

DPS MODERN INDIAN SCHOOL, DOHA, QATAR
PORTION FOR SUMMATIVE ASSESMENT I- SEPTEMBER 2013

CLASS X: Marks : 90

Units:

| | |
|-------------------------|-----------|
| I. Chemical Substances | 33 |
| II. World of living | 21 |
| III. Effects of Current | 29 |
| IV Natural Resources | 07 |
| Total | 90 |

CHEMISTRY:

Unit : Chemical Substances - Nature and Behaviour

Chemical reactions : Chemical Equation, Balanced chemical equation, implications of a balanced chemical equation, types of chemical reactions : combination, decomposition, displacement, double displacement, precipitation, neutralization, oxidation and reduction.

Acids, bases and salts : Their definitions in terms of furnishing of H⁺ and OH⁻ ions, General properties, examples and uses, concept of pH scale(Definition relating to logarithm not required), importance of pH in everyday life; preparation and uses of sodium hydroxide, Bleaching powder, Baking soda, washing soda and Plaster of Paris.

Metals and non metals : Properties of metals and non-metals, reactivity series, formation and properties of ionic compounds, basic metallurgical processes, corrosion and its prevention

BIOLOGY:

Unit : World of Living

Life Processes : "living being". Basic concept of nutrition, respiration, transport and excretion in plants and animals.

Control and Co-ordination in Animals and Plants : Tropic movements in plants; Introduction to plant hormones; control and co-ordination in animals : nervous system; voluntary, involuntary and reflex action, chemical co-ordination: animal hormones.

PHYSICS:

Unit : Effects of Current

Electric current, potential difference and electric current. Ohm's law; Resistance, Resistivity, Factors on which the resistance of a conductor depends. Series combination of resistors, parallel combination of resistors and its applications in daily life. Heating effect of Electric current and its applications in daily life. Electric Power, Inter relation between P, V, I and R.

Magnetic effects of current : Magnetic field, field lines, field due to a current carrying conductor, field due to current carrying coil or solenoid; Force on current carrying conductor, Fleming's left hand rule. Electro magnetic induction. Induced potential difference, Induced current. Fleming's Right Hand Rule, Direct current. Alternating current : frequency of AC. Advantage of AC over DC. Domestic electric circuits.

Sources of energy : Different forms of energy, conventional and non-conventional sources of energy: fossil fuels, solar energy; biogas; wind, water and tidal energy; nuclear energy. Renewable versus non-renewable sources.

PRACTICALS:

1. To find the pH of the following samples by using pH paper/universal indicator.
 - a. Dilute Hydrochloric acid
 - b. Dilute NaOH solution
 - c. Dilute ethanoic acid solution
 - d. Lemon juice
 - e. Water
 - f. Dilute sodium bicarbonate solution.
2. To study the properties of acids and bases HCl & NaOH by their reaction with
 - a. Litmus solution (Blue/Red)
 - b. Zinc metal
 - c. Solid sodium carbonate
3. To perform and observe the following reactions and classify them into:
 - i. Combination reaction
 - ii. Decomposition reaction
 - iii. Displacement reaction
 - iv. Double displacement reaction
 - 1) Action of water on quick lime.
 - 2) Action of heat on ferrous sulphate crystals
 - 3) Iron nails kept in copper sulphate solution
 - 4) Reaction between sodium sulphate and barium chloride solutions.
4. a) To observe the action of Zn, Fe, Cu and Al metals on the following salt solutions.
 - a. ZnSO_4 (aq.)
 - b. FeSO_4 (aq.)
 - c. CuSO_4 (aq.)
 - d. $\text{Al}_2(\text{SO}_4)_3$ (aq.)b) Arrange Zn, Fe, Cu and Al metals in the decreasing order of reactivity based on the above result.
5. To study the dependence of potential difference (V) across a resistor on the current (I) passing through it and determine its resistance. Also plot a graph between V and I.
6. To determine the equivalent resistance of two resistors when connected in series.
- 7 To determine the equivalent resistance of two resistors when connected in parallel.
- 8 To prepare a temporary mount of a leaf peel to show stomata.
- 9 To show experimentally that light is necessary for photosynthesis.
- 10 To show experimentally that carbon dioxide is given out during respiration.