

CLASS X – SCIENCE – SYLLABUS –SA 2 - 2014

Natural Phenomena - 29 Marks

Reflection of light at curved surfaces, Images formed by spherical mirrors, centre of curvature, principal axis, principal focus, focal length, mirror formula (Derivation not required), magnification.

Refraction; laws of refraction, refractive index. Refraction of light by spherical lens, Image formed by spherical lenses, Lens formula (Derivation not required),

Magnification. Power of a lens; Functioning of a lens in human eye, defects of vision and their corrections, applications of spherical mirrors and lenses.

Refraction of light through a prism, dispersion of light, scattering of light, applications in daily life.

Conservation of natural resources -8 Marks

Management of natural resources. Conservation and judicious use of natural resources. Forest and wild life, coal and petroleum conservation. Examples of People's participation for conservation of natural resources.

The Regional environment : Big dams : advantages and limitations; alternatives if any. Water harvesting.

Sustainability of natural resources.

Our environment : Eco-system, Environmental problems, Ozone depletion, waste production and their solutions. Biodegradable and non-biodegradable substances.

World of Living 30 Marks

Reproduction : Reproduction in animal and plants (asexual and sexual) reproductive health-need for and methods of family planning, safe sex vs HIV/AIDS. Child bearing and women's health.

Heredity and evolution : Heredity; Mendel's contribution- Laws for inheritance of traits: Sex determination: brief introduction; Basic concepts of evolution.

Chemical Substances - Nature and Behaviour 23 Marks

Carbon compounds : Covalent bonding in carbon compounds. Versatile nature of carbon. Homologous series Nomenclature of carbon compounds containing functional groups (halogens, alcohol, ketones, aldehydes, alkanes and alkynes), difference between saturated hydrocarbons and unsaturated hydrocarbons. Chemical properties of carbon compounds (combustion, oxidation, addition and substitution reaction). Ethanol and Ethanoic acid (only properties and uses), soaps and detergents.

Periodic classification of elements : Need for classification, Modern periodic table, gradation in properties, valency, atomic number, metallic and non-metallic properties.

**Design of Question Paper
Science (086),
Summative Assessment-II
Class X – (2012-13)**

Types of questions	Marks per question	Total no of questions	Total marks
MCQ	1	18	18
VSA	1	3	3
SA-I	2	4	8
SA-II	3	12	36
LA	5	5	25
Total		42	90