

**Madhya Pradesh Board Element of Science Syllabus for Class 11**

Elements of Science syllabus for class XI of 2008-09 session

Time: 3 hours

Maximum Marks: 75

Unit	Title	Contents	Marks	Periods
Unit-1	General properties of matter	(a) General properties of matter - Principle of Archimedes, Floating things, Hydrometer, Atmospheric pressure, Barometer and its relations with climatic conditions.  (b) Simple Machines - Definition of Simple machine and its importance, Machines used in daily life i.e- vacuum cleaner, washing machine, dish washing machine.	10	20
Unit- 2	Heat	(a) Heat - Introductory knowledge of specific heat and latent heat, Melting point, Boiling point, effect of impurities on it, Principle of pressure cooker and its function.  (b) Conduction, Convection and Radiation, Definition and its uses in daily life.  (c) Humidity, Dryness and Dampness Definition, effect of temperature on humidity and its uses.	10	20
Unit- 3	Sound	Sound - Transmission of sound waves, Velocity of sound, Production and reproduction, noise pollution.	5	14
Unit- 4	Chemical classification of matter and laws of chemical combination	(A) Chemical classification of Matter - Element, Compound and mixture, difference between, Element, Compound and mixture.  (B) Laws of chemical combination -Law of conservation of mass, Law of definite proportion, Law of multiple, Proportion, Law of Reciprocal proportion, Gallusac's law, Avogadro Hypothesis.  (C) Structure of Atom, Components of Atom-Electron, Proton, Neutron, Rutherford model.	10	14
Unit- 5	Solubility Product	Solubility Product - Ionisation, difference between Ion and Atom, chemical reactions in solutions, solubility product, uses of solubility product factors, affecting solubility product.	4	10
Unit- 6	Water	Water - Sources of water, Hard and soft water, Methods of removal of hardness in water, uses of water.  Contaminated water - causes and prevention of contaminated water diseases caused by contaminated water, conservation of water.	6	17
Unit-7	Bleaching Properties	Bleaching Properties - Bleaching Properties of different types of bleaches, difference between their bleaching action, i.e. sulphur dioxide, chlorine and bleaching powder.	4	15
Unit-8	Different parts of a flowering plant, pollination and fertilization, structure and germination of seeds.	(a) Different parts of flowering plant -Vegetative and Reproductive parts Introduction of Root, Stem and leaves. Different parts of flower  (b) Pollination and Fertilization -  Definition and types of pollination. Advantages and Disadvantages of pollination. Modes of Pollination  Pollen grains - Structure of pollen grains, structure of ovule, fertilization, double fertilization and importance of double fertilization.  (c) Structure and germination of seed Mono cotyledon seed - Maize, dicotyledon seed, Gram, economic importance of seeds.	10	22
Unit-9	(1) Flower	(a) Flower - Description of any flower of family malvaceae or leguminosae, economic importance of family. (b) The fruit - Definition, Parts of fruit, Types of fruit, classification of fruits, Edible parts of some common fruits.	4	10

	(2) The Fruit			
Unit-10	Study of disease carriers	Study of disease Carriers -  Entamoeba, Mosquito, Hook worm, Tape worm, Round worm, (Ascaris) External features and Lifecycle. Diseases caused by them and their prevention, economic importance.	4	8
Unit-11	Simple and compound microscope, cell, cell division, Tissues	(a) Simple and Compound Microscope - Structure, Functions and Uses. (b) Cell, Cell division, Tissue -  (1) Definition, size and shape, protoplasm, properties of protoplasm, structure of cell and its functions.  (2) Nucleic acid - D.N.A. & R.N.A. structure, function and difference between D.N.A. & R.N.A.  (3) Cell Division - Mitosis & meiosis, its importance.  (4) Tissue - Definition, types and functions.	8	10
	Revision			20

Practical Syllabus-

Time: 3 hours

Maximum Marks: 25

1	Physics-	(1) To determine relative density of solid (glass or cork) by Nicholson's Hydrometer  (2) To determine relative density of liquid given by Nicholson's Hydrometer  (3) To determine melting point of wax.	6 Marks
2	Chemistry-	(4) Single titration - acid-base	6 Marks
3	Biology-	(5) Study of any one flower (malvaceae or leguminosae)  (6) Spotting- According to syllabus  (7) Record  (8) Viva	13 Marks