



ESSENCE TEST-6

DATE : 25-08-19

9TH CLASS

ICSE

LANGUAGE OF CHEMISTRY, WATER,
REACTION AND CHEMICAL EQUATION.

Mantra to get the best outcome.....

**Best** solution
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Q.1 [1 Mark Questions]

- (i) What is the molecular mass of $K_2Cr_2O_7$?
[Atomic Mass : K = 39, Cr = 52, O = 16]
(a) 294 (b) 138 (c) 153 (d) 98
- (ii) The molecular formula of aluminum sulphate is
(a) $AlSO_4$ (b) Al_2SO_4 (c) $Al_3(SO_4)_2$ (d) $Al_2(SO_4)_3$
- (iii) Moisture of water turns white anhydrous $CuSO_4$.
(a) Red (b) Green (c) Blue (d) No change
- (iv) Pure sulphuric acid act as –
(a) Drying agent (b) dehydrating agent
(c) Both Drying and dehydrating agent (d) None of these
- (v) which of the following is dehydrating substance?
(a) Conc. H_2SO_4 (b) Silica gel
(c) Honey (d) NaOH

Q.2 [2 Marks Question]

- (i) Give balance equations for the reaction of water with the following:
(a) Calcium oxide (b) Sulphur dioxide
- (ii) Give reason:
(a) Ice floats on water
(b) Hot water less dissolved in air than cold water.
- Q.3 Explain why:-
(i) Steam cause more severe burns than boiling water.
(ii) Air dissolved in water has higher proportion of oxygen than ordinary air.
- Q.4 Mention important differences between physical and chemical changes.
- Q.5 Explain a combination reaction, giving an example?
- Q.6 What do you mean by double decomposition reaction?
- Q.7 Write the name of the following compounds-
(a) $KMnO_4$ (b) Na_2O (c) NH_4Cl (d) H_2SO_4
- Q.8 An element 'X' is trivalent. Write the balanced equations for the combustion of 'X' in oxygen.

- Q.9 What is the valiancy of nitrogen in
(a) NO (b) N₂O
- Q.10 Balance the following word equations.
(a) Calcium + water → Calcium hydroxide
(b) Iron + Hydrochloric acid → Iron (II) Chloride + Hydrogen.

Q.III [3 marks questions]

- Q.1 Calculate the percentage of oxygen in K₂Cr₂O₇.
[K = 39, Cr = 52, and O = 16]
- Q.2 Define
(1) Atomic Mass (2) Atomic Number (3) Molecular Mass
- Q.3 A metal M forms a volatile chloride containing 65.5% Chlorine. If the density of the Chloride relative to hydrogen that is vapour density is 162.5 find the molecular formula of the chloride [M = 56 and Cl = 35.5].
- Q.4 Define exothermic and exothermic reaction with examples.
- Q.5 Name the type of a reaction, decomposition, displacement, combination or double decomposition of the following reaction.
(a) $NH_3 + HCl \rightarrow NH_4Cl$
(b) $2KNO_3 \rightarrow 2KNO_2 + O_2$
(c) $N_2 + 3H_2 \rightarrow 2NH_3$
(d) $NaCl + AgNO_3 \rightarrow AgCl + NaNO_3$
(e) $2H_2O_2 \rightarrow 2H_2O + O_2$
(f) $Cl_2 + 2KBr \rightarrow 2KCl + Br_2$
- Q.6 Name three important factor that influence the solubility of a solid in water.
- Q.7 Explain temporary and permanent hardness of water.
- Q.8 What is the difference between hygrosopes and deliquescence with examples.
- Q.9 If column carbonate is put in distilled water will it cause hardness If not why?
- Q.10 Explain the following terms:
(a) Solute (b) Solvent (c) Solution

Q.IV [5 Marks Questions]

- Q.1 Explain the methods of removing soft hardness and permanent hardness in waters. Give reactions also.
- Q.2 Differentiate between unsaturated, Saturated and supersaturated solutions, with examples.
- Q.3 Write 5 Chemical properties of water.
- Q.4 Define precipitation reaction, Neutralization reactions with 2 examples each.
- Q.5 Write 4 differences between oxidation reaction and Reduction reaction.



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