Write the assumptions of Bohr atom model.		
35.	(a) (i) Define Modern Periodic law.	, (2)	
	(ii) Explain the periodic trend of ionisation potentia	1 [OR] (3)	
	(b) (i) Give the uses of heavy water.	(2)	
	(ii) What are the three types of Covalent hydrides. (Give examples. (3)	
26	(a) (i) State Boyle's law	(2)	
36	(ii) What is Joule - Thomson effect? [OR]	(3)	
	(11) What is Joule - Thomson effect: [Ost]	(2)	
	(b) (i) State the third law of thermodynamics	(3)	
	(ii) List the characteristics of internal energy	(2)	
37	(a) (i) Define Gibb's free energy.		
	(ii) What are state and path functions? Give two ex	amples: $\{OK\}$ (5)	
	(b) Derive the relation between Kp and Kc.	(3)	
38.	(a) Give a brief description of the principles of	. (5)	
	(i) Fractional distillation	(5)	
	(ii) Column chromatography [OR]		
	(b) What are electrophiles and nucleophiles?		
	Give suitable examples for each	(5)	
	******	11th Chemistry - Page: 2	
	Kindly Send Me Your Key Answer to Our email id	l - Padasalai.net@gmail.com	

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