



**GENERAL SCIENCE CAPSULE 2015  
FOR  
SSC CGL/LDC & other Entrances**

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## GENERAL SCIENCE CAPSULE 2015

**SCIENCE:** The word science comes from the Latin word scientia which implies knowledge. The science as subject has come to mean the systematic, consistent and excellent study of the physical world including everything that can be seen, observed or detected in nature by the man and society and the knowledge that grows out of such study. usually the science is characterized by the methodologies and approaches of the hypotheses, postulates, assumptions, theories and laws based experimental observations and mathematical conclusions.

The science is broadly categorized into two groups- Natural science and Social science. natural science deals with the nature or physical world.

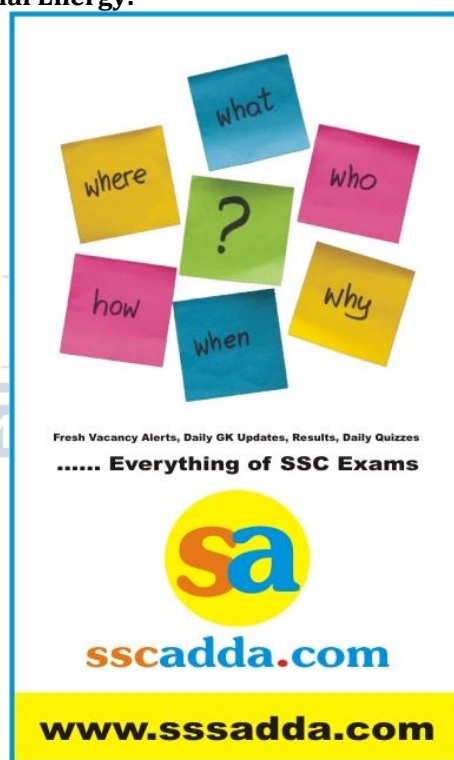
Natural science is broadly divided into:

1. Physical science (studies concerned with non-living matter)
2. Life science or Biological science (studies concerned with living matter)

### General Science :

1. The temperature at which all substances have zero thermal energy - **273 degree celcius.**
2. Any substance which when added to a reaction, alters the rate of the reaction but remains chemically unchanged at the end of the process is called - **Catalyst.**
3. The study of the inter-relations of animals and plants with their environment is called-**Ecology.**
4. Study of insects is called-**Entomology.**
5. A unit used to express the focal power of optical lenses-**Dioptr.**
6. The velocity that a body with less mass must achieve in order to escape from the gravitational attraction of a more massive body is called-**Escape Velocity.**
7. Laughing gas is chemically known as- **Nitrous Oxide.**
8. The blood vessels carrying blood from the heart to various parts of the body is called-**Artery.**
9. The distance travelled by light in one year is called - **Light year.**
10. An organism which derives its nourishment from another living organism is called-**Parasite.**
11. Newton's which law states that the rate of change of momentum of a body is directly proportional to the force applied and takes place in the direction in which the force act -**Newton's second law of motion.**
12. Which is the world's first man-made satellite-**Sputnik-I.(4 oct 1957)**
13. Which planet is the brightest of all the planets-**Venus.**
14. Small pieces of solid matter which are found scattered in the inter-planetary space of the solar system are known as-**Meteoroids.**



15. The largest gland in the body which is dark red in colour is- **Liver.**
16. Inadequate secretion of Insulin hormone causes which disease -**Diabetes.**
17. Common cold, Influenza, Chickenpox and Measles are caused due to the attack of Virus or Bacteria - **Virus.**
18. In which atmospheric layer are the communication satellite located- **Ionosphere.**
19. The scientific principle behind 'Fibre Optics' is - **Total internal reflection of light.**
20. Ginger is a stem and not a root, True or False - **True (because it has nodes and Internodes).**
21. When we wind a watch which energy is stored - **Potential Energy.**



22. On which phenomena the process of Dialysis used on patient with affected kidneys is Based - **Osmosis.**
23. When a piece of ice floating in a beaker of water melts, the level of water will rise or fall-**Remains the same.**
24. Energy stored in a dry cell is - **Chemical energy.**
25. When a cricketer lowers his hand while catching the ball, it saves him from injury due to - **Conservation of momentum.**
26. Full form of AIDS is - **Acquired Immune Deficiency Syndrome.**
27. Chemical technology dealing with the conversion of base metals into gold is - **Alchemy.**

28. Substances produced by micro-organism that kill or prevent growth of other micro-organism is called - **Antibiotics.**
29. Substances which react with acids to form salts is called - **Base.**
30. The ancient oriental art of growing trees in dwarf form is called - **Bonsai.**
31. What is the unit of heat - **Calorie.**
32. The ability of a body to resist tension or compression and to recover its original shape and size when the stress is removed is called - **Elasticity.**
33. The negatively charged particles which revolve around the nucleus of the atom in certain orbits is called - **Electron.**
34. The branch of biology dealing with study of Heredity is - **Genetics.**
35. Kwashiorkor is caused due to the deficiency of - **Protein.**
36. Optical illusion often witnessed in deserts when the objects on the surface of the earth at
37. The branch of science which deals with study of nature and properties of light is called- **Optics.**
38. The scale used to measure the magnitudes of earthquakes is called - **Richter scale.**
39. The heat required to raise the temperature of 1 kg of a substance through one degree celcius is called - **Specific heat.**
40. The speed greater than the speed of sound is called- **Supersonic speed.**
41. Volatile substance that incapacitates a time by powerfully irritating the eyes, provoking tears is called - **Tear gas.**
42. Who is the inventor of Dynamite - **Alfred B. Nobel.**
43. Who discovered life in plants - **Jagadish Chandra Bose.**
44. The unit used to measure loudness of sound is - **Decibel.**
45. The smallest part of an element that can take part in a chemical reaction is called - **Atom.**
46. Substances used for destroying or stopping growth of micro-organisms in living tissue is Called -**Antiseptic.**
47. Water that does not form lather with soap easily is called - **Hard water.**
48. The lines drawn on maps joining the places having same barometric pressure is called -**Isobars.**
49. Lymph differs from blood in not having - **Red Blood Corpuscles.**
50. Universal receivers can receive blood from - **Groups O, A, B and AB**
51. Study of Grass is called - **Agrostology.**
52. Study of Tumor is called - **Oncology.**
53. Which physical property will be unaffected with increase in quantity - **Density.**
54. Oil spreads over the surface of water because - **Oil has less surface tension than water.**
55. In high mountaneous regions bleeding through nose occurs because - **The pressure of the blood in the capillaries is higher than the outside air pressure.**
56. Why does a man weigh more at the poles than at the equator - **Gravitational pull is more at the poles.**
57. A gas will behave as an ideal gas at - **At very low pressure and high temperature.**
58. Oology is the branch of science dealing with the study of -**Birds egg.**
59. Why does a drop of liquid assume a spherical shape - **Because a sphere has the least surface tension**
60. When cream is separated from milk the density of milk increases or decreases-**Increases**
61. Diamond is harder than Graphite due to difference of - **Crystalline structure.**
62. Which combination of colours is the most convenient during day and night time-- **Red and Green**
63. An element which does not react with oxygen is - **Helium**
64. An instrument that measures and records the relative humidity of air is - **Hygrometer**
65. The different colours of different stars are due to the variation of- **Temperature**
66. Which is left when an hydrogen atom loses its electron - **A proton**
67. The fundamental scientific principle in the operation of a battery is - **Oxidation-reduction**
68. Which metal is used to galvanise iron - **Zinc**
69. The instrument used to measure the force and velocity of the wind is- **Anemometer**
70. Edward Jenner is associated with - **Small Pox**
71. The scientist who explained about blood circulation for the first time was - **William Harvey**
72. Nitroglycerine is used as - **An explosive**
73. Solar Energy is due to the process of - **Fusion reactions**
74. In a dry cell battery which are used as electrolytes - **Ammonium Chloride and Zinc Chloride**
75. Permanent Research Station of India, Dakshin Gangotri is located at - **Antarctica**
76. Which types of waves are used in a night vision apparatus - **Infrared waves**
77. In order to stay over the same spot on the earth, a geostationary satellite has to be directly Above - **The Equator**
78. Water is used to cool the engines of cars, buses, trucks, etc. It is because water has-**High specific heat**
79. Due to contract of eyeball, a long-sighted eye can only see farther objects which is corrected by using - **Convex lens**
80. Rainwater collected after 30 to 40 minutes of raining is not suitable for drinking because it is - **Acidic**

81. The refining of petroleum is done by the process of - **Fractional Distillation** Physical quantities which are completely described by a magnitude (size) alone are known as - **Scalar quantities**
82. Study of the abundance and reactions of chemical elements and molecules in the universe, and their interaction with radiation is called - **Astrochemistry**
83. Birbal Sahni Institute of Palaeobotany is located at - **Lucknow, Uttar Pradesh**
84. Organelles which is known as the power house of the cells - **Mitochondria**
85. Photosynthesis takes place maximum in red colour and minimum in - **Violet colour**
86. Other name of White Blood Cells is - **Leukocytes**
87. Other name of Red Blood Cells is - **Erythrocytes**
88. Which antiseptic compound is present in Dettol - **Chloroxylenol**
89. What is a compound that is a white solid which absorbs water vapour from the air - **Calcium chloride**
90. To which product of equivalent weight and valency of an element is equal - **Atomic weight**
91. Which element forms the highest number of compounds in the periodic table - **Silicon**
92. How does addition of ethylene dibromide help to petrol - **Elimination of lead oxide**
93. What do we call the process of separation of pure water from impurities - **Distillation**
94. What is the name of gas which is present in both the natural gas and the biogas - **Methane**
95. Of which alloy the commonly used safety fuse-wire is made - **Alloy of Tin and Lead**
96. What is alcohol obtained in the saponification process - **Glycerol**
97. Which is used to dilute oxygen in the gas cylinders used by divers - **Helium**
98. What do cathode rays case when obstructed by metal - **emission of X-rays**
99. With which liqued is anomalous expansion associated - **Water**
100. What is a tick paste of cement, sand and water called - **Mortar**
101. Ethanol containing 5% water By which name is it known - **Rectified spirit**
102. Of which Container radioactive materials should be kept - **Pb**
103. Which is not an anesthetic agent in surgical operations - **Acetone**
104. What is the percentage of Nitrogen, present in ammonium sulphate - **21%**
105. Which is the nuclear particle having no mass and no charge, but only spin - **Neutrino**
106. The pH of fresh milk is 6. When it turns sour, what will be the pH - **Less than 6**
107. How must have metals used to make wires for safety fuses- **Low resistivity and low melting point**
108. Sodium stearate is a salt and how is it used - **To make soap**
109. Which are the two main constituents of granite- **Iron and silica**
110. Which method of water purification does not kill microorganism - **Filtration**
111. Which gase is supporter of combustion - **Oxygen**
112. By which was the presence of Cobalt. in Vitamin B-12 established for the first time - **Borax-Bead test**
113. Which metal can deposit copper from copper sulphate solution - **Iron**
114. Which group of gases contribute to the "Green House effect" - **Carbon dioxide and Methane**
115. On heating, Gypsum loses certain percentage of its water content and what does it become - **Plaster of Paris**
116. A liquid initially contracts when cooled down to 4 degree Celsius but on further cooling down to zero degree Celsius, it expands. What is the name of liquid - **Water**
117. Under which category Magnetic, electrostatic and gravitational forces come - **Non-contact forces**
118. No matter how far you stand from a mirror, your image appears erect, How is the mirror likely to be - **Either plane or convex**
119. Due to which Phenomenon are advanced sunrise and delayed sunset found in the sky - **Refraction of sunlight**
120. Due to which Phenomenon is the formation of colours in soap bubbles - **Interference of light**
121. On which principle a pressure cooker works - **Elevation of boiling point of water by application of pressure**
122. Why does pressure of a gas increases due to increase of its temperature- **Kinetic energies of die gas molecules are higher**


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123. By which Newton's may the weight of an object be assigned – **Laws of gravitation**
124. With which field is a current carrying conductor associated – **A magnetic field**
125. On which the linear expansion of a solid rod is independent – **On its time of heat flow**
126. Which doesn't have any effect on velocity of sound – **Pressure**
127. Why does white light into its components – **Due to dispersion**
128. What type of lenses are used in movie projectors – **Convex**
129. During which radioactivity radiation is not emitted – **Cathode rays**
130. An object is undergoing a non-accelerated motion. What is Its rate of change in momentum – **Zero**
131. A particle is moving freely. Then its – **kinetic energy is always greater than zero**
132. If an object undergoes a uniform circular motion, then What will be – **Its velocity changes**
133. In how many hours does geostationary satellite complete its one revolution around the earth – **24 hours**
134. MCB, which cuts off the electricity supply in case of short-circuiting, on which effect does it work – **Magnetic effect of current**
135. A motor vehicle is moving in a circle with a uniform speed. Where will be the net acceleration of the vehicle – **towards the centre of circle**
136. Which property of a proton may change while it moves freely in a magnetic field – **Velocity**
137. During sunrise and sunset, why does sun appears reddish-orange – **Reddish-orange light is least scattered by the atmosphere**
138. Why are ball bearings used in bicycles, cars, etc – **The effective area of contact between the wheel and axle is reduced**
139. By which Signal a television channel is characterised – **Frequency of transmitted signal**
140. What is a good conductor while carrying current – **Electrically neutral**
141. What is the device used for measuring the wavelength of X-rays – **Bragg Spectrometer**
142. Which is responsible for the working of Newton's colour disc experiment – **Persistence of vision**
143. Who is the founder, of quantum theory of radiation – **Plank**
144. What is Photon – **The fundamental unit/quantum of Light**
145. When does a liquid disturbed by stirring come to rest – **Due to Viscosity**

### BRANCHES OF SCIENCE

- Study of Heavenly bodies is called - **Astronomy**
- Study of bacteria and the diseases caused by them is called - **Bacteriology**
- Science dealing with the origin and development of mankind is called - **Anthropology**
- Study of cells is called - **Cytology**
- Science dealing with the functions and the diseases of heart is called - **Cardiology**
- Study of skin is called - **Dermatology**
- Study of Blood Vascular System is called - **Angiology**
- Study of Fungi and fungus diseases is called - **Mycology**
- Study of Tumors is called - **Oncology**
- Study of Liver and its diseases is called - **Hepatology**
- Study of the Nervous system, its functions and its disorders is called - **Neurology**
- Branch of Biology dealing with the phenomena of Heredity is called - **Genetics**
- Study of causes of Diseases is called - **Etiology**
- Study of Ears and their diseases is called - **Otology**
- Study of Condition and Structure of Earth is called - **Geology**
- Study of Kidneys and its function is called - **Nephrology**
- Study of Birds is called - **Ornithology**
- Study of Fossils is called - **Palaeontology**
- Study of Bones is called - **Osteology**
- Study of Soils is called - **Pedology**
- Branch of science dealing with Urinary system is called - **Urology**
- Study of Viruses is called - **Virology**
- Study of resistance of body against infection (immunity) is called - **Immunology**
- Study of Muscles is called - **Myology**
- Study of development of Embryos is called - **Embryology**
- Study of Insects is called - **Entomology**
- Study of Female Reproductive System is called - **Gynaecology**
- Study of production of Three Dimensional Image using Laser is called - **Holography**
- Study of Snakes is called - **Serpentology**
- Production of Raw Silk by rearing of Silk Worms is called - **Sericulture**
- Study of Algae is called - **Phycology**
- Study of diseases, symptoms, cause and remedy is called - **Pathology**
- Study of Serum is called - **Serology**
- The Breeding, Rearing, and Transplantation of Fish is called - **Pisciculture**

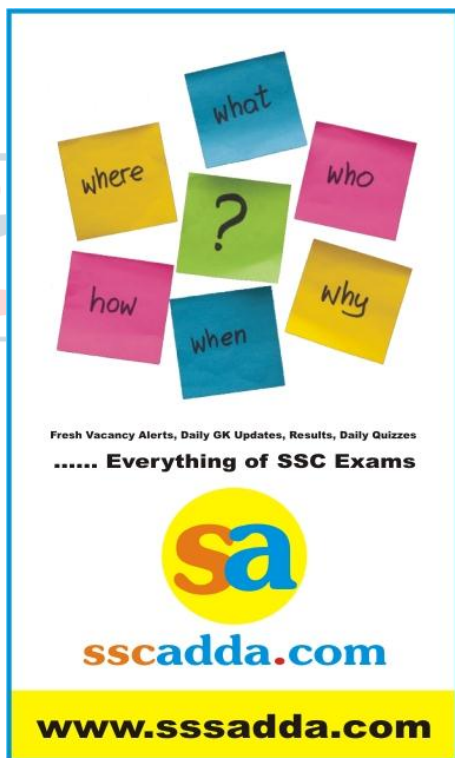
Study of Eyes and its diseases is called - **Ophthalmology**


**LIST OF SCIENTIFIC INSTRUMENT**

1. An instrument used in aircrafts for measuring altitudes is called - **Altimeter**
2. An instrument used to measure the strength of an electric current is called - **Ammeter**
3. An instrument to measure the speed, direction and pressure of the wind is called- **Anemometer**
4. An instrument used to measure difference in hearing is called - **Audiometer**
5. An instrument to measure atmospheric pressure and conditions is called - **Barometer**
6. An instrument used to measure potential difference between two points is called - **Voltmeter**
7. An optical instrument used for magnified view of distant objects is called-**Binoculars**
8. An instrument used to measure the diameters of wire, tube or rod is called-**Callipers**
9. An instrument used to measure quantities of Heat is called - **Calorimeter**
10. An apparatus used for charging air with petrol vapours in an internal combustion engine is called - **Carburettor**
11. An instrument used for measuring the temperature of the human body is called-**Thermometer**
12. A device which converts mechanical energy into electrical energy is called- **Dynamo**
13. An instrument used for measuring electrical potential differences is called- **Electrometer**
14. An instrument used for detecting the presence of electric charge is called- **Electroscope**
15. An instrument used for measuring Electric Current is called - **Galvanometer**
16. An instrument used for measuring depth of the ocean is called - **Fathometer**
17. An instrument used for relative density of liquids is called - **Hydrometer**
18. An instrument used for relative density of milk is called - **Lactometer**
19. An instrument used for magnified view of very small objects is called - **Microscope**
20. An apparatus used in submarines for viewing objects lying above the eye level of the observer is called - **Periscope**
21. An instrument used for comparing the luminous intensity of two sources of light is Called - **Photometer**
22. An instrument used to measure high temperature is called - **Pyrometer**
23. An instrument used to measure Rainfall is called - **Rain Gauge**
24. An instrument used for recording the intensity and origin of earthquakes shocks is called - **Siesmograph**
25. An instrument used for measuring angular distance between two objects is called - **Sextant**
26. An instrument used for measuring speed of the vehicle is called - **Speedometer**
27. An apparatus used for converting high voltage to low and vice-versa is called- **Transformer**
28. An instrument that continuously records a barometer's reading of atmospheric pressure. - **Barograph**
29. An instrument used to measure infrared, or heat, radiation. - **Bolometer**
30. An instrument used for measuring growth in plants.- **Crescograph**
31. An instrument used for tracing movement of heart.- **Cardiograph**
32. A clock that keeps very accurate time and determines longitude of a vessel at sea. - **Chronometer**
33. An instrument used to examine internal parts of the body. - **Endoscope**
34. A glass tube for measuring volumes changes in the chemical reactions between gases -**Eudiometer**
35. A machine for reproducing recorded sound. - **Gramophone**
36. An instrument used to measure the moisture content or the humidity of air or any gas. - **Hygrometer**
37. A microphone designed to be used underwater for recording or listening to underwater sound.- **Hydrophone**
38. A device used to measure atmospheric pressure - **Manometer**
39. A device which converts sound waves into electrical signals. - **Microphone**
40. An instrument attached to the wheel of a vehicle, to measure the distance traversed. - **Odometer**
41. An instrument used for reproducing sound.- **Phonograph**
42. An instrument used for measuring Solar radiation is called - **Pyrheliometer**
43. An instrument used for taking angular measurements of altitude in astronomy and navigation is called - **Quadrant**
44. An instrument for measuring a Refractive Index of a substance is called - **Refractometer**
45. An instrument used for Spectrum analysis is called- **Spectroscope**
46. An instrument for measuring blood pressure is called - **Sphygmomanometer**
47. An instrument for measuring and indicating temperature is called - **Thermometer**
48. A medical instrument used for hearing and analysing the sound of Heart is called - **Stethoscope**

49. An apparatus for recording the readings of an instrument and transmitting them by radio is called - **Telemeter**
50. An instrument used for magnified view of distant objects is called- **Telescope**
51. A device that automatically regulates constant temperatures is called - **Thermostat**
52. An instrument used for measuring Viscosity is called - **Viscometer**
53. A small scale calibrated to indicate fractional divisions of the main scale is called- **Vernier Scale**
54. An instrument for testing the refractive power of the eye is called - **Optometer**
55. An instrument designed for visual examination of the eardrum is called - **Otoscope**
56. A device that measures low temperature is called - **Cryometer**
57. An instrument used in an aircraft indicating airspeed is called - **Machmeter**

	<b>Compounds</b>	<b>Formula</b>
<b>Baking Powder</b>	Sodium Bicarbonate	NaHCO <sub>3</sub>
<b>Blue Vitriol</b>	Copper Sulphate	CuSO <sub>4</sub> .5H <sub>2</sub> O
<b>Bleaching Powder</b>	Calcium Oxychloride	CaOCl <sub>2</sub>
<b>Chloroform</b>	Trichloro Methane	CHCl <sub>3</sub>
<b>Chalk (Marble)</b>	Calcium Carbonate	CaCO <sub>3</sub>
<b>Caustic Potash</b>	Potassium Hydroxide	KOH
<b>Caustic Soda</b>	Sodium Hydroxide	NaOH
<b>Dry Ice</b>	Solid Carbondioxide	CO <sub>2</sub>
<b>Epsom</b>	Magnesium Sulphate	MgSO <sub>4</sub>
<b>Gypsum</b>	Calcium Sulphate	CaSO <sub>4</sub>
<b>Green Vitriol</b>	Ferrous Sulphate	FeSO <sub>4</sub>
<b>Heavy Water</b>	Deuterium Oxide	D <sub>2</sub> O
<b>Vinegar</b>	Acetic Acid	CH <sub>3</sub> COOH
<b>Washing Soda</b>	Sodium Carbonate	Na <sub>2</sub> CO <sub>3</sub>
<b>Slaked Lime</b>	Calcium Hydroxide	Ca(OH) <sub>2</sub>
<b>Potash Alum</b>	Potassium Aluminium Sulphate	KALSO <sub>4</sub>
<b>Quick Lime</b>	Calcium Oxide	CaO
<b>Plaster of Paris</b>	Calcium Sulphate	CaSO <sub>4</sub> 2H <sub>2</sub> O
<b>Mohr's Salt</b>	Ammonium Ferrous Sulphate	FeSO <sub>4</sub> (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> .6H <sub>2</sub> O
<b>White Vitriol</b>	Zinc Sulphate	ZnSO <sub>4</sub> .7H <sub>2</sub> O
<b>Marsh Gas</b>	Methane	CH <sub>4</sub>
<b>Magnesia:</b>	Magnesium Oxide	MgO
<b>Laughing Gas:</b>	Nitrous Oxide	N <sub>2</sub> O
<b>Vermelium:</b>	Mercuric Sulphide	HgS
<b>Sugar:</b>	Sucrose	C <sub>12</sub> H <sub>22</sub> O <sub>11</sub>
<b>T.N.T.</b>	Trinitrotoluene	C <sub>7</sub> H <sub>5</sub> N <sub>3</sub> O <sub>6</sub>
<b>Sand</b>	Silicon Oxide	SiO <sub>2</sub>



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#### COMMON NAMES OF CHEMICAL COMPOUNDS:

Common Names	Chemical	Chemical
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#### Vitamins and Minerals

**Balance Diet:-** It means a diet which contains right amount and types of foods and drink to provide essential nutrients and energy required for proper development of the body cells, tissue and organs. Balance diet should contain right amount of vitamins and minerals for overall development of the body.

**Vitamins:** Vitamins are organic compounds required in small quantities for optimal health. It enhances the metabolism of proteins, carbohydrates and fats. Vitamins are required for growth in children, formation of hormones, blood cells, tissues and bones. Vitamins cannot be synthesised/produced by the human body, thus, our diet must contain vitamins.



## TYPES OF VITAMINS:

Vitamin	Chemical Name	Food Sources	Deficiency Diseases
<b>A</b>	Retinol	Milk, eggs, fish, butter, cheese and liver.	Night blindness, Skin dryness.
<b>B1</b>	Thiamine	Legumes, whole grain, nuts.	Beri-beri.
<b>B2</b>	Riboflavin	Egg, milk, cheese, nuts, bread products.	Inflammation of tongue, sores in the corners of the mouth.
<b>B3</b>	Niacin or Nicotinic acid	Meat, fish, pea nuts, whole grain.	skin disease, diarrhoea, depression, dementia.
<b>B5</b>	Pantothenic acid	Eggs, liver, dairy products.	Fatigue, muscle cramp. Pellagra
<b>B6</b>	Pyridoxine	Organ meats, cereals, corn.	Anaemia, kidney stones, nausea, depression.
<b>B12</b>	Cyanocobalamin	Meat, fish.	pale skin, constipation, fatigue.
<b>C</b>	Ascorbic acid	Oranges, tomatoes, sweet and white potatoes.	Scurvy, anaemia, ability to fight infections decreases.
<b>D</b>	Calciferol	Direct sunlight, fish oils, eggs.	Rickets, osteomalacia.
<b>E</b>	Tocopherol	Vegetable oils, olives, tomatoes, almonds, meat, eggs.	Neurological problems, problems of reproductive system.
<b>K</b>	Phylloquinone or Naphthoquinone	Soyabeans, green leafy vegetables, dairy products, meat.	Failure to clot blood.

### Vitamins are further divided into two groups-

- (1) Fat soluble vitamins, and
- (2) Water soluble vitamins.

**Fat soluble vitamins** - A, D, E and K.

**Water soluble vitamins** - Vitamin-B complex (B1, B2, B3, B5, B6, B12), C and Folic acid.

**Minerals:** Minerals are also essential for proper development of the body. Minerals helps in building strong teeth and bones, skin, hair, proper function of nerves, muscle contraction, maintains heart functions, etc.

## TYPES OF MINERALS:

Minerals	Food Sources	Properties	Deficiency Diseases
<b>Calcium</b>	Milk, cheese and other diary products, nuts, green leafy vegetables.	Build and maintain bones and teeth, control heart beat and blood pressure.	Weak teeth and bones, poor development of body.
<b>Iron</b>	Meat, liver, egg yolk, nuts, cereals.	It is required for transportation of Oxygen in the blood. Maintains Haemoglobin level in the blood.	Anaemia, weak immunity.
<b>Iodine</b>	Iodine-enriched salt, milk, cheese.	Iodine is the main building block of thyroid hormone, T3 and T4. It is essential for proper development of the body.	Goitre.
<b>Phosphorus</b>	Meat, fish, poultry, cereals.	It is required in building strong bones and teeth. It also repair cells. It is a component of DNA and RNA.	Poor body growth, weak bones and teeth.
<b>Sodium</b>	Salt	Maintains water balance, blood pressure and nervous system.	Low blood pressure, muscle cramp.
<b>Zinc</b>	Meat, liver, fish, milk, cheese and other diary products.	It is important for the function for the enzymes in the body. It builds immunity and regulates cholesterol levels.	Retarded body growth
<b>Potassium</b>	Fish, milk, pulses, nuts, green	It maintains the pH balance of the	Low blood pressure, weak

	vegetables, meat.	blood. It controls the water balance of the body.	muscles.
<b>Magnesium</b>	Green vegetables, nuts, cereals.	Magnesium builds immunity. It is important for nerve cell function and muscle contraction.	It affects nervous system

### ORES AND ALLOYS:

#### ORES:

Metal	Ores
<b>Aluminium (Al)</b>	Bauxite, Corundum, felspar, Cryolite, Kaolin
<b>Antimony (Sb)</b>	Stibnite
<b>Barium (Ba)</b>	Barite, Witherite
<b>Cadmium (Cd)</b>	Greenockite
<b>Calcium (Ca)</b>	Chalk, Quicklime, Calcite, Dolomite, Gypsum, Asbestos
<b>Chromium (Cr)</b>	Chromite
<b>Copper (Cu)</b>	Malachite, Chalcocite, Chalcopyrite, Cuprite
<b>Gold (Au)</b>	Quartz, Calaverite, Silvenites
<b>Iron (Fe)</b>	Hematite, Magnetite, Lemonite, Copper pyrites
<b>Lead (Pb)</b>	Galena
<b>Magnesium (Mg)</b>	Magnesite, Dolomite, Epsom salt, Carnalite
<b>Manganese (Mn)</b>	Pyrolusite
<b>Mercury (Hg)</b>	Cinnabar
<b>Potassium (K)</b>	Carnalite, Sylvite, Potash
<b>Silver (Ag)</b>	Argentite
<b>Sodium (Na)</b>	Rock Salt, Trona, Borax
<b>Strontium (Sr)</b>	Strontianite, Silestine
<b>Tin (Sn)</b>	Cassiterite
<b>Zinc (Zn)</b>	Zincite, Ferulinite, Calamine
<b>Uranium (U)</b>	Uraninite
<b>Tungsten (W)</b>	Wolframite, Scheelite
<b>Nickel (Ni)</b>	Pentlandite, Milarite
<b>Beryllium (Be)</b>	Beryl

#### Alloys:

Alloy	Components
<b>Brass</b>	Copper and Zinc
<b>Bronze</b>	Copper and Tin
<b>Gun Metal</b>	Copper, Zinc and Tin
<b>German Silver</b>	Copper, Zinc and Nickel
<b>Duralumin</b>	Aluminium, Copper, Magnesium and Manganese
<b>Magnesium</b>	Aluminium and Magnesium
<b>Nickel Steel</b>	Iron and Nickel
<b>Stainless Steel</b>	Iron, Chromium and Nickel
<b>Electrum</b>	Silver and Gold
<b>Solder</b>	Tin and Lead
<b>Invar</b>	Iron and Nickel

#### Important Facts About Human Body:

<b>Largest and strongest Bone in the body:</b>	Femur (thigh bone)
<b>Smallest Bone in the body:</b>	Stapes in ear
<b>Number of Cells in the body:</b>	75 trillion
<b>Volume of Blood in the body:</b>	6 litres (in 70 kg body)
<b>Number of Red Blood Cells(R.B.C.):</b>	1. In male: 5 to 6 million/cubic mm 2. In female: 4 to 5 million/cubic mm
<b>Life span of Red Blood Cells(R.B.C.):</b>	100 to 120 days
<b>Life span of White Blood Cell(W.B.C.):</b>	3-4 days
<b>Normal White Blood Cell(W.B.C.) count:</b>	5000-10000/cubic mm
<b>Time taken by R.B.C. to complete one cycle of circulation:</b>	20 seconds
<b>Other name of Red Blood Cell (R.B.C.):</b>	Erythrocytes
<b>Largest White Blood Cells:</b>	Monocytes
<b>Smallest White Blood Cells:</b>	Lymphocyte
<b>Who discovered Blood Group:</b>	Karl Landsteiner
<b>Blood Platelets count:</b>	150,000 - 400,000 platelets per micro litre
<b>Haemoglobin (Hb):</b>	1. In male: 14-15 gm/100 c.c. of blood



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	2. In female: 11-14 gm/100 c.c. of blood
<b>Hb content in body:</b>	500-700 gm
<b>pH of Urine:</b>	6.5-8
<b>pH of Blood:</b>	7.36-7.41
<b>Volume of Semen:</b>	2-5 ml/ejaculation
<b>Normal Sperm Count:</b>	250-400 million/ejaculation
<b>Menstrual cycle:</b>	28 days
<b>Menopause age:</b>	45-50 years
<b>Blood clotting time:</b>	3-5 minutes
<b>Weight of Brain:</b>	1300-1400 gm in human adult
<b>Normal Blood Pressure (B.P.):</b>	120/80 mm Hg
<b>Universal blood donor:</b>	O
<b>Universal blood recipient:</b>	AB
<b>Average body weight:</b>	70 kg
<b>Normal body temperature:</b>	37 degree celsius
<b>Breathing Rate at rest:</b>	12-16/minute
<b>Number of Spinal Nerves:</b>	31 pairs
<b>Largest Endocrine Gland:</b>	Thyroid gland
<b>Gestation period:</b>	40 weeks or 9 calendar months
<b>Normal Heart Beat at rest:</b>	72 beats per minute
<b>Largest Gland:</b>	Liver
<b>Largest Muscle in the body:</b>	Gluteus Maximus or Buttock Muscle
<b>Smallest Muscle in the body:</b>	Stapedius
<b>Largest Artery:</b>	Aorta
<b>Largest Vein:</b>	Inferior Vena Cava
<b>Largest and longest Nerve:</b>	Sciatic Nerve
<b>Longest Cell:</b>	Neurons (nerve cells)
<b>Minimum distance for proper vision:</b>	25 cm
<b>Pulse rate:</b>	72 per minute
<b>Thinnest Skin:</b>	Eyelids
<b>Weight of Heart:</b>	200-300 gm

### Common Drugs and Their Usage:

<b>Drugs/Medicine</b>	<b>Use</b>
<b>Anaesthetics</b>	It is a drug that induces insensitivity to pain.
<b>Antiflatulent</b>	It is a drug that reduces intestinal gas
<b>Antipyretics</b>	It is a drug used to lower body temperature.
<b>Analgesics</b>	It is a drug that is used to prevent

	or relieve pain. Eg. Aspirin.
<b>Antibiotics</b>	It is a drug that inhibits the growth of or destroys micro-organisms. Eg. Penicillin.
<b>Antihistamines</b>	It is a drug used to relieve symptoms of cold and allergies.
<b>Antispasmodic</b>	It is a drug used to relieve spasm of involuntary muscle usually in stomach.
<b>Antacid</b>	It is a drug used for preventing or correcting acidity, especially in the stomach.
<b>Diuretics</b>	It is a drug that promotes the production of urine.
<b>Laxative</b>	It is a drug used to provide relief in constipation.

### Important Scientific Laws and Theories:

**1. Archimede's principle** - It states that a body when wholly or partially immersed in a liquid, experiences an upward thrust which is equal to the weight of the liquid displaced by it. Thus, the body appears to lose a part of its weight. This loss in weight is equal to the weight of the liquid displaced by the body.

**2. Aufbau principle** - It states that in an unexcited atom, electrons reside in the lowest energy orbitals available to them.

**3. Avogadro's Law** - It states that equal volumes of all gases under similar conditions of temperature and pressure contain equal number of molecules.

**4. Brownian motion** - It is a zigzag, irregular motion exhibited by small solid particles when suspended in a liquid or gas due to irregular bombardment by the liquid or gas molecules.



**5. Bernoulli's principle** - It states that as the speed of a moving fluid, liquid or gas, increases, the pressure within the fluid decreases. The aerodynamic lift on the wing of an aeroplane is also explained in part by this principle.

**6. Boyles's Law** - It states that temperature remaining constant, volume of a given mass of a gas varies inversely with the pressure of the gas. Thus,  $PV = K$  (constant), where, P = Pressure and V = Volume.

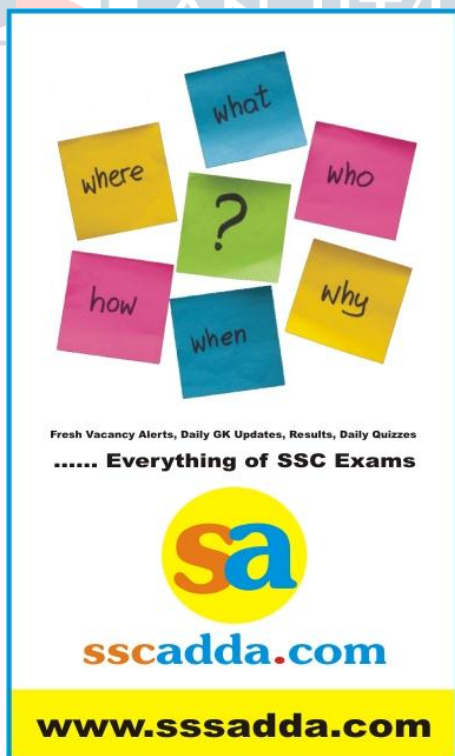
**7. Charles's Law** - It states that pressure remaining constant, the volume of a given mass of gas increases or decreases by  $\frac{1}{273}$  part of its volume at 0 degree celsius for each degree celsius rise or fall of its temperature.

**8. Coulomb's Law** - It states that force of attraction or repulsion between two charges is proportional to the amount of charge on both charges and inversely proportional to the square of the distance between them.

**9. Heisenberg principle (uncertainty principle)** - It is impossible to determine with accuracy both the position and the momentum of a particle such as electron simultaneously.

**10. Gay-Lussac's Law of combining volumes** - Gases react together in volumes which bear simple whole number ratios to one another and also to the volumes of the products, if gaseous — all the volumes being measured under similar conditions of temperature and pressure.

**11. Graham's Law of Diffusion** - It states that the rates of diffusion of gases are inversely proportional to the square roots of their densities under similar conditions of temperature and pressure.



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**12. Kepler's Law** - Each planet revolves round the Sun in an elliptical orbit with the Sun at one focus. The

straight line joining the Sun and the planet sweeps out equal areas in equal intervals. The squares of the orbital periods of planets are proportional to the cubes of their mean distance from the Sun.

**13. Law of Floatation** - For a body to float, the following conditions must be fulfilled:

(1) The weight of the body should be equal to the weight of the water displaced.

(2) The centre of gravity of the body and that of the liquid displaced should be in the same straight line.

**14. Law of conservation of energy** - It states that energy can neither be created nor destroyed but it can be transformed from one form to another. Since energy cannot be created or destroyed, the amount of energy present in the universe is always remain constant.

**15. Newton's First Law of Motion** - An object at rest tends to stay at rest, and an object in motion tends to stay in motion, with the same direction and speed in a straight line unless acted upon by some external force.

**16. Newton's Second Law of Motion** - The rate of change of momentum of a body is directly proportional to the force applied and takes place in the direction in which the force acts.

**17. Newton's Third Law of Motion** - To every action there is an equal and opposite reaction.

**18. Newton's Law of Gravitation** - All particles of matter mutually attract each other by a force directly proportional to the product of their masses and inversely proportional to the square of the distance between them.

**19. Ohm's Law** - It states that the current passing through a conductor between two points is directly proportional to the potential difference across the two points provided the physical state and temperature etc. of the conductor does not change.

**20. Pauli exclusion principle** - It explains that no two electrons in the same atom or molecule can have the same set of quantum numbers.

**21. Raman effect** - It is the change in wavelength that occurs when light is scattered by the atoms or molecules in a transparent medium.

**22. Tyndall effect** - The scattering of light by very small particles suspended in a gas or liquid.

## TYPES OF DISEASES

### List of Diseases caused by Virus, Bacteria, Protozoa and Worm:

#### Disease caused by Viruses:

<b>1. Chicken pox</b> - It is caused by Varicella-zoster virus.
<b>2. Small Pox</b> - It is caused by Variola virus.
<b>3. Common Cold</b> -It is caused by Rhinovirus.
<b>4. AIDS (Acquired Immunodeficiency Syndrome)</b> - It is caused by Human Immunodeficiency Virus (HIV).
<b>5. Measles</b> -It is caused by Measles virus.
<b>6. Mumps</b> -It is caused by Mumps virus.
<b>7. Rabies</b> - It is caused by Rabies virus (Rhabdoviridae family).
<b>8. Dengue fever</b> -It is caused by Dengue virus.
<b>9. Viral encephalitis</b> - It is an inflammation of the brain. It is caused by rabies virus, Herpes simplex, polio virus, measles virus, and JC virus.

#### Disease caused by Bacteria:

<b>1. Whooping Cough</b> - It is caused by a bacterium called Bordetella pertussis.
<b>2. Diphtheria</b> - It is caused by Corynebacterium

#### DISEASE CAUSED BY PROTOZOANS:

<b>1. Malaria</b>	It is spread by Anopheles mosquitoes. The Plasmodium parasite that causes malaria is neither a virus nor a bacteria	it is a single	celled parasite that multiplies in red blood cells of humans.
<b>2. Amoebic dysentery</b>	It is caused by Entamoeba histolytica.		
<b>3. Sleeping sickness</b>	It is caused by Trypanosoma brucei.		
<b>4. Kala azar</b>	It is caused by Leishmania donovani.		

#### DISEASE CAUSED BY WORMS:

<b>1. Tapeworm</b>	They are intestinal parasites. It cannot live on its own. It survives within the intestine of an animal including human.	
<b>2. Filariasis</b>	It is caused by thread	like filarial nematode worms. Most cases of filaria are caused by the parasite known as Wuchereria bancrofti.
<b>3. Pinworm</b>	It is caused by small, thin, white roundworm called Enterobius vermicularis.	

diphtheriae.
<b>3. Cholera</b> - It is caused by Vibrio cholerae.
<b>4. Leprosy</b> - It is caused by Mycobacterium leprae.
<b>5. Pneumonia</b> - It is caused by Streptococcus pneumoniae.
<b>6. Tetanus</b> - It is caused by Clostridium tetani.
<b>7. Typhoid</b> - It is caused by Salmonella typhi.
<b>8. Tuberculosis</b> - It is caused by Mycobacterium tuberculosis.
<b>9. Plague</b> - It is caused by Yersinia pestis.


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## VITAMINS AND MINERAL DEFICIENCY DISEASES:

<b>1. Anaemia</b>	It is caused due to deficiency of mineral Iron.
<b>2. Ariboflavinosis</b>	It is caused due to deficiency of Vitamin B2.
<b>3. BeriBeri</b>	It is caused due to deficiency of Vitamin B.
<b>4. Goitre</b>	It is caused due to deficiency of Iodine.
<b>5. Impaired clotting of the blood</b>	It is caused due to deficiency of Vitamin K.
<b>6. Kwashiorkor</b>	It is caused due to deficiency of Protein.
<b>7. Night Blindness</b>	It is caused due to deficiency of Vitamin A.
<b>8. Osteoporosis</b>	It is caused due to deficiency of mineral Calcium.
<b>9. Rickets</b>	It is caused due to deficiency of Vitamin D.
<b>10. Scurvy</b>	It is caused due to deficiency of Vitamin C.

## COMMON HUMAN DISEASES AND AFFECTED BODY PART:

<b>Disease</b>	<b>Affected Body Part</b>
AIDS	Immune system of the body
Arthritis	Joints
Asthma	Bronchial muscles
Bronchitis	Lungs
Carditis	Heart
Cataract	Eye
Cystitis	Bladder
Colitis	Intestine
Conjunctivitis	Eye
Dermatitis	Skin
Diabetes	Pancreas and blood
Diphtheria	Throat
Eczema	Skin
Goitre	Thyroid gland
Glossitis	Tongue
Glaucoma	Eye
Gastritis	Stomach
Hepatitis	Liver
Jaundice	Liver
Malaria	Spleen
Meningitis	Brain and spinal cord
Myelitis	Spinal cord
Neuritis	Nerves
Otitis	Ear
Osteomyelitis	Bones
Paralysis	Nerves and limb
Pyorrhoea	Teeth
Peritonitis	Abdomen
Pneumonia	Lungs
Rhinitis	Nose
Rheumatism	Joints
Tuberculosis	Lungs
Tonsillitis	Tonsils
Trachoma	Eye

## DISEASES IN PLANTS

### Fungal, Viral and Bacterial diseases in Plants:

Diseases in plants are caused by different agent and affect its different parts. Most plant diseases are caused by fungi, bacteria, and viruses. List of some of the fungal, viral and bacterial diseases are given below:

### FUNGAL DISEASES IN PLANTS:

<b>Name of the Crop/Plant</b>	<b>Fungal Disease</b>
Sugarcane	Red Rot
Bajra (Pearl Millet)	Ergot, Green Ear, Smut
Pigeon Pea, Cotton	Wilt
Ground Nut	Tikka
Rice	Blast
Paddy, Papaya	Foot Rot
Wheat Rust,	Powdery Mildew
Coffee	Rust
Potato	Late Blight
Grapes, Cabbage, Cauliflower, Bajra, Mustard	Downy Mildew
Radish, Turnip	White Rust

### VIRAL DISEASES IN PLANTS:

<b>Name of the Crop/Plant</b>	<b>Viral Disease</b>
Potato	Leaf Roll, Mosaic
Banana	Bunchy Top
Papaya	Leaf Curl
Tobacco	Mosaic
Carrot	Red Leaf

### BACTERIAL DISEASES IN PLANTS:

Name of the Crop/Plant	Bacterial Disease
Beans, Rice	Blight
Cotton	Black Arm
Tomato	Canker
Potato	Ring Rot, Brown Rot

Teak	Tectonagrandis Linn.
Tamarind tree	Tamarindusindica
Tomato	Lycopersicanesculentum
Watermelon	Citrullus vulgaris
Wheat	TriticumAestivum

**SCIENTIFIC NAMES OF COMMON PLANT/ TREES/ VEGETABLES /CEREALS/FRUITS ETC.:**

Common Name of Plant/Vegetables/Cereals/Fruits etc. Scientific Name of Plant	
Apple	Pyrusmalus
Bamboo	Bamboosaridinarifolia
Brinjal	Solanummelongena
Banana	Musa paradisticum
Black Gram	PaloesMungo
Banyan	Ficusbenghalensis
Black Pepper	Piper nigrum
Clove	Syzygiumaromaticum
Carrot	Daucascarota
Cucumber	Cucumissativas
Capsicum	Capsicum fruitscence
Chiku	Achrassapota
Cotton	Gossypiumherbaceum
Green Gram	Phaseoliesauicus
Guava	Psidium guava
Ginger	Zingiberofficinale
Garlic	Allium sativum
Jack fruit	Artocarpusintegra
Jowar	Sorghum Vulgare
Kadamb	Anthocephalusindicus
Lemon	Citrus limonium
Maize	Zea mays
Mango	Mangiferaindica
Neem	Azadhirachtaindica
Onion	Allium cepa
Orange	Citrus aurantium
Potato	Solanumtubersum
Pomegranate	Punicagranatum
Peacock Flower (Gulmohar)	Delonixregiarafin
Purple orchid tree (Kachnar)	Bauhinia purpurea
Peepal	Ficusreligiosa Linn.
Pineapple	Ananussativus
Radish	Raphanussativus
Rice	Oryza sativa
Silver Oak	Grevillearobusta
Sandalwood	Santalum album
Spinach	Lactuca sativa
Turmeric	Curcuma longa
Tobacco	Nicotinatobaccum
Tulsi	Ocimum sanctum

**Scientific Names of Common Animals:**

Common Name of Animal	Scientific Name of Animal
Cat	Feliscatus
Cobra	Elapidaenaja
Camel	Cameluscamelidae
Cheetah	Acinonyxjubatus
Chimpanzee	Pan troglodytes
Crocodile	Crocodylianiloticus
Chameleon	Chamaeleontidate
Dog	Cannisfamiliaris
Deer	Artiodactyl cervidae
Dolphin	Delphinidaedelphis
Elephant	Proboscidaeaelephantidae
Frog	Anuraranidae
Fox	Cannisvulpes
Giraffe	Giraffacamalopardalis
Giant Panda	Ailuropodamelanoleuca
Goat	Capra hircus
Housefly	Muscadomestica
Hippopotamus	Hippopotamus amphibius
Horse	Eqguscaballus
Hyena	Hyaenidaecarnivora
Kangaroo	Macropusmacropodidae
Lion	Pantheraleo
Lizard	Saurialacertidae
Mouse	Rodentiamuridae
Panther	Pantherapardus
Pig	Artiodactylasuida
Porcupine	Hystricomorphhystricidae
Rabbit	Leporidaecuniculas
Rhinoceros	Perrissodanctylrthinocerotidae
Scorpion	Archinidascorpionida
Sea Horse	Hippocampus syngnathidae
Squirrel	Rodentiasciurus
Tiger	Pantheratigris
Zebra	Equidaeburcheli



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**BLOOD GROUP AND ITS CLASSIFICATION :**

**K. Landsteiner :** Classified human beings (1900) in four groups on the basis of the reaction of their blood: A,B,AB and O.

Blood group	Carries antigen	Carries antibody	Can donate blood to	Can receive blood from
A	A	B	A,AB	A,O
B	B	A	B,AB	B,O
AB	A,B	None	Only AB	Universal Acceptor
O	None	A,B	Universal donor	Only O

**SI Units of Measurement:**

Quantity	SI Unit	Symbol
Acceleration	Meter/second square	m/s <sup>2</sup>
Area	Square meter	m <sup>2</sup>
Angular Velocity	Radian/second	ω
Atmospheric Pressure	Pascal	Pa
Capacitance	farad	F
Depth of Sea	Fathom	ftm
Density	Kilogram/cubic meter	kg/m <sup>3</sup>
Electric Current	Ampere	A
Electromotive Force	Volt	V
Electrical Conductivity	Ohm/metre	--
Electric Energy	Kilowatt hour	kWh
Electric Power	Watt	W
Electric Charge	Coulomb	C
Electric Potential	Volt	V
Energy	Joule	J



<b>Force</b>	Newton	N (kg m/s <sup>2</sup> )
<b>Frequency</b>	Hertz	Hz
<b>Heat</b>	Joule	J
<b>Impulse</b>	Newton second	Ns
<b>Illuminance</b>	Lux	lx
<b>Inductance</b>	Henry	H
<b>Length</b>	Meter	m
<b>Luminous Flux</b>	Lumen	lm
<b>Luminous Intensity</b>	Candela	Cd
<b>Mass</b>	Kilogram	kg
<b>Momentum</b>	Kilogram meter/second	kg m/s
<b>Magnetic Flux</b>	Weber	Wb
<b>Magnetic Flux Density</b>	Tesla	T
<b>Power</b>	Watt	W
<b>Power of Lens</b>	Dioptre	d
<b>Plane Angle</b>	Radian	rad
<b>Radioactivity</b>	Becquerel	Bq
<b>Resistance</b>	Ohm	Ω
<b>Specific Heat</b>	Joule per kilogram kelvin	J/(kg.K)
<b>Solid Angle</b>	steradian	sr
<b>Surface Tension</b>	Newton/square meter	N/m <sup>2</sup>
<b>Speed/Velocity</b>	Meter/second	m/s
<b>Temperature</b>	Kelvin	K
<b>Time</b>	Second	s
<b>Viscosity</b>	Pascal second	Pa.s
<b>Volume</b>	Cubic meter	M <sup>3</sup>
<b>Weight</b>	Newton	N
<b>Work</b>	Joule	J

### SOME EQUIPMENT USED TO TRANSFORM ENERGY:

<b>S. No.</b>	<b>Equipment</b>	<b>Energy Transformed</b>
1.	Dynamo	Mechanical energy into electrical energy
2.	Candle	Chemical energy into light and heat energy
3.	Microphone	Sound energy into electrical energy
4.	Loud Speaker	Electrical energy into sound energy
5.	Solar cell	Solar energy into electrical energy
6.	Tube light	Electrical energy into light energy
7.	Electric Bulb	Electrical energy into light and heat energy
8.	Battery	Chemical energy into electrical energy
9.	Electric motor	Electrical energy into mechanical energy
10.	Sitar	Mechanical energy into sound energy

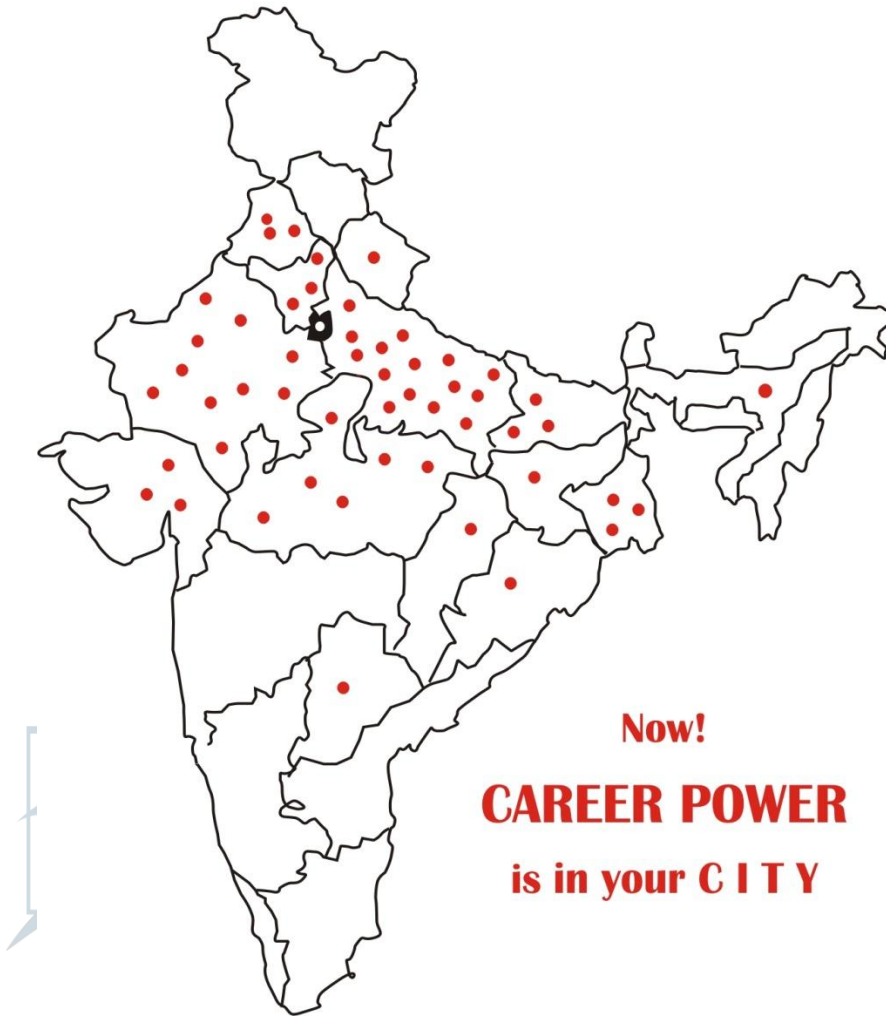
**SOME FRUITS AND THEIR EDIBLE PARTS:**

<b>Fruits</b>	<b>Edible Part</b>	<b>Fruits</b>	<b>Edible Part</b>
<b>Apple</b>	Fleshy thalamus	<b>Wheat</b>	Starchy endosperm
<b>Pear</b>	Fleshy thalamus	<b>Cashew nut</b>	Peduncle and cotyledons
<b>Mango</b>	Mesocarp	<b>Lichi</b>	Aril
<b>Guava</b>	Entire fruit	<b>Gram</b>	Cotyledons and embryo
<b>Grapes</b>	Pericarp and placenta	<b>Groundnut</b>	Cotyledons
<b>Papaya</b>	Mesocarp	<b>Mulberry</b>	Entire fruit
<b>Coconut</b>	Endosperm	<b>Jackfruit</b>	Bract, Parianth and seed
<b>Tomato</b>	Pericarp and placenta	<b>Pineapple</b>	Bract, Parianth
<b>Banana</b>	Mesocarp and Endocarp	<b>Orange</b>	Juicy hair

**MEDICINAL DISCOVERIES:**

<b>Inventions/Discoveries</b>	<b>Inventor/Discoveries</b>
<b>Vitamin</b>	F.G.Hopkins, Cosimir Funk
<b>Vitamin-A</b>	Mc. Collum
<b>Vitamin-B</b>	Mc.Collum
<b>Vitamin-C</b>	Holst
<b>Vitamin-D</b>	Mc. Collum
<b>Streptomycin</b>	Selman Waksman
<b>Heart Transplantation</b>	Christian Bernard
<b>Malaria parasite and treatment</b>	Ronald Ross
<b>First test tube baby</b>	Edwards and stepho
<b>Antigen</b>	Karl Landsteiner
<b>RNA</b>	James Watson and ArtherArg
<b>DNA</b>	James Watson and Crick
<b>Insulin</b>	Banting
<b>Vaccine of chicken pox</b>	Edward Jenner
<b>T.B.bacteria</b>	Robert Koch
<b>Diabetes</b>	Banting
<b>Penicillin</b>	Alexander Flemming
<b>Polio vaccine</b>	Johan E.Salk
<b>BCG</b>	Guerin Calmatte
<b>Bacteria</b>	Luvenhauk -Leeuwenhock
<b>Blood transfer</b>	Karl Landsteiner

# Our Presence in India



Now!  
**CAREER POWER**  
is in your C I T Y

**Delhi** CAREER POWER AN IIT/IIM ALUMNI COMPANY

- ▶ Laxmi Nagar 08750505082
- ▶ Rohini 08750505047
- ▶ Uttam Nagar 08750505076
- ▶ Kingsway Camp 08750505084
- ▶ Munirka 08750505023
- ▶ Old Rajendra Nagar 08750505097

**Uttar Pradesh** CAREER POWER AN IIT/IIM ALUMNI COMPANY

- ▶ Noida Sector-12 08750505074
- ▶ Bareilly 09012333385
- ▶ Varanasi-Durgakund 07275075593
- ▶ Noida Sector-18 08750505022
- ▶ Kanpur 07505050506
- ▶ Varanasi- Siga 07275075594
- ▶ Ghaziabad 08750050801
- ▶ Meerut (Baccha Park) 07055546662
- ▶ Jhansi 09198871555
- ▶ Lucknow Mahanagar 07505050503
- ▶ Meerut (Old Delhi Chungi) 07055044779
- ▶ Moradabad 07055546661
- ▶ Lucknow Alambagh 07505950507
- ▶ Agra 07055891953
- ▶ Faizabad 08960360129
- ▶ Aligarh 07409093000
- ▶ Coming Soon..
- ▶ Mathura
- ▶ Gorakhpur
- ▶ Allahabad

**Rajasthan** CAREER POWER AN IIT/IIM ALUMNI COMPANY

- ▶ Jodhpur 08560807792
- ▶ Udaipur 09587387555
- ▶ Jaipur 07742836868
- ▶ Alwar 09024610363
- ▶ Bikaner 08094402345
- ▶ Pali 08560807794
- ▶ Hanumangarh 08385875151
- ▶ Sri Ganganagar 08385870101
- ▶ Ajmer 09772228899
- ▶ Sikar 08233200291
- ▶ Coming Soon..
- ▶ Kota

**Madhya Pradesh** CAREER POWER AN IIT/IIM ALUMNI COMPANY

- ▶ Gwalior 09644340011
- ▶ Guna 07542255877
- ▶ Rewa 09752216820
- ▶ Bhopal 09685985799
- ▶ Indore 08982737301
- ▶ Chhatarpur 09479652676

**Bihar** CAREER POWER AN IIT/IIM ALUMNI COMPANY

- ▶ Patna 07050816141
- ▶ Muzaffarpur 07061274036
- ▶ Ara 09931666733

**Gujarat** CAREER POWER AN IIT/IIM ALUMNI COMPANY

- ▶ Ahmedabad 09726110183
- ▶ Gandhi Nagar 09104813773
- ▶ Anand 07567145525

**Haryana** CAREER POWER AN IIT/IIM ALUMNI COMPANY

- ▶ Rohtak 08950455444
- ▶ Sonapat 09996017020
- ▶ Ambala 09355155557

**Jharkhand** CAREER POWER AN IIT/IIM ALUMNI COMPANY

- ▶ Ranchi 09334652565
- ▶ Coming Soon..
- ▶ Dhanbad
- ▶ Jamshedpur

**Odisha** CAREER POWER AN IIT/IIM ALUMNI COMPANY

- ▶ Brahmapur 09778433533
- ▶ Coming Soon..
- ▶ Cuttack
- ▶ Puri
- ▶ Bhubaneswar

**West Bengal** CAREER POWER AN IIT/IIM ALUMNI COMPANY

- ▶ Kolkata 09339920009
- ▶ Hooghly 09331918985
- ▶ Durgapur 09798973169

**Punjab** CAREER POWER AN IIT/IIM ALUMNI COMPANY

- ▶ Bhatinda 09888377003
- ▶ Ludhiana 09803040570
- ▶ Coming Soon..
- ▶ Amritsar
- ▶ Patiala

**Assam** CAREER POWER AN IIT/IIM ALUMNI COMPANY

- ▶ Guwahati 08752933801

**Uttarakhand** CAREER POWER AN IIT/IIM ALUMNI COMPANY

- ▶ Roorkee 07060189489
- ▶ Coming Soon..
- ▶ Dehradun

**Chhattisgarh** CAREER POWER AN IIT/IIM ALUMNI COMPANY

- ▶ Bhilai 09981083333
- ▶ Coming Soon..
- ▶ Raipur

**Telangana** CAREER POWER AN IIT/IIM ALUMNI COMPANY

- ▶ Hyderabad 09319312467