

SARALA BIRLA PUBLIC SCHOOL

Mahilong, Ranchi.

Revision Test (CHEMISTRY)

Class – XI



- 1 mole of Ethene (C_2H_4) contains
 - 6.022 $\times 10^{23}$ atom of H
 - 4 g of hydrogen
 - 1.81 $\times 10^{23}$ molecules of ethene
 - 24 g of carbon
 - Which of the following statement is not correct
 - the electronic configuration of Cu is $[Ar] 3d^{10}, 4s^1$
 - 'm' can have -l to +l value
 - In Ag (47), 23 electrons have one type of spin and 24 electrons have opposite spin
 - the oxidation state of nitrogen in HN_3 (Hydrazonic acid) is - 3
 - The stability of +1 oxidation state among Al, Ga, In and Tl increases in the sequence
 - Al < Ga < In < Tl
 - Tl < In < Ga < Al
 - In < Tl < Ga < Al
 - Ga < In < Al < Tl
- Direction (Q. 4): In the following question, the Assertion and Reason have been put forward. Read the statement carefully and choose the correct alternative from the following**
- both Assertion and Reason are true and Reason is the correct explanation of Assertion
 - both Assertion and Reason are true and Reason is not correct explanation of Assertion
 - Assertion is true but Reason is false
 - both Assertion and Reason are false
- Assertion:** $SiCl_4$ reacts with water, CCl_4 does not
Reason: $SiCl_4$ is ionic whereas CCl_4 is covalent
 - Equal masses of He, O_2 and SO_2 taken in closed container. What will be ratio of their partial pressure
 - 50 mL of H_2 measured at 27 $^{\circ}$ C are heated to 327 $^{\circ}$ C, what is new volume if pressure is kept constant
 - If 50 g of $CaCO_3$ is treated with 50 g of HCl how many grams of CO_2 can be produced according to following equation; $CaCO_3(s) + 2HCl(dil) \rightarrow CaCl_2(aq) + CO_2(g) + H_2O(l)$
 - The wavelength of first spectral line in the Balmer series is 6561 Å. Calculate the wavelength of the second spectral line in Balmer series
 - Element A and B have atomic numbers 29 and 36 respectively on the basis of electronic configuration, write to which group of the periodic table each element belong
 - Predict the blocks to which these element belong also predict the periods
 - Use molecular orbital theory to predict why Be_2 molecule does not exist
 - Compare the stability of N_2^+ and N_2 .
 - Define molarity and molality.

b) Commercially available concentrated hydrochloric acid contains 45% HCl by mass. (i) What is the molarity and molality of this solution? The density is 1.19 g/ml

12. a) State Pauli's exclusion Principle.

b) Using s, p, d, f notations, describe the orbital with following quantum numbers:

i) $n=2, l=1$

ii) $n = 4, l = 0$

iii) $n = 5, l = 3$

iv) $n=3, l = 2$

c) Arrange the elements of second period in order of decreasing value of ionization energy .

d) Among Be & B which one has higher electron gain enthalpy and why

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