SYLLABUS FOR TET
SCIENCE : For Paper-II
[Physics, Chemistry and Biology]
For Upper Primary Level—Classes (VI-VIII)
Total Marks : 30

PHYSICS--

Kinematics :-

Motion in a straight line : Distance and displacement, speed and velocity, uniform and non-uniform motion, average and instantaneous speed and velocity, uniform acceleration, graphical representation of motion ,periodic motion, pendulum, Oscillatory motion.

Laws of Motion : Newton's first law of motion, qualitative concept of force, inertia of rest and inertia of motion and their examples, Newton's second law of motion ,Quantitative concept of force, Newton's third law of motion and examples, Law of conservation of linear momentum.

Heat and Temperature : Differences between heat and temperature, measurement, transfer of heat.

Light : Rectilinear propagation of light ,shadows, eclipses, transparent, opaque and translucent objects, Reflection of light, plane and spherical mirrors, laws of reflection, Refraction of light, refractive index, total internal refraction, refraction in lenses, laws of refraction, Image formed by spherical Mirrors and lenses, Defects of vision, Power of lenses.

Sound : Oscillations and waves, kind of waves, Sound waves, sources of sound, propagation of sound through solids, liquids and gases, Speed of sound in different medium, ultrasound.

Electricity : Electric charge and Coulomb's law, Electric cell, Conductors, Insulators, Electric field, Electric intensity and electric potential and potential difference, Electric current, Primary cell, Ohm’s law, AC and DC, series and parallel combination of Resistances, Heating effects of electric current, magnetic effects of electric current.

Chemistry-Total Marks-9

Metals and Non-Metals : Physical properties of Metals and Non-Metals, Chemical properties of Metals and Non-Metals, Reaction with Water and Acids, Use of Metals and Non-Metals.

Physical and Chemical Change : Differences between chemical and physical change, Rusting of Iron, Galvanisation, Crystallisation.

Acids, Bases and Salts : Acids and Bases, Indicators, Reaction of Acids and Bases with Metals, Reaction of Acids and Bases with each other, Strong or Weak solutions of Acid and Base, idea of pH, Importance of pH in everyday life, Chemicals from common salts.

F**ibre and Fabric :** Natural and Synthetic Fibre, Making of Fabric, Plastics**,**

Chemical Effects of Electric Current : Electrolysis and electroplating**.**

Pollution : Air pollution and water pollution.

BIOLOGY—

Living World :-

Cells :- Concept of cell, cell types, structure of cells and functions of cell organelles, difference between plant and animal cells, cell division.

Transportation in Animals and Plants : Circulatory system, Excretory system in human, Blood vessels, Human heart, Transportation of substances and water in plants, Transpiration.

Respiration in organisms : Cellular respiration, anaerobic respiration

Plant World :-

Reproduction in plants--Mode of production, vegetation propagation, Fragmentation, sexual Reproduction, Fertilisation, Seed Dispersal.

Nutrition in plants—Nutrients, Mode **of** multiplication in plants, Photosynthesis, Saprotrophs.

Crop production and Management –Kharif and Rabi crops, Fertiliser and Manure, weeds and protection from weeds, different types of soil and crop production.

Animal World :--

Microorganism--Virus, Bacteria, Fungi, Protozoa, Algae, Common ailments like cold, influenza, Disease like polio and chicken pox ,dysentery and malaria, Beneficial microbes.

Animal nutrition- The major nutrients in human's food and its sources, functions of nutrients, Diseases occurring for deficiency of different nutrients.

Reproduction in Animals--Different modes of animal reproduction**,** Reproductive organs in animals, Development of Embryo and related processes, Asexual reproduction in animals.

Intergration of ICT in teaching Science-

Importance of ICT in teaching Science.

Use of ICT in teaching Science

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