CBSE-NCERT

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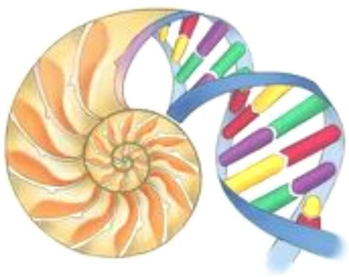
WORKSHEETS

SCIENCE

(Class 8)



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Class- VIII (Science)

CBSE Worksheet-01

Class–VIII Science (Crop Production and Management)

1. Sunflower seeds provide us mainly with :-
   a. fats
   b. carbohydrates
   c. proteins
   d. vitamins
2. Most commonly grown cereal crop is/are :-
   a. rice
   b. maize
   c. wheat
   d. all the above
3. Crops sown during winters are :-
   a. rabi crops
   b. kharif crops
   c. mixed crops
   d. cereal crops
4. The method of scattering seeds in the field by hand is :-
   a. hand picking
   b. transplantation
   c. broadcasting
   d. leveling

5. Match the column :-

a. horticultural crop	i) potato
b. kharif crop	ii) crotons
c. rabi crop	iii) agricultural waste
d. compost manure	iv) groundnut
e. green manure	v) dry leaves

6. Fill in the blanks :-

   a. _____ is large scale cultivation of vegetable, fruits & flower plants.

   b. _____ is the process of loosening and turning up of the soil.

   c. _____ is the process of supplying water to crops at different intervals.

   d. _____ is result of too much water given to the soil.

   e. _____ is the science dealing with growth of plants and animals for human use.

7. Why is it good to wash foodgrains before use?

8. Why are manures better than fertilizers?

9. Pick the wrong word out of the following:
   Pesticide/Horticide/Herbicide/Weedicide/Insecticide

10. Write the correct words by putting letters in correct sequence-

    i) wwiinnngo

    ii) shhtegrin

Answer Key

1. a
2. d
3. a
4. c
5. a. ii, b. i, c. iv, d. v, e. iii.
6. horticulture, tilling, irrigation, waterlogging, agriculture.
7. may contain weedicides that are toxic to us.
8. no toxic effect and low in cost.
9. horticide
10. i) winnowing

    ii) threshing

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CBSE Worksheet-02
Class–VIII Science (Crop Production and Management)

1. The disadvantage of broadcasting is :-
   a. seeds are evenly distributed
   b. seeds get damaged
   c. seeds are unevenly distributed
   d. seeds get infected

2. Seeds being used for sowing must be :-
   a. inferior quality
   b. disease free
   c. hollow and light
   d. all the above

3. Seed drill sows the seeds at :-
   a. equal distances
   b. proper depth
   c. both a & b are correct
   d. unequal distances

4. Two or more crops grown together in the same field is called :-
   a. crop rotation
   b. mixed farming
   c. field fallow
   d. mixed cropping

5. Match the column :-

a. sowing	i) sprinklers
b. irrigation	ii) trowel
c. weeding	iii) sickle
d. harvesting	iv) seed drills
e. manuring	v) manually

6. Fill in the blanks :-

a. _____ were the first crop known to be cultivated.

b. _____ provide the staple food for people in every part of world.

c. Grains are rich in _____.

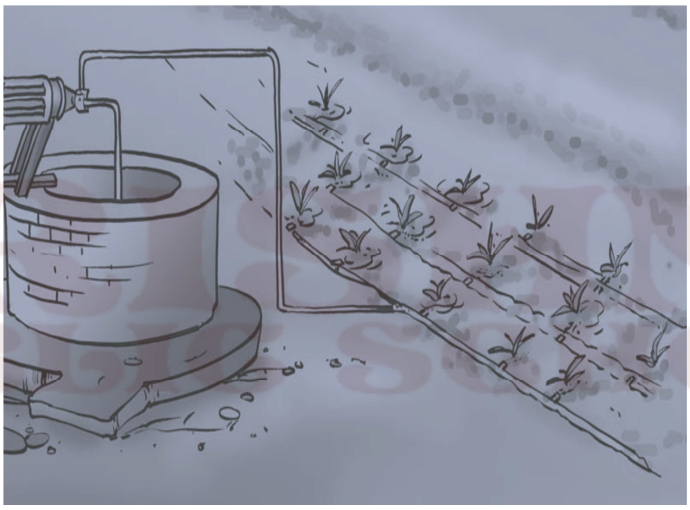
d. If there is a shortfall in production, grains are made available from _____ stock .

e. _____ is the most important cereal in the world.

7. List main advantages of preparation of soil?

8. What are silos?

9. What does the following picture represent?



10. Correct the following sequence of steps in crop production:

a. seed selection & sowing

b. preparation of soil

c. protection from pests

d. manuring

e. weeding

f. irrigation

g. storage

h. harvesting

Answer Key

1. c
2. b
3. c
4. d
5. a. iv, b. i, c. ii, d. iii, e. v.
6. Cereals, Grains, Starch, Buffer, Wheat.
7. Allows loosening and turning of soil which traps air for easy root breathing, helps earthworms to grow, brings nutrient rich soil to the top and provides better mixing of fertilisers.
8. Also known as granaries, they are places for storage of grains on large scale .Packing is done within bags, bins and then stored.
9. Drip irrigation method in a crop field.
10. b, a, d, f, e, c, h, g.

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CBSE Worksheet-03
Class–VIII Science (Crop Production and Management)

1. A bacterial disease of plants is:-
   a. rust
   b. wilt
   c. blight
   d. smut

2. Which of the following is used as a biofuel:-
   a. Ethanol
   b. Gammaxene
   c. Manure
   d. Amaranthus

3. Rearing of honeybees for products like honey and wax is called:-
   a. Sericulture
   b. Aquaculture
   c. Pisciculture
   d. Apiculture

4. Which of the following is a milch animal:-
   a. Camel
   b. Sheep
   c. Honeybee
   d. Silkworm

5. Match the column :-

a. legume crop	i) jute
b. root crop	ii) coffee
c. cereal crop	iii) sweet potato
d. plantation crop	iv) groundnut
e. fibre crop	v) wheat

6. Fill in the blanks :-

a. Better varieties of crops can be developed by plant _____.

b. _____ means producing offsprings under controlled conditions.

c. _____ is a technique used for developing new crop varieties by cross breeding.

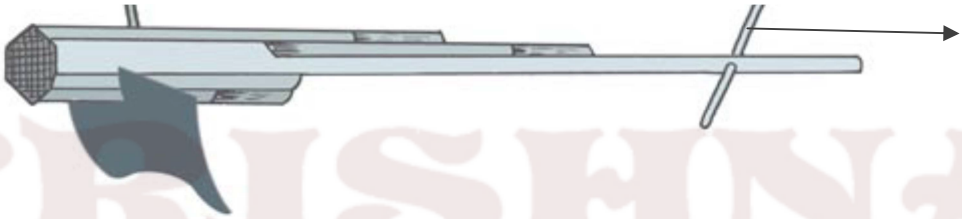
d. In the breeding experiments anthers of plants are removed by process called _____ .

e. _____ farming technique of crop cultivation employs biological methods.

7. How does transplantation of onion seedlings increases its production?

8. Define nitrogen fixation and its importance?

9. In the given diagram label the unknown represented by arrow:



10. Write the correct words by putting letters in correct sequence-

i) ouhgpl

ii) vitarotlcu

Answer Key

1. b
2. a
3. d
4. a
5. a. iv, b. iii, c. v, d. ii, e. i.

6. breeding, breeding, hybridization, emasculation, organic.

7. If onion is planted in nurseries and then their small plantlets called seedlings are transplanted in the field,it will help farmers to select only healthy seedlings that increases crop production.

8. Nitrogen fixation is the process of converting free nitrogen gas of the atmosphere into nitrogen compounds. Biological nitrogen fixation is very important for crop production. Generally bacteria like Rhizobium fix atmospheric nitrogen into nitrates.

9. beam.

10. i) plough
    ii) cultivator

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CBSE Worksheet-04
Class–VIII Science (Crop Production and Management)

1. Cod liver oil from fish is found to be rich in :-
   a. Vitamin A
   b. Vitamin D
   c. Vitamin C
   d. Vitamin B

2. Conversion of ammonia into nitrates is called:-
   a. nitrification
   b. denitrification
   c. ammonification
   d. deammonification

3. Which of the following are harmful for crop plants:-
   a. too little water
   b. too much of water
   c. both a & b
   d. too much light

4. The irrigation method in which water enters the field through channels made between two rows of crop plants is:-
   a. Sprinkler irrigation method
   b. Basin irrigation method
   c. Furrow irrigation method
   d. Drip irrigation method

5. Match the column :-

a. Compost	i) fertilizer
b. Rodents	ii) insecticide
c. BHC	iii) pest
d. NPK	iv) weedicide
e. Metachlor	v) manure

6. State whether following statements are true/false :-

   a. Rice is transplanted in standing water.

   b. Vegetables and fruits are rich sources of proteins.

   c. Rhizobium bacteria is found in the root nodules of non leguminous plants.

   d. Technology has been developed to use crop stabs for making ethanol.

   e. Horticulture is a branch of agriculture.

7. Define water logging and its impact ?

8. Which method of irrigation would be recommended for a region with uneven land surface and why ?

9. What are contributions made by Prof. M.S.Swaminathan?

10. Which one would you prefer a chemical pesticide or a biopesticide? why?

Answer Key

1. b
2. a
3. c
4. c

5. a. v, b. iii, c. ii, d. i, e. iv.

6. true, false, false, true, true.

7. When a lot of water is given to the crop, it stands in the field and accumulates around roots of crop plants. This is known as water-logging. It causes damage to the crop because roots can't breathe properly and salinity of soil is also increased.

8. Sprinkler system of irrigation is best suited for uneven land where proper distribution of water is not possible. In this system, perpendicular pipes are put in the field at regular intervals and have rotating nozzles at the top end such that water gets sprinkled over crop plants.

9. He is better known as father of green revolution in India.

10. Biopesticides are ecofriendly and non toxic to humans for eg: cochineal insect is used to eliminate prickly pear (opuntia= cactus) from crop fields.

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CBSE Worksheet-05

Class–VIII Science (Microorganisms: Friend and Foe)

1. Low temperature prevents spoilage of food because it :-
   a. retards microbial growth
   b. inactivates enzymes
   c. both a & b
   d. removes water from food materials

2. Which of the following is found to be present in curd ?
   a. Lactobacillus
   b. Rhizobium
   c. Lactovirus
   d. Lactococcus

3. In the given picture the microbe responsible for the spoilage is a :-

   a. virus
   b. protozoa
   c. bacteria
   d. fungus

4. The microorganism used in preparation of bread is :-
   a. yeast
   b. adenovirus
   c. Penicillium
   d. blue green algae

5. Match the column :-

Disease	**Transmission by**
a. Dengue	i) infected dog's bite
b. Hepatitis B	ii) contact
c. Food poisoning	iii) contaminated water
d. Rabies	iv) carrier Aedes mosquito bite
e. Pox	v) contaminated food

6. Fill in the blanks :-

a. _____ are preserved by the use of oil and vinegar.

b. _____ is the process of heat and cold treatment for preserving milk.

c. _____ is a dangerous form of food poisoning.

d. _____ is the oldest method of food preservation.

e. Jellies, squashes and jams are preserved by _____ syrup.

7. How the percentage of nitrogen in the atmosphere remains more or less constant ?

8. Identify the microorganism in the picture and write any one important feature of it ?

9. Pick the odd word out of the following:

HIV, Cholera, Sleeping sickness, Cancer, Citrus canker.

10. Write the correct words by putting letters in correct sequence-

i) ttiiibcoans ii) gotsenpah

Answer Key:-

1. c
2. a
3. d
4. a
5. a. iv, b. iii, c. v, d. i, e. ii.

6. pickles, pasteurisation, botulism, dehydration, sugar.

7.Nitrogen present in air is fixed by some microbes as nitrifying bacteria. That fixed nitrogen is utilised by plants and then by animals. After their death, fixed nitrogen is thereafter released back into the atmosphere in its molecular form by the action of another group of microbes called denitrifying bacteria. Due to this cyclic movement the percentage of nitrogen in the atmosphere remains more or less constant

8. The picture shows a virus of bacteriophage group and they are all parasites on bacteria. They reproduce inside the host cell by utilising the cell machinery of it and increase their number till the bacterial cell bursts open to release the virus particles.

9. All others are communicable diseases except Cancer.

10. i) antibiotics
    ii) pathogens

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CBSE Worksheet-06

Class–VIII Science (Microorganisms: Friend and Foe)

1. Some microbes have a hard outer cover called :-
   a. protein coat
   b. mucilaginous sheath
   c. disc
   d. cyst

2. A vaccine contains :-
   a. active disease causing microbes
   b. weakened or killed microbes
   c. antibiotic dose
   d. combination of medicines

3. A group of similar microorganisms living together is called :-
   a. factory
   b. colony
   c. herd
   d. capsule

4. Atmosphere comprises of 78% :-
   a. oxygen gas
   b. hydrogen gas
   c. nitrogen gas
   d. carbondioxide gas

5. Match the column :-

Disease	**Prevention by**
a. Pneumonia	i) spraying insecticides
b. Pox	ii) drinking boiled water
c. Malaria	iii) BCG vaccine
d. Tuberculosis	iv) isolation of patient
e. Jaundice	v) using antibiotics

6. Fill in the blanks :-

a. _____ reproduce only inside the living cells.

b. _____ is a bacteria eating virus.

c. Viruses can be seen under the _____ microscope.

d. Viruses are regarded as _____ link between living and non living.

e. A virus do not have _____ structure.

7. Differentiate between atmospheric, biological and industrial nitrogen fixation ?

8. What are chemical preservatives of food ? Name any two of them.

9. Give one word answer to the following:

i) A communicable disease caused by female anopheles mosquito.

ii) A disease of animals and humans which is caused by bacteria.

10. Write the correct words by putting letters in correct sequence-

i) rreeesavvpit

ii) derndhatoyi

Answer Key:-

1. a
2. d
3. a
4. c
5. a. v, b. iv, c. i, d. iii, e. ii.

6. virus, bacteriophage, electron, connecting, cellular .

7. Atmospheric nitrogen fixation takes places by electric discharge, during rains. Compounds of nitrogen thus formed are dissolved in rain water and reach the soil.
   Biological nitrogen fixation is performed by some microbes (bacteria) which convert atmospheric nitrogen into nitrogenous compounds.
   Industrial nitrogen fixation refers to manufacturing of ammonium salts and compounds in chemical factories.

8. Food can also be preserved by the use of some chemicals which can kill the food spoiling microorganisms. This method of conservation of food materials is also called as chemical preservation of food. Such chemicals that prevent food spoilage are called food preservatives for eg. Sodium benzoate and Potassium metabisulphite.

9. i. malaria,
   ii. anthrax

10. i) preservation
    ii) dehydration

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CBSE Worksheet-07

Class–VIII Science (Microorganisms: Friend and Foe)

1. Nitrogen is never a part of :-
   a. proteins
   b. carbohydrates
   c. vitamins
   d. chlorophyll

2. Which group of microorganisms contains only pathogenic members ?
   a. viruses
   b. protozoans
   c. fungi
   d. algae

3. Some bacteria like E. coli living in human intestine synthesise :-
   a. vitamin E
   b. vitamin B
   c. antibiotics
   d. glycogen

4. The first antibiotic was prepared from a :-
   a. fungus
   b. bacterium
   c. protozoan
   d. alga

5. Match the column :-

Disease	**causative organism**
a. Citrus canker	i) TMV
b. Measles	ii) fungi
c. Wheat rust	iii) virus
d. Tobacco mosaic disease	iv) protozoa
e. Kala-Azar	v) bacteria

6. Fill in the blanks :-

a. The process of conversion of sugar into alcohol is called _____ .

b. The process of conversion of free atmospheric nitrogen into useful nitrogenous compounds is called nitrogen _____ .

c. The process of conversion of compounds of nitrogen into free molecular nitrogen is _____ .

d. Incomplete breakdown of organic matter in less air leading to foul smell is called_____ .

e. Complete breakdown of organic matter in sufficient air without foul smell is called _____ .

7. Define pasteurization?

8. How is dehydration helpful in food preservation ?

9. Tick the odd one out :

Hepatitis, Polio, Leukaemia, Smallpox, chickenpox, Rabies.

10. Write the correct words by putting letters in correct sequence-

i) posaircptyh

ii) scraapiit

Answer Key:-

1. b
2. a
3. b
4. a
5. a. v, b. iii, c. ii, d. i, e. iv.

6. fermentation, fixation, denitrification, putrefaction, decomposition .

7. It is method utilised for preservation of milk. This method consists of heating milk to a high temperature of 70^0 C for about half a minute and then cooling it quickly which kills most of the bacteria.

8. Dehydration decreases the moisture/water content of food and retards the growth of food spoiling microorganisms hence helps in food preservation.

9. Except leukemia for all other diseases vaccines are available.

10. i) saprophytic
    ii) parasitic

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CBSE Worksheet-08
Class–VIII Science (Microorganisms: Friend and Foe)

1. Viruses can be :-
   a. stored
   b. crystallised
   c. isolated
   d. all the above

2. The group of microorganisms where all members contain chlorophyll is:-
   a. fungi
   b. bacteria
   c. protozoa
   d. algae

3. Louis Pasteur discovered :-
   a. Pasteurisation b. Fermentation
   c. both a & b
   d. Putrefaction

4. Fixation of nitrogen can occur :-
   a. naturally
   b. artificially
   c. both a & b
   d. only during rains

5. Match the column :-

Disease	**organism affected**
a. Foot and mouth disease	i) wheat
b. Anthrax	ii) bhindi
c. Smut	iii) humans
d. Blast	iv) cattle
e. Yellow vein mosaic	v) rice

6. State whether the following statements are true or false :-
   a. Chemical compound produced by certain microbes that inhibit the growth of other microbes are called vaccines.
   b. Food preservative chemicals increase the shelf life of perishable food items.
   c. Polio drops given to children are actually vaccines.
   d. Yeast can also make fruit juices unfit for consumption due to formation of alcohol.
   e. Snack packets are evacuated and flushed with nitrogen free oxygen.

7. What makes the dough rise while preparing idli, dosa, bhaturas and dhoklas ?

8. How can be communicable diseases prevented ?

9. What is botulism? Name the organism causing it.

10. Write the correct sequence for vaccination-
    i) Body produces antibodies.
    ii) Introduction of weak or dead microbes.
    iii) Antibodies protect from future microbial infection.
    iv) Vaccine reaches internal parts of body.

Answer Key:-

1. d
2. d
3. c
4. c
5. a. iv, b. iii, c. i, d. v, e. ii.

6. false, true, true, true, false .

7. Yeast is a beneficial fungus. Through the process of fermentation it breaks down sugar and produces alcohol and carbon dioxide. Bubbles of carbon dioxide gas fills the spaces in dough and make it to rise.

8. To avoid the spreading of communicable diseases :
   i) we should cover our nose and mouth while we sneeze or cough.
   ii) we should take care of personal and community hygiene.
   iii) we must keep food and water covered to prevent contamination.
   iv) we must wash our hands before eating food .

9. When cooked food is kept for long time, some microbes grow on it and produces toxins over there that makes food poisonous. If such spoiled food is consumed it leads to food poisoning.
   Food poisoning caused by a bacterium named Clostridium botulinum is called botulism.

10. ii), iv), i), iii).

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CBSE Worksheet-09

Class–VIII Science (Microorganisms: Friend and Foe)

1. Organisms responsible for recycling of matter in nature is/are :-
   a. bacteria
   b. viruses
   c. fungi
   d. both a & c

2. A denitrifying bacterium is :-
   a. Pseudomonas
   b. Pseudopodia
   c. Nitrosomonas
   d. Nitrobacter

3. When a disease causing microbe enters into our body, defense system produces :-
   a. antigens
   b. antibodies
   c. antibiotics
   d. both a & b

4. Which of the following is a biological nitrogen fixer ?
   a. bacteriophage
   b. lactobacillus
   c. blue green algae
   d. Euglena

5. Match the column :-

vaccine given	**Age**
a. Polio(booster dose)	i) 4 to 9 months
b. Small pox (revaccination)	ii) soon after birth
c. BCG	iii) 2 years
d. DPT (triple vaccine)	iv) 5 years
e. Typhoid vaccine	v) 1 year

6. State whether the following statements are true or false :-
   a. Robert Koch was the first scientist to observe microbes through a microscope.
   b. Edward Jenner discovered the first vaccine against small pox.
   c. Louis Pasteur gave the germ theory of disease.
   d. Antony Van Leewenhoek observed the dead cells.
   e. Study of microorganisms is known as microscopy.

7. What are symbiotic or commensal bacteria and what is their significance for humans?

8. What is an antibiotic? Give any four examples of antibiotics.

9. Pick the wrong word out of the following:
   Bacillus, Coccus, Spirillum, Vibrio, Polygonal.

10. Write the correct words by putting letters in correct sequence-
    i) setrupa
    ii) newheeeoklu

Answer Key:-

1. d
2. a
3. b
4. c

5. a. iii, b. v, c. ii, d.i , e.iv.

6. false, true, true, false, false.

7. Some bacteria occur in the human intestine and intestine of other animals as well. They benefit their host and referred to as symbiotic &/or commensals like E.coli synthesizing vitamin B in our body .

8. Many microorganisms produce certain chemicals that inhibit the growth of some other microbes. Such chemicals are called antibiotics. examples are penicillin, streptomycin, tetracycline, gramicidine.

9. All are shapes of bacterial cells except polygonal.

10. i) Pasteur
    ii) Leeuewnhoek

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CBSE Worksheet-10

Class–VIII Science (Synthetic fibres and plastics)

1. Polyester is a long chain polymer of a chemical substance called :-
   a. aldehyde
   b. ester
   c. alcohol
   d. ethene
2. Which of the following represent the smallest units of a polymer :-
   a. tetramer
   b. dimer
   c. monomer
   d. octamer
3. A regenerated synthetic fibre is :-
   a. rayon
   b. nylon
   c. terylene
   d. polythene
4. The first fully synthetic fibre is :-
   a. rayon
   b. nylon
   c. Acrylic
   d. Polyester
5. Match the column :-

Fibre	**articles made**
a. Jute	i) bristles for brushes
b. Polyester	ii) surgical dressings
c. Rayon	iii) bags
d. Acrylic	iv) sails for boats
e. Nylon	v) sweaters

6. Fill in the blanks :-

   a. Rayon is prepared from _____ .

   b. Polythene is prepared from_____ .

   c. Nylon is prepared from simple chemicals obtained from _____ .

   d. Polyester is made from _____ products.

   e. _____ is called a regenerated fibre.

7. a) Define polymerisation?

   b) For making synthetic polymers where from we get small molecules?

8. What are plant and animal fibres ?

9. Pick the odd word out of the following:

   Terene, Terylene, Acrylic, Decron, Terycot.

10. Which synthetic fibre is the following cloth made up of :-

Answer Key:-

1. b
2. c
3. a
4. b

5. a. iii, b. iv, c. ii, d. v, e. i.

6. cellulose, ethylene, coal, petroleum, rayon.

7. a)The process which involves combining of a large number of simple molecules chemically so as to form a giant molecule is known as polymerisation.

   b) Small molecules which form long chains of polymers are obtained from petroleum and natural gas.

8. Plant and animal fibres are natural polymers and obtained from plant and animal sources respectively. Cotton and jute are plant fibres while wool and silk are animal fibres.

9. All contain polyester except acrylic.

10. nylon

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CBSE Worksheet-11

Class–VIII Science (Synthetic fibres and plastics)

1. Among the following a synthetic polymer is :-
   a. cellulose
   b. chitin
   c. rayon
   d. silk
2. A synthetic polymer called polythene is prepared from:-
   a. Ethyene
   b. Ethene
   c. Ethanol
   d. Ethane
3. One of the most common form of polyester is :-
   a. artificial silk
   b. tetrafluoroethylene
   c. polyvinyl chloride
   d. polyethylene terephthalate
4. All are polyester fibres except:-
   a. Melamine
   b. Terylene
   c. Decron
   d. Terene
5. Match the column :-

Fibre	**Property/ characteristic**
a. Cotton	i) silky texture
b. Nylon	ii) plant fibre
c. Rayon	iii) feels like wool
d. Polyester	iv) does not absorb water
e. Acrylic	v) absorbs very little water

6. Fill in the blanks :-

   a. _____ burns vigorously and leaves little ash.

   b. _____ burns slowly with the smell of burning hair.

   c. _____ shrinks on burning producing black smoke.

   d. _____ burns readily with the smell of burning paper.

   e. _____ shrinks if burnt and forms a black bead along with sooty flame.

7. How are plastics good as well as bad to us ?

8. How can we contribute to reduce hazards of plastics ?

9. Name the components of blended fibres of which the following cloth is made :-

10. Write the correct words by putting letters in correct sequence-

    i) tcorety

    ii) laaimmen

Answer Key:-

1. c
2. b
3. d
4. a
5. a. ii, b. iv, c. i, d. v, e. iii.

6. cotton, wool, polyester, rayon, acrylic.

7. Plastics are good because they are light in weight, strong and durable, do not allow heat and electricity to flow through them, non-reactive and cheaper than metals.
   Plastics are bad because they are non biodegradable substances i.e. they do not decompose to harmless substances through the action of air, water and microbes over a period of time hence accumulate and cause pollution.

8. We must use plastic products to lesser extent, we must try to recycle and atleast reuse the plastic materials, we must use either paper or cloth bags for carrying good instead of using polythene bags, we must create awareness among people about excessive use of plastics etc.

9. Polyester and wool (terywool)

10. i) terycot
    ii) melamine

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CBSE Worksheet-12

Class–VIII Science (Synthetic fibres and plastics)

1. The polymers in which smaller units are linked to each other in straight arrangement are called :-
   a. cross-linked polymers
   b. branched polymers
   c. linear polymers
   d. all the above
2. A plastic which can be softened on heating and moulded repeatedly is called :-
   a. thermoplastic
   b. thermosetting plastic
   c. thermolabile plastic
   d. both b & c
3. The synthetic plastic used for making insulation cover in electrical wires/cables is :-
   a. Bakelite
   b. Melamine
   c. Polyvinyl chloride
   d. Polystyrene
4. Plastics are :-
   a. cheaper
   b. durable
   c. nonreactive
   d. all the above
5. Match the column :-

column A	**column B**
a. Plastics	i) first fully synthetic fibre
b. Cotton cloth	ii) PET bottles
c. Nylon	iii) non biodegradable
d. Polyester	iv) thermosetting plastic
e. Bakelite	v) biodegradable

6. Fill in the blanks :-

   a. _____ fibres are less expensive than natural fibres.

   b. Synthetic fibres are not good absorbers of _____ .

   c. In_____ weather clothes made of synthetic fibre stick to the body.

   d. Synthetic fibres catch fire easily so they are _____ .

   e. Clothes made of synthetic fibres should not be worn in _____ .

7. What are plastics and how are they classified ?

8. How did NYLON fabric got this name ?

9. Pick the odd word out of the following:

   bakelite, melamine, polyethylene, polyvinyl chloride, polywool.

10. Write the correct words by putting letters in correct sequence-

    i) sckoinnt wkccoorea

    ii) nliyv lroedich

Answer Key:-

1. c
2. a
3. c
4. d

5. a. iii, b. v, c. i, d. ii, e. iv.

6. synthetic, sweat, hot/humid, inflammable, kitchen/laboratory.

7. Plastics are such materials which can be moulded into a desired form. A variety of day to day usable articles are prepared from plastics such as- comb, toothbrush, chair, table, bottle etc. Like synthetic fibres, plastics are also polymers.
   Platics have been classified into two broad types: thermoplastic and thermosetting plastics depending upon their ability of getting reprocessed or not.

8. Nylon is the first fully synthetic fibre. The name nylon was derived from New York (NY) and London (LON) as it was being produced in New York and London at the same time.

9. All are plastics except polywool.

10. i) non-stick cookware
    ii) vinyl chloride

*****

CBSE Worksheet-13

Class–VIII Science (Synthetic fibres and plastics)

1. Which of the following is not a part of 4R's formula :-
   a. reduce
   b. recycle
   c. recover
   d. reinvent
2. Synthetic plastics lead to :-
   a. water pollution
   b. air pollution
   c. solid waste pollution
   d. all the above
3. Rayon is made from :-
   a. wood pulp
   b. bark of the tree
   c. dry leaves
   d. petroleum products
4. Acrylic fibres are advantageous over :-
   a. cotton
   b. wool
   c. silk
   d. jute
5. Match the column :-

Synthetic plastic	**Property/characteristic**
a. Polyethylene	i) quite inert
b. PVC	ii) lighter than polythene
c. Polystyrene	iii) high polish polymer
d. Teflon	iv) tougher than polythene
e. Melamine	v) impermeable to water

6. State whether the following statements are true or false :-

   a. A polymer is made up of repeating units called monomers.

   b. Structure of a polymer can be compared to that of a gemstone in a ring.

   c. Polymerisation is the process of joining together of polymers to form a monomer.

   d. Polymers can have a cross- linked arrangement of molecules.

   e. Cellulose is a synthetic polymer.

7. Why is rayon called a regenerated fibre ?

8. Describe the need for making polymers ?

9. Name the arrangement of small molecules as shown in the below representation.

10. Write the correct words by putting letters in correct sequence-

    i) rlyompe

    ii) unsiartlro

Answer Key:-

1. d
2. d
3. a
4. b

5. a. v, b. iv, c. ii, d. i, e. iii.

6. true, false, false, true, false.

7. We can describe rayon as a regenerated fibre because the original raw material used for making rayon is cellulose. The cellulose is broken down and then reformed to yield rayon fibers. For this reason rayon is called as a regenerated fibre.

8. Properties of polymers make them very useful. Some of them are:
   i) they do not corrode or rust.
   ii) they can be produced in various colours.
   iii) they can be moulded into different shapes.
   iv) they are comparatively cheap or inexpensive.
   v) they are quite strong.

9. The polymers in which smaller molecules are linked to each other in a straight (linear) arrangement such a polymer is called linear polymer.

10. i) polymer
    ii) insulator

*****

CBSE Worksheet-14

Class–VIII Science (Synthetic fibres and plastics)

1. The purest natural form of cellulose is :-
   a. rayon
   b. cotton
   c. wool
   d. silk
2. Rayon clothes are comfortable to wear in:-
   a. winters
   b. rainy season
   c. both a & b
   d. summers
3. The first fully synthetic plastic was :-
   a. bakelite
   b. melamine
   c. teflon
   d. polythene
4. The non stick coating on pans and other cooking utensils is made from :-
   a. rayon
   b. teflon
   c. melamine
   d. PVC
5. Match the column :-

Synthetic plastic	**use/article made**
a. Bakelite	i) thermocole
b. Melamine	ii) shoes
c. Teflon	iii) combs
d. Polystyrene	iv) unbreakable dinner set
e. PVC	v) nonstick cookware

6. State whether the following statements are true or false :-

   a. Rayon is made from methanol.

   b. Nylon is also known as artificial silk.

   c. Polyester is prepared from petroleum products.

   d. Clothes made from acrylic fibres are low in cost than those made from wool.

   e. PVC is a thermoplastic.

7. Define a thermosetting plastic and give examples.

8. Why has government banned the use of polythene bags ?

9. Pick the odd word out of the following:

   Nylon, Teflon, Terrycot, Polyester, Acrylic.

10. Which synthetic fibre is the following cloth made up of ?

Answer Key:-

1. b
2. d
3. a
4. b

5. a. iii, b. iv, c. v, d. i, e. ii.

6. false, false, true, true, true.

7. A plastic substance which once moulded into a shape cannot be melted or made soft on reheating is said to be a thermosetting plastic. Hence these plastics cannot be reprocessed and they can maintain their shape and size even at very high temperatures. For example Bakelite and melamine are thermosetting plastics.

8. Polythenes or plastic bags are non biodegradable i.e. they cannot be decomposed or recycled by the microorganisms. Besides this an improper disposal of polythenes leads to following environmental problems:
   i) soil and water pollution.
   ii) Blockage and choking of drains and sewer lines.
   iii) Death of animals that chew these polythene bags along with any food.

9. Only terrycot is a fibre made by blending polyester with cotton while all others are unblended pure fibres/ plastics.

10. acrylic

*****

CBSE Worksheet-15

Class–VIII Science (Metals and non metals)

1. Which of the following is/are metalloid?
   a. silicon
   b. iodine
   c. both a & b
   d. gallium
2. Which of the following is/are noble gas?
   a. hydrogen
   b. argon
   c. neon
   d. both b & c
3. Chile saltpeter contains :-
   a. hydrogen
   b. carbon
   c. nitrogen
   d. chlorine
4. A metal with low melting and boiling points is :-
   a. F
   b. K
   c. B
   d. I
5. Match the column :-

Metal	**Uses**
a. Copper	i) construction purpose
b. Iron	ii) automobile batteries
c. Aluminium	iii) cables & wires
d. Lead	iv) photography
e. Silver	v) metallic paints

6. Fill in the blanks :-

   a. A pencil lead is made up of a non metal called _____ .

   b. Non metal do not make a _____ sound when struck.

   c. Non metals are _____ conductors of electricity.

   d. Non metals are not good conductors of heat hence also called as _____ .

   e. Bromine is the only non metal which is _____ at room temperature.

7. Cooking utensils are made of metals but their handles are made of wood or plastic, why ?

8. Why is it advised not to store pickles and curd in metallic utensils ?

9. Name the non metal shown in the following picture?

10. Write the correct words :-

    i) metals : shiny :: non metals : ?

    ii) gold : noble metal :: helium : ?

Answer Key:-

1. a
2. d
3. c
4. b

5. a. iii, b. i, c. v, d. ii, e. iv.

6. graphite, ringing, poor, insulators, liquid .

7. Cooking utensils are made of metals because metals are good conductors of heat so that heat gets conducted in a proper way from the fire(cooktop or induction cooker heat) into the food which is being cooked.
   On the other hand, the handles of cooking utensils must be held time to time during cooking. Since metallic handles will be very hot to hold thus handles are made from any plastic or wood which are bad conductors of heat.

8. Kitchen utensils are generally made up of metals like iron and aluminium. These metals are quite reactive and due to the reaction between acid present in pickle or curd and the utensil metal, a toxic substance may be formed. This can harm our health.

9. Coal(a form of carbon).

10. i) dull.
    ii) noble gas.

*****

CBSE Worksheet-16

Class–VIII Science (Metals and non metals)

1. Hard and brittle form of iron with a high carbon content is :-
   a. wrought iron
   b. steel
   c. pig iron
   d. rust
2. A reaction in which more reactive metal replaces a less reactive metal from its salt solution is called :-
   a. addition reaction
   b. double displacement reaction
   c. exothermic reaction
   d. displacement reaction
3. Cryolite is an ore of :-
   a. aluminium
   b. boron
   c. copper
   d. iron
4. On sweets, thin sheets of which of the following metals is put :-
   a. aluminium
   b. silver
   c. copper
   d. platinum
5. Match the column :-

Non-metals	**Uses**
a. Sulphur	i) bleaching
b. Phosphorus	ii) respiration
c. Oxygen	iii) fuel
d. Chlorine	iv) making gun powder
e. Hydrogen	v) fertilizers

6. Fill in the blanks :-

a. Mercury is the only metal found in _____ state at room temperature.

b. In nature, metals are mostly found as compounds called _____ .

c. Metals can be drawn into wires and this property is called _____ .

d. The property of metals by which they can be hammered into very thin sheets without breaking is called _____.

e. Metals are _____ conductors of heat and electricity.

7. Other than iron do any metal get rusted? If yes explain how?

8. How will you prove the nature of metal oxides ?

9. Pick the odd word out of the following:

Au/Ag/Pt/K/C

10. What is the following picture of ?

Answer Key:-

1. c
2. d
3. a
4. b

5. a. iv, b. v, c. ii, d. i, e. iii.

6. liquid, minerals, ductility, malleability, good.

7. Yes copper also gets rusted in moist air and acquires a dull (non shiny) green coating. Copper gets corroded or rusted in the presence of carbon dioxide and water to form a green coating, which is a mixture of copper hydroxide and copper carbonate.

   $2Cu+H_2O+CO_2+O_2 \rightarrow Cu(OH)_2 + CuCO_3$

8. If we burn a magnesium ribbon, white ash of magnesium oxide is formed. Now by adding little water to white ash we can prepare solution of magnesium oxide. When we dip red litmus paper into this solution it turns blue while when we dip blue litmus paper into this solution colour remains unchanged. It proves that metal oxides are basic in nature.

9. C is odd because it is carbon which is a non metal while all other are metals.

10. It is an aluminium sheet/foil.

*****

CBSE Worksheet-17

Class–VIII Science (Metals and non metals)

1. When a metal spoon hits the ground a characteristic sound is produced and this property of metals is called :-
   a. malleability
   b. ductility
   c. sonorosity
   d. conductivity
2. Non metal found in liquid state at room temperature is :-
   a. chlorine
   b. bromine
   c. iodine
   d. sulphur
3. A gaseous non metal is:-
   a. chlorine
   b. bromine
   c. carbon
   d. iodine
4. Tough and malleable form of iron is :-
   a. pig iron
   b. wrought iron
   c. rust
   d. magnetite
5. Match the column :-

Metals	**Ores**
a. Aluminium	i) Epsom salt
b. Copper	ii) Haematite
c. Iron	iii) Cuprite
d. Lead	iv) Bauxite
e. Magnesium	v) Galena

6. Fill in the blanks :-

a. Non metals are generally _____, so they break into pieces on hammering.

b. Sodium and _____ are soft enough to be cut with a knife.

c. Strings of musical instruments are made up of a _____ .

d. _____ is the only non metal which is a good conductor of heat and electricity.

e. Metals oxides are _____ in nature because their solution in water turns red litmus blue.

7. List any five important uses of metals ?

8. How will you prove the nature of non metal(sulphur) oxides ?

9. Which metal has been used to make the wires shown in the picture?

10. Write the correct words by putting letters in correct sequence-

i) saanniialtgov

ii) namimgreu

Answer Key:-

1. c
2. b
3. a
4. b

5. a. iv, b. iii, c. ii, d. v, e. i.

6. brittle, potassium, metal, graphite, basic. .

7. (i) Lead is used in X-ray machines.
   (ii) Iron is used in construction.
   (iii) Mercury is used in thermometers.
   (iv) Gold and silver are used in making jewellery.
   (v) Aluminium foil is used for packing food.

8. (i) Take a small amount of powdered sulphur in a deflagrating spoon and heat it.
   (ii) As soon as sulphur starts burning, introduce the spoon into a gas jar/glass tumbler.
   (iii) Remove the spoon after some time. Add a small quantity of water into the tumbler and shake well.
   (iv) Check the solution with red and blue litmus papers. Since the blue litmus paper turns red thus oxide is acidic in nature.
   Sulphur dioxide (SO_2) + Water (H_2O) → Sulphurous acid (H_2SO_3)

9. Copper.

10. i) galvanisation
    ii) germanium

*****

CBSE Worksheet-18

Class–VIII Science (Metals and non metals)

1. An ore of lead is :-
   a. galena
   b. magnetite
   c. leadlite
   d. calamine
2. Corrosion of iron can be prevented by:-
   a. coating of zinc
   b. aluminium paint
   c. both a & b
   d. copper paints
3. Oxide responsible for acid rain is/are :-
   a. SO_2
   b. NO_2
   c. both a & b
   d. CO_2
4. Which of the following metal will not replace copper from its salt solution :-
   a. magnesium
   b. mercury
   c. zinc
   d. iron
5. Match the column :-

Metal/Non-metal	**Physical state/property**
a. Aluminium	i) liquid
b. Mercury	ii) gas
c. Platinum	iii) hardest substance known
d. Diamond	iv) noble metal
e. Chlorine	v) malleable

6. State whether the following statements are true or false :-

   a. Graphite is a non metal and has very low melting and boiling points.

   b. Sulphur burns in air to make a basic oxide.

   c. When phosphorus burns in air, it forms an acidic oxide.

   d. Nitric oxide is and oxide of nitrogen and is neutral in nature.

   e. Non metals displace hydrogen from dilute acids.

7. What are noble metals?

8. List any five important uses of non metals ?

9. Arrange the following metals in their increasing order of ability to conduct electricity: silver, aluminium, copper, gold.

10. Name the non metal which is employed to make the pink colored part of the matchsticks shown in following picture?

Answer Key:-

1. a
2. c
3. c
4. b

5. a. v, b. i, c. iv, d. iii, e. ii.

6. false, false, true, true, false.

7. Some of the metals are more reactive while other are less reactive. But there are certain metals that are very unreactive as they do not react with oxygen, water, moisture, or even any of the dilute acids for example gold and platinum. Therefore such metals are called as noble metals.

8. (i) Sulphur is used in vulcanization of rubber, which makes rubber sufficiently hard to produce tyres.
   (ii) Phosphorus is used in making phosphatic fertilizers.
   (iii) Graphite is used in making lead of pencils.
   (iv) Hydrogen can be used as a fuel that will be a non polluting option of fuel.
   (v) Chlorine is added to water for purification purpose.

9. aluminium < gold < copper < silver.

10. Phosphorus.

*****

CBSE Worksheet-19

Class–VIII Science (Metals and non metals)

1. Magnetite is an ore of :-
   a. magnesium
   b. iron
   c. zinc
   d. aluminium

2. Most metals react with dilute acids to produce :-
   a. hydrogen gas
   b. oxygen gas
   c. chlorine gas
   d. nitrogen gas

3. In a transistor which of the following will be present :-
   a. S
   b. P
   c. Mg
   d. Si

4. The substance added to common salt is :-
   a. F
   b. Cl
   c. I
   d. Br

5. Match the column :-

a. Metal	i) CO
b. Non-metal	ii) Germanium
c. Metalloid	iii) N_2O
d. Acidic oxide	iv) Zinc
e. Neutral oxide	v) Graphite

6. State whether the following statements are true or false :-

   a. Metals form neutral oxides when react with oxygen.

   b. Solution of MgO in water turns red litmus paper to blue.

   c. Rust is an oxide of iron.

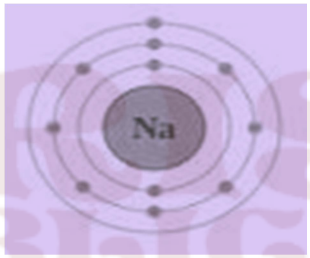
   d. Zinc reacts with water but copper reacts only with steam.

   e. Zinc replaces copper from the copper sulphate solution.

7. What would happen if sodium and potassium are kept in open air?

8. What is the property of sonorosity?

9. Whether the following atomic structure represents a metal or a non metal? Name it.



10. Arrange the following in descending order as per their reactivity with oxygen :

    iron, copper, magnesium, zinc.

Answer Key:-

1. b
2. a
3. d
4. c

5. a. iv, b. v, c. ii, d. iii, e. i.

6. false, true, true, false, true.

7. Both sodium and potassium are highly reactive metals. They react violently (may catch fire) with oxygen and moisture present in air even at the room temperature. A lot of heat is evolved when such reaction occurs and as such the metal is lost because it makes oxides. Hence these extremely reactive metals are not kept in open but are kept immersed in the kerosene.

8. When a metal is struck hard like bell, it produces a ringing sound. This property of metals if producing a typical sound is called sonorosity. Sonorous nature of metals is brought into use in stringed musical instruments.

9. It is a metal named sodium.

10. magnesium > zinc > iron > copper.

*****

CBSE Worksheet-20

Class–VIII Science (Coal and Petroleum)

1. A solid fuel formed by heating coal in the absence of air :-
   a. hydrogen
   b. coke
   c. methane
   d. coal tar
2. Fossil fuels does not include:-
   a. coal
   b. petroleum
   c. biogas
   d. natural gas
3. For generation of electricity in thermal power plants we need:-
   a. coal
   b. petroleum
   c. natural gas
   d. biogas
4. Coal is a mixture of substances containing:-
   a. carbon
   b. hydrogen
   c. oxygen
   d. all the above
5. Match the column :-

Petroleum fraction	**Uses**
a. Paraffin wax	i) domestic fuel
b. Diesel	ii) making candles
c. Kerosene	iii) making roads
d. Petroleum gas	iv) stove fuel
e. Bitumen	v) automobile fuel

6. Fill in the blanks :-

   a. All such substances which are used by human beings for their survival and welfare are called _____ .

   b. Petroleum is a _____ and _____ resource.

   c. _____ resources are present in unlimited amount in nature and can be continually replenished.

   d. A _____ is a substance that can be used to produce heat at a reasonable cost.

   e. A _____ fuel is obtained from the remains of plants and animals that died millions of years ago.

7. Define carbonization?

8. How burning of coal can create serious global problems?

9. Classify the following resources as natural or man- made :
   petroleum, bleach, coal, steel, wind, alloys, water.

10. Name the black liquid shown in the following picture?

Answer Key:-

1. b
2. c
3. a
4. d

5. a. ii, b. v, c. iv, d. i, e. iii.

6. resources, natural and exhaustible, inexhaustible, fuel, fossil .

7. During a slow process, over a period of millions of years there has occurred gradual decay and compression of buried remains of plants/trees. Sometimes earthquakes and volcanoes buried entire forests deep down in the earth.
   The high temperature and high pressure inside the earth slowly converted the buried vegetation into coal. This slow conversion of dead trees and other plants (wood) is known as carbonisation.

8. When coal is burnt, many gases like carbon dioxide, nitrogen dioxide, smoke, little carbon monoxide etc are produced. Each of these gases causes considerable harm to health and environmental balance. They are major cause of air pollution and global warming. Carbon dioxide is considered one of the pioneer green house gas, nitrogen dioxide causes acid rain and smog(smoke+fog) and smoke itself is very injurious to eyes and respiratory system.

9. natural : petroleum, coal, wind, water.
   man-made : bleach, steel, alloys.

10. bitumen

*****

CBSE Worksheet-21

Class–VIII Science (Coal and Petroleum)

1. The gas evolved when coal is heated in the absence of air :-
   a. coal gas
   b. biogas
   c. natural gas
   d. noble gas
2. Which variety of coal is the highest in percentage of carbon ?
   a. bituminous coal
   b. lignite
   c. anthracite
   d. all contain equal carbon content
3. Coal – Volatile impurities and moisture =?
   a. coal gas
   b. coal tar
   c. CNG
   d. coke
4. The oil which is used as a fuel for jet aeroplanes is :-
   a. crude oil
   b. kerosene
   c. diesel
   d. Lubricating oil
5. Match the column :-

Products	**uses**
a. Coal tar	i) non polluting automobile fuel
b. CNG	ii) an industrial fuel
c. LPG	iii) in metal extraction process
d. Coal gas	iv) fuel for home
e. Coke	v) making naphthalene balls

6. Fill in the blanks :-

a. Soil is an _____ natural resource.

b. Fossil fuels are valuable sources of _____ .

c. Save electricity to save _____ .

d. When coal is heated in the _____ of air, many useful products are formed.

e. When coal is burnt in the _____ of oxygen, lot of smoke and harmful gases are formed.

7. What can be potential effect of petroleum products on environment?

8. Where and how is petroleum separated into usable products?

9. Classify the following resources as living and non living natural resources:
plants, water, animals, microbes, soil, minerals.

10. Name this destructive distillation product of coal you are viewing in the picture?

Answer Key:-

1. a
2. c
3. d
4. b

5. a. v, b. i, c. iv, d. ii, e. iii.

6. inexhaustible, energy, coal, absence, presence, .

7. (i) While transporting petroleum and its products there might be oil spillage.
   (ii) The process of refining petroleum generates various products that can lead to air and water pollution.
   (iii) Drilling of petroleum may result into serious disturbances in the aquatic life.
   (iv) Any leakage in the tanks in which petroleum is stored may lead to pollution and deterioration of groundwater.

8. Petroleum or crude oil contains large amount of hydrocarbons mixed with lot many impurities like sea water and silt. Hence it cannot be used as such.
   The process of separating petroleum into usable fractions is done by fractional distillation and it is called refining of the petroleum. This process is carried out in a petroleum refinery.

9. living natural resources: plants, animals, microbes.
   non-living natural resources: water, minerals, soil.

10. Coal tar

*****

CBSE Worksheet-22
Class–VIII Science (Coal and Petroleum)

1. A renewable resource that has become exhaustible due to faster use is :-
   a. air
   b. sunlight
   c. soil
   d. groundwater

2. Non renewable resource that can be recycled are :-
   a. Coal
   b. Petroleum
   c. Metals
   d. Natural gas

3. The alternative source of energy in place of fossil fuels is/are :-
   a. wind
   b. Biogas
   c. sunlight
   d. all the above

4. Natural gas is used for manufacturing :-
   a. carbon black
   b. coke
   c. anthracite
   d. coal gas

5. Match the column :-

a. Crude oil	i) $H_2 + CO$
b. Producer gas	ii) coal
c. Water gas	iii) cattle dung
d. Fossil fuel	iv) black gold
e. Biogas	v) $N_2 + CO$

6. Fill in the blanks :-
   a. Useful substances obtained from petroleum and natural gas are called _____ .
   b. The constituent of petroleum added to produce Vaseline is _____ .
   c. The wise and judicious use of the fossil fuels is called _____ of fossil fuels.
   d. Process of conversion of wood to carbon is called _____ .
   e. Process of separating the fractions of petroleum by fractional distillation is called _____ of petroleum.

7. Which one is a better fuel coal or coke? Give reason.

8. Describe the process through which petroleum is formed?

9. Classify the following resources as exhaustible and inexhaustible natural resources : wind, petroleum, coal, natural gas, sunlight, forests, water, minerals.

10. Name the variety of coal shown in the picture below?

Answer Key:-

1. d
2. c
3. d
4. a

5. a. iv, b. v, c. i, d. ii, e. iii.

6. petrochemicals, paraffin wax, conservation, carbonisation, refining .

7. Coke is a better fuel because coke does not produce more heat on burning as compared to coal. Therefore no air pollution, no green house effect and environment is not harmed so all these benefits prove coke to be a better option.

8. Petroleum was formed from the dead remains of the animals and plants that lived in the sea millions of years ago. After their death there bodies sank and got buried at the bottom of ocean floor. Gradually, they were covered by layers of sand, silt and clay. In the absence of oxygen or air, high temperature and pressure slowly changed the dead remains into petroleum and natural gas.

9. Exhaustible : petroleum, coal, natural gas, forests, minerals.
   Inexhaustible : wind, sunlight, water.

10. peat/bituminous coal

*****

CBSE Worksheet-23

Class–VIII Science (Coal and Petroleum)

1. All are common varieties of coal except :-
   a. peat
   b. hematite
   c. lignite
   d. anthracite

2. Other name used for petroleum is/are :-
   a. crude oil
   b. black gold
   c. rock oil
   d. all the above

3. Petroleum is generally found accompanied by the :-
   a. biogas
   b. coal gas
   c. natural gas
   d. noble gas

4. The constituent of petroleum used as solvent for dry cleaning is :-
   a. petrol
   b. diesel
   c. paraffin
   d. kerosene

5. Match the column :-

a. Coke	i) methane rich gas
b. Coal tar	ii) product of heating coal in absence of air
c. Natural gas	iii) solid fuel
d. Coal gas	iv) oil which serves as fuel
e. Petroleum	v) thick black liquid

6. State whether the following statements are true or false :-

a. The percentage of carbon is more in coke than in coal.

b. Petroleum is soluble in water.

c. Petroleum is an exhaustible or non renewable energy source.

d. Ammoniacal liquor is formed by solution of ammonia in oil.

e. Natural gas is a domestic and industrial fuel with high calorific value.

7. What are petrochemicals? Explain.

8. What is meant by destructive distillation of coal ?

9. Pick the odd word out of the following:

LPG/CNG/Diesel/Petrol/Kerosene/Paraffin/Lubricating oil

10. Name the variety of coal shown in the picture below?

Answer Key:-

1. b
2. d
3. c
4. a

5. a. iii, b. v, c. i, d. ii, e. iv.

6. true, false, true, false, true .

7. Many useful products are obtained from petroleum and natural gas. They are called petrochemicals.
   These petrochemicals are the raw materials for the manufacture of the synthetic fibres (nylon, acrylic, polyester etc) and detergents and many other useful polymers. Natural gas yields which is used in the manufacture of ammonia which is further employed as a raw material in the manufacture of fertilisers like urea.

8. The process of heating of coal in the absence of air is called destructive distillation of coal.
   The destructive distillation of coal is carried out by heating coal strongly to 1000^{0}C in the absence of air (oxygen). It yields various useful organic and inorganic products like coke, coal gas, coal tar, ammonium compounds.

9. CNG is odd because all others are fractions of fractions while it is a component of natural gas.

10. lignite

*****

CBSE Worksheet-24

Class–VIII Science (Coal and Petroleum)

1. The fraction of petroleum used as fuel for stoves and lamps is :-
   a. kerosene
   b. LPG
   c. diesel
   d. both a & b

2. A fuel which doesn't cause any pollution on burning is :-
   a. coal
   b. natural gas
   c. diesel
   d. petrol

3. Petroleum is separated into useful products by :-
   a. fractional distillation
   b. destructive distillation
   c. both a & b
   d. filteration

4. Destructive distillation will not produce :-
   a. coke
   b. coal tar
   c. coal gas
   d. natural gas

5. Match the column :-

a. Carbonisation	i) hard coal
b. Lignite	ii) conversion of wood to carbon
c. Anthracite	iii) solution of NH_3 in water
d. Peat	iv) soft coal
e. Ammoniacal liquor	v) inferior quality coal

6. State whether the following statements are true or false :-

a. Oxygen is a non renewable resource.

b. Natural gas is found along with petroleum in reservoirs under the ground.

c. Natural gas is chiefly made up of methane.

d. CNG is used as a domestic fuel.

e. Biogas is very costly and inconvenient fuel for rural areas.

7. Why do we need to conserve resources?

8. What is anaerobic thermal degradation of wood? What is its importance?

9. Put the following statements in correct sequence:

In a petroleum refinery -

i. vapour rises and hydrocarbons with lower boiling points condense at different heights.

ii. hydrocarbons get separated in the fractionizing tower to form the different fractions.

iii. Crude oil is heated to 4000C in furnace.

iv. hydrocarbons with highest boiling points condense first.

v. they get collected near base of furnace.

10. Name the variety of coal shown in the picture below?

Answer Key:-

1. a
2. b
3. c
4. d

5. a. ii, b. iv, c. i, d. v, e. iii.

6. false, true, true, false, false.

7. All sorts of resources whether exhaustible or inexhaustible need to be conserved. Groundwater though is a renewable natural resource yet faster use of it is turning this resource into exhaustible. Fossil fuels are exhaustible and cannot be replenished. Hence we need judicious use of our resources such that future generations can also get advantages of these resources and maintain their survival.

8. Anaerobic thermal degradation of wood is carbonisation. Through this process cellulosic material of plants/trees which died and got buried inside earth million of years ago are converted into coal or carbon.

9. iii, iv, v, i, ii.

10. Anthracite

*****

CBSE Worksheet-25

Class–VIII Science (Combustion and Flame)

1. Combustion refers to a :-
   a. physical change
   b. chemical change
   c. cyclic change
   d. all the above

2. Select the combustible substance :-
   a. wax
   b. water
   c. glass
   d. sand

3. During combustion of coal, the supporter of combustion is :-
   a. hydrogen
   b. nitrogen
   c. oxygen
   d. carbon dioxide

4. Fire can be extinguished by :-
   a. lowering temperature below ignition temperature
   b. cutting the supply of oxygen
   c. removing non combustible substances from surroundings
   d. both a & b

5. Match the column :-

a. Incomplete combustion	i) Burning a firecracker
b. Explosion	ii) carbon to carbon monoxide
c. Calorific value	iii) carbon to carbon dioxide
d. Complete combustion	iv) spontaneous
e. Slow combustion	v) fuel efficiency

6. Fill in the blanks :-
   a. The lowest temperature at which any substance catches fire is called _____ temperature.
   b. The substances which burn in air are called _____ substances.
   c. In the absence of sufficient _____ , combustion of a fuel remains incomplete.
   d. _____ should not be used for extinguishing fire caused by an electric short-circuit.
   e. The middle zone of a candle flame is also called the zone of _____ combustion.

7. How will you distinguish between fire extinguishing action of water and CO_2 ?

8. Define fuel efficiency?

9. If you find such a symbol/sign on a box etc, what does it represent?

10. Write the correct words by putting letters in correct sequence-
    i) tiningoi
    ii) submobticle

Answer Key:-

1. b
2. a
3. c
4. d

5. a. ii, b. i, c. v, d. iii, e. iv.

6. ignition, combustible, oxygen, water, partial/incomplete.

7. Water helps to extinguish fire in two ways:- it brings temperature of the combustible material below its ignition temperature and the water vapour formed due to the heat of fire cuts the supply of oxygen.
   Carbon dioxide is highly volatile. So, it immediately vaporises to cut off the supply of air. In the absence of supporter of combustion, fire is extinguished.

8. Different types of fuels generate different amounts of heat. The heat produced by fuels is measured and expressed through its calorific value. For a fuel to be categorised as a good fuel should have a high calorific value, in other words greater is the calorific value larger is amount of heat produced on burning that fuel and vice a versa.

9. It represents that the substance kept inside the box is inflammable.

10. i) ignition
    ii) combustible

*****

CBSE Worksheet-26

Class–VIII Science (Combustion and Flame)

1. The process of burning is also called as :-
   a. combustion
   b. inflammation
   c. induction
   d. conduction
2. For a good fuel :-
   a. ignition temperature should be below the room temperature
   b. ignition temperature should be above the room temperature
   c. ignition temperature should be equal to the room temperature
   d. ignition temperature should be less than 25^0C
3. To fight fire :-
   a. we should cut off the supply of oxygen
   b. we should remove combustible substance
   c. we should cool down combustible substance below ignition temperature
   d. all the above
4. Water works as a fire extinguisher by removing :-
   a. heat
   b. oxygen
   c. both a & b
   d. source of combustible substance
5. Match the column :-

Fuel	**calorific value (kJ/kg)**
a. Coal	i) 35000-40000
b. CNG	ii) 55000
c. Petrol	iii) 25000-33000
d. Biogas	iv) 50000
e. LPG	v) 45000

6. Fill in the blanks :-

   a. Substances having _____ ignition temperature will catch fire easily.

   b. Non combustible substances do not burn in _____ .

   c. When methane burns in enough oxygen supply, _____ and water are formed.

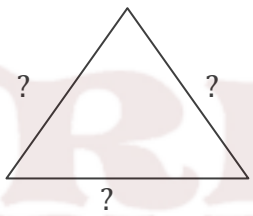
   d. When sufficient oxygen is not available, methane combustion produces _____ and water.

   e. Burning of matchstick is an example of _____ combustion.

7. A paper cup with water in it doesn't burn. Explain why?

8. Differentiate between complete and incomplete combustion?

9. If following is a fire triangle then label the question marks :



10. Sort out the combustible and non combustible substances :
    stone, wood, gold, LPG, CNG, silver.

Answer Key:-

1. a
2. b
3. d
4. c
5. a. iii, b. iv, c. v, d. i, e. ii.

6. low, air/oxygen, carbon dioxide, carbon monoxide, rapid .

7. A paper cup containing water in it not burns because the heat conveyed by candle flame to the paper cup is further conducted to the water present inside the paper cup. Since paper cup loses the heat to the water by conduction, the temperature of the paper does not increase beyond its ignition temperature as a result paper cup doesn't burn.

8.

Incomplete combustion takes place when oxygen supply is not sufficient. During incomplete combustion many harmful gases like CO, NO_2, smoke etc are formed.	Complete combustion takes place when oxygen supply is sufficient. During complete combustion CO_2, water and a lot of heat is produced.

9. air, fuel, heat.

10. i) combustible – wood, LPG, CNG.
ii) non combustible – stone, gold, silver.

*****

CBSE Worksheet-27

Class–VIII Science (Combustion and Flame)

1. The non SI unit for reporting calorific value is :-
   a. J/kg
   b. KP/kg
   c. KW/kg
   d. KJ/kg
2. The SI unit of the calorific value of a fuel is :-
   a. J/kg
   b. KJ/kg
   c. N/kg
   d. KW/kg
3. Acid rain is caused due to dissolution of :-
   a. oxides of nitrogen in rain water
   b. oxides of sulphur in rain water
   c. both a & b
   d. oxides of carbon in rain water
4. SPM released by combustion of coal in air may lead to :-
   a. bone cancer
   b. asthma
   c. arthritis
   d. goitre
5. Match the column :-

a. liquid fuel	i) natural gas
b. gaseous fuel	ii) hydrogen
c. solid fuel	iii) coal gas
d. Good gaseous fuel	iv) LPG
e. Fuel of future	v) cattle dung cakes

6. Fill in the blanks :-

   a. One should never use water for extinguishing _____ fires.

   b. Combustion of food inside living cells occurs through _____ .

   c. Nowadays in place of petrol and diesel, a cleaner fuel _____ is recommended.

   d. If ignition temperature of a substance is lower than room temperature then it will undergo _____ combustion.

   e. Wax vapours burn completely in _____ zone of a candle flame.

7. a) Define ignition temperature.

   b) Define calorific value.

8. List any five characteristics of a good fuel.

9. Pick the odd word out of the following:

   water, wood, cement, sand, glass.

10. Write the correct words by putting letters in correct sequence-

    i) steerxuiingh

    ii) malef

Answer Key:-

1. d
2. a
3. c
4. b
5. a. iv, b.iii, c. v, d. i, e. ii.
6. oil, respiration, CNG, slow/spontaneous, outer .
7. a) Combustible substances generally do not catch fire on their own. However if they are provided heat they start burning. Heat increases their temperature. So, the lowest temperature at which a substance catches fire is known as its ignition temperature.
   b) The quantity of heat produced by complete combustion of 1 kg of a fuel is called its calorific value.
8. i) Fuel should burn safely and should be readily catching fire.
   ii) Fuel should have high calorific value.
   iii) Fuel should not produce toxic gases when burnt.
   iv) Fuel should be easily stored and transported.
   v) Fuel should be cheap.
9. Only wood is combustible while all others are non combustible.
10. i) extinguisher
    ii) flame

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CBSE Worksheet-28

Class–VIII Science (Combustion and Flame)

1. A fire triangle doesn't need :-
   a. oxygen
   b. nitrogen
   c. heat
   d. fuel
2. Fire can be extinguished by spraying :-
   a. carbon dioxide
   b. carbon tetrachloride
   c. water
   d. all the above
3. Temperature is higher for a :-
   a. blue flame
   b. yellow flame
   c. brown flame
   d. both a & b
4. Type of combustion that leads to pollution is/are :-
   a. intermittent combustion
   b. complete combustion
   c. incomplete combustion
   d. both b & c
5. Match the column :-

Candle flame	property
a. yellowish	i) not enough oxygen is available
b. blue	ii) plenty of oxygen available
c. inner zone	iii) flame color in non luminous zone
d. outer zone	iv) flame color in luminous zone
e. middle zone	v) dark black in colour

6. State whether the following statements are true or false :-

   a. Ignition temperature of kerosene is lower than that of petrol.

   b. Food is a fuel for the body.

   c. Fuels are either solid or liquid but never gas.

   d. All fuels are pollutants.

   e. For easy combustion of coal , air has to be blown around coal.

7. How does a blanket help in extinguishing fire?

8. What are inflammable substances? Define them with examples.

9. Arrange the following fuels in their ascending order of calorific value :
   hydrogen, methane, cow dung cake, kerosene, wood.

10. Write the correct words by putting letters in correct sequence-

    i) rocaciilf

    ii) lesionpxo

Answer Key:-

1. b
2. d
3. a
4. c

5. a. iv, b. iii, c. v, d. ii, e. i.

6. false, true, false, false, true .

7. If a person's clothes catch fire (start burning), a blanket must be wrapped over immediately on his/her body. This activity will cut off the supply of oxygen which is a condition for burning(combustion). This will help to extinguish the fire and save the life of that person.

8. Substances that have a very low ignition temperature can catch fire readily and such substances are known as inflammable substances. Examples are LPG, kerosene, petrol, diesel, alcohol etc. Even a small spark can ignite them and result into a major fire outburst hence they need special care during storage and transport.

9. cow dung cake < wood < kerosene < methane < hydrogen.

10. i) calorific
ii) explosion

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CBSE Worksheet-29

Class–VIII Science (Combustion and Flame)

1. Water should not be used as extinguishing agent for fires caused by :-
   a. oil
   b. electricity
   c. both a & b
   d. burning of wood
2. A fire extinguisher works on following principle/s :-
   a. removing combustible substance
   b. cooling the burning substance below ignition temperature
   c. cutting off supply of air
   d. both b & c
3. The dark zone of a candle flame is :-
   a. region around the wick
   b. base close to wick
   c. middle region of flame
   d. outer region of flame
4. Incompletely burnt fuel releases a very poisonous gas that can be fatal if inhaled :-
   a. carbon dioxide
   b. ozone
   c. carbon monoxide
   d. water gas
5. Match the column :-

a. Carbon dioxide	i) also called gobar gas
b. Oxygen	ii) highest calorific value
c. Hydrogen	iii) gas essential for burning
d. Biogas	iv) non pollutant vehicular fuel
e. CNG	v) used in fire extinguisher

6. State whether the following statements are true or false :-
   a. If ignition temperature is higher than room temperature, the fuel is considered good.
   b. Combustion is an oxidation process.
   c. If supply of oxygen is insufficient during combustion, carbon dioxide is formed instead of carbon monoxide.
   d. Any combustion reaction not accompanied by flame is known as burning.
   e. Body fuel like butter gives us more energy than others.

7. What is SPM? Which type of pollution it might cause?

8. Deforestation and excess burning of fossil fuels is leading to a global problem. Explain it.

9. Pick the odd word out of the following:
   LPG, wax, kerosene, charcoal, bunsen burner.

10. Write the correct words by putting letters in correct sequence-
    i) panetsouson
    ii) riversoco

Answer Key:-

1. c
2. d
3. a
4. c
5. a. v, b. iii, c. ii, d. i, e. iv.

6. true, true, false, false, true.

7. Combustion of cabon containing fuels, releases harmful gases but also leave behind ash and fine particles. These fine particles are called SPM i.e. suspended particulate matter. If they are not disposed off properly, may lead to air pollution and water pollution. These pollutants create respiratory problems in living organisms because they can block the respiratory passage.

8. Cutting down forests is leading to less utilisation of CO_2 and less release of oxygen. Combustion of fossil fuels leads to release of CO_2 in atmosphere. Excess burning of coal, petroleum etc and deforestation is adding lot of CO_2 to our air.
   An increase in concentration of carbon dioxide in the atmosphere leads to an increase in temperature on earth. This is called the greenhouse effect and it leads to global warming.

9. Other than charcoal all burn with a flame.

10. i) spontaneous
    ii) corrosive

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CBSE Worksheet-30

Class–VIII Science (Conservation of plants and animals)

1. Large scale cutting of trees and clearing of forests is called :-
   a. reforestation
   b. global warming
   c. deforestation
   d. afforestation
2. Wise and judicious use of plants and animals is called their :-
   a. recycling
   b. conservation
   c. reforestation
   d. reconstruction
3. The largest among various protected areas is a :-
   a. national park
   b. wildlife sanctuary
   c. biosphere reserve
   d. botanical garden
4. The biosphere consists of a extensive network of inter-connected :-
   a. forests
   b. countries
   c. food chains
   d. ecosystems

5. Match the column :-

Protected area	**Animals maintained**
a. Kanha national park	i) Siberian crane
b. Gir sanctuary	ii) Indian elephant
c. Bandipur sanctuary	iii) one horned rhinoceros
d. Kaziranga sanctuary	iv) Lion
e. Bharatpur sanctuary	v) Tiger

6. Fill in the blanks :-

   a. Plants found in a particular area are called _____ of that area .

   b. All non living things constitute the _____ component of an ecosystem.

   c. Red Data Book provides information on the _____ species.

   d. Birds which fly from one habitat to another are called _____ birds.

   e. Species that at present exist in small numbers are called _____ species.

7. Define threatened species?

8. What are endemic species? Give examples.

9. Write full forms of the following :

   i) IUCN

   ii) WCU

10. Write the correct words by putting letters in correct sequence-

    i) realbuvlen

    ii) nerclygic

Answer Key:-

1. c
2. b
3. c
4. d
5. a. v, b. iv, c. ii, d. iii, e. i.

6. flora, abiotic, endangered, migratory, rare .

7. Threatened species include such species of plants and animals whose members are greatly reduced in number or are near extinction. The international union for conservation of nature and natural resources has classified threatened species into endangered, vulnerable and rare species.

8. Those species of plants and animals which are found exclusively in a particular state or country or geographical area are called endemic species. Such species are not found anywhere else. For example Sal trees and Wild mango trees are from endemic flora of Panchmarhi biosphere reserve.

9. i) International union of conservation of nature and natural resources
   ii) World conservation union

10. i) vulnerable
    ii) recycling

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CBSE Worksheet-31

Class–VIII Science (Conservation of plants and animals)

1. The species of plants and animals which are found exclusively at a place are called :-
   a. endemic species
   b. epidemic species
   c. extinct species
   d. endangered species

2. Conservation means :-
   a. replacing present resources with new ones
   b. not using present resources at all
   c. both a & b
   d. using resources without depleting them

3. Function of an ecosystem is/are :-
   a. transfer of energy
   b. fixation of solar energy
   c. transfer of organic matter
   d. all the above

4. The first Red Data Book of animals was published in the year :-
   a. 1975
   b. 1991
   c. 1951
   d. 1995

5. Match the column :-

a. Extinct species	i) crocodile
b. Endangered species	ii) Siberian crane
c. Rare species	iii) Chinkara deer
d. Vulnerable species	iv) sarpagandha
e. Migrating species	v) Himalayan porcupine

6. Fill in the blanks :-

   a. Developing forests by planting trees in places of trees destroyed is called _____.

   b. Animals found in a particular area are called _____ of that area.

   c. Biosphere reserves are developed to conserve _____ .

   d. The living beings of an ecosystem constitute its _____ component.

   e. In a _____ , grazing of animals and cultivation of crops is prohibited.

7. Differentiate between the terms extinct and extinct in the wild with suitable examples?

8. Make a list of any three threats to global biodiversity?

9. Pick the odd word out of the following:

   India/China/Nepal/Indonesia/Columbia/Brazil.

10. Write the correct words by putting letters in correct sequence-

    i) carnuasyt

    ii) medicen

Answer Key:-

1. a
2. d
3. d
4. b
5. a. iv, b. i, c. v, d. iii, e. ii.

6. reforestation, fauna, biodiversity, biotic, national park .

7. When the last individual of a particular kind of organismic species is believed to have died, then the species is declared extinct. eg: Dodo.
   When a species no longer exists in its natural habitat and is known only to survive in the captivity, it is said to be extinct in the wild. eg: white tiger.

8. Threats to the global biodiversity includes :
   i) Habitat loss or destruction of habitat is the primary cause of the loss of biodiversity.
   ii) Pollution and pollutants released from industries and vehicles etc cause harm to environment, which threatens biodiversity.
   iii) Over exploitation of natural resources by humans for food, construction, industrial products, medicines etc is bringing about imbalance in the nature. This harms different species and hence threatens biodiversity.

9. other than Nepal all are megabiodiversity nations.
10. i) sanctuary
    ii) endemic

*****

CBSE Worksheet-32

Class–VIII Science (Conservation of plants and animals)

1. The variety of plants, animals and microbes found in a particular area is called :-
   a. globalisation
   b. biodiversity
   c. conservative variation
   d. flora and fauna
2. Longest migration is exhibited by :-
   a. Siberian crane
   b. Sea turtle
   c. Arctic tern
   d. Salmon fish
3. The term biodiversity was coined for the first time by :-
   a. Wilson
   b. Jim Corbett
   c. William
   d. Robert Hooke
4. Biotic components of an ecosystem will not include:-
   a. flora
   b. fauna
   c. microorganisms
   d. rainfall
5. Match the column :-

Protected area	**State**
a. Sultanpur lake bird sanctuary	i) karnataka
b. Palamau national park	ii) kerala
c. Kaziranga wildlife sanctuary	iii) Madhya pradesh
d. Bandipur national park	iv) Haryana
e. Periyar national park	v) Assam

6. Fill in the blanks :-

   a. _____ is a self-sustaining functional unit of biosphere.

   b. Paper mills convert the wood of a tree into _____ .

   c. That part of earth in which living organisms exist is called _____ .

   d. Conversion of a fertile land into barren land due to soil erosion is called _____ .

   e. Species that are on the verge of _____ are called endangered species.

7. Define migration and explain causes of bird migration through suitable examples?

8. How is a biosphere reserve different from national park and sanctuary?

9. Pick the odd word out of the following:

   whales, elephant, fishes, butterflies, turtles.

10. Write the correct words by putting letters in correct sequence-

    i) cartinetiosfedi

    ii) nuafa

Answer Key:-

1. b
2. c
3. a
4. d

5. a. iv, b. iii, c. v, d. i, e. ii.

6. ecosystem, pulp, biosphere, desertification, extinction .

7. The seasonal movement of animals from one habitat to another to overcome unfavourable conditions is called migration. Birds migrate for :
   i) breeding grounds/reproduction
   ii) seeking food and water
   Siberian crane travels long distance in search of feeding grounds.

8. As compared to national park and sanctuary, a biosphere reserve is a much larger area of protected land for conservation of wildlife, plant and animal resources, and traditional life of the tribal groups living in the area .

9. All are migrating creatures except elephants.

10. i) desertification
    ii) fauna

*****

CBSE Worksheet-33

Class–VIII Science (Conservation of plants and animals)

1. In India following hotspot of biodiversity is/are present :-
   a. Western ghats
   b. Eastern himalayas
   c. Sunderbans
   d. only a & b

2. A place where numerous varieties of only plants are grown :-
   a. botanical gardens
   b. zoological parks
   c. seed banks
   d. sanctuary

3. Sariska national park is located in :-
   a. Haryana
   b. Uttrakhand
   c. Rajasthan
   d. Gujarat

4. Group of organisms capable of interbreeding to produce offsprings :-
   a. flora
   b. species
   c. fauna
   d. ecosystem

5. Match the column :-

a. Global warming	i) tiger reserve
b. Paper	ii) deforestation
c. Kanha national park	iii) animals kept in captivity
d. Nilgiri reserve	iv) recycling
e. Zoological parks	v) first reserve in India

6. State whether the following statements are true or false :-

   a. All varieties of papers can be recycled.

   b. India is a megabiodiversity nation.

   c. Climate determines the type of flora and fauna in a particular region.

   d. Rapid decline of biodiversity is caused due to competition between species.

   e. Wise and judicious cutting of trees by man results into deforestation.

7. What is poaching? Is it posing a threat to biodiversity ?

8. Describe the cause behind giant panda becoming an endangered species ?

9. Pick the odd word out of the following:

   giant flying squirrel, lion-tailed macaque, giant panda, ganga river dolphin, nilgiri leaf monkey.

10. Name the following extinct animal species?

Answer Key:-

1. d
2. a
3. c
4. b

5. a. ii, b. iv, c. i, d. v, e. iii.

6. false, true, true, false, false. .

7. Illegal hunting of wild animals is called poaching. Due to demand for rhino horns, tiger bones, elephant teeth and furs of several animals, illegal trade in animal parts continues. As a result all such species suffer high rates of exploitation that can lead to their extinction. Hence posing threat to the biodiversity.

8. Some of the animals have very specific requirements such as a single specific food source. For example giant panda is endangered because it survives only on bamboo shoots. In the past decades, more than half of bamboo forests have been cleared for farming and development. As a result, now only a few giant pandas live in the wild.

9. Other than giant panda all are endemic animals of India.

10. It is Dodo (*Raphus cucullatus*)

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CBSE Worksheet-34

Class–VIII Science (Conservation of plants and animals)

1. In a core zone of biosphere reserve :-
   a. limited human activity is permitted
   b. several human activities are permitted
   c. no human activity is permitted
   d. only tourists are allowed

2. Dried and deep frozen seeds are stored for conservation in :-
   a. silos
   b. botanical gardens
   c. zoological parks
   d. seed banks

3. Paper can be recycled :-
   a. 5 to 7 times
   b. 3 to 5 times
   c. only twice
   d. only 2 to 4 times

4. WWF is :-
   a. world wild life
   b. world wide fund
   c. world wild flora
   d. world wild fauna

5. Match the column :-

a. Biodiversity hotspot	i) chinkara
b. Fauna of Rajasthan	ii) pine trees
c. Flora of Panchmarhi	iii) Himalayas
d. Flora of Himachal Pradesh	iv) exotic species
e. Threat to endemic species	v) Wild mango trees

6. State whether the following statements are true or false :-

a. Endemic species are exclusive to a state or country or geographical area.

b. Threat to biodiversity will not be a threat to human existence.

c. Forests are nicknamed as lungs of the nature.

d. Deforestation is caused only by man never by nature.

e. Biogas is a good alternative to fuelwood.

7. What are the different zones allotted in a biosphere reserve and their significance?

8. Arctic tern is called the champion of migration?

9. Name the following endangered species?

10. Write the correct words by putting letters in correct sequence-

i) roalf

ii) refoednatiots

Answer Key:-

1. c
2. d
3. a
4. b

5. a. iii, b. i, c. v, d. ii, e. iv.

6. true, false, true, false, true.

7. A biosphere reserve is divided into three zones for differentiation of activities :
   i) Core zone → In this zone absolutely no human activity is permitted.
   ii) Buffer zone → In this zone limited human activity is permitted as tourism.
   iii) Manipulation zone → In this zone several human activities are permitted like tribals living and farming in that area.

8. An arctic tern migrates the longest than by any other living creature. This is a seabird and it breeds or reproduces in the northern hemisphere as the arctic and spends winter in the southern hemisphere as far south in the Antarctica. This means a round trip of upto 35,000 km every year.

9. It is giant panda (*Ailuropoda melanoleuca*)

10. i) flora
    ii) deforestation

*****

CBSE Worksheet-35

Class–VIII Science (Cell structure and functions)

1. The lowest level of organization of life is :-
   a. organ system level
   b. organ level
   c. cellular level
   d. tissue level

2. Which of the following is not a part of nucleus?
   a. nucleolus
   b. lysosomes
   c. chromosomes
   d. nucleoplasm

3. Centrosomes are present only in :-
   a. plant cells
   b. animal cells
   c. both a & b
   d. only viruses

4. All functions of the body are carried out by a single cell in :-
   a. multicellular organism
   b. unicellular organism
   c. bicellular organism
   d. tetracellular organism

5. Match the column :-

a. magnifying glass	i) single celled organism
b. Amoeba	ii) smallest cell
c. Ostrich egg	iii) plant cell
d. chloroplast	iv) largest cell
e. Mycoplasma	v) simplest microscope

6. Fill in the blanks :-

a. A _____ is the smallest unit of life.

b. Chromosomes contain basic hereditary units called _____ .

c. _____ is the cell organelle which produces energy by the oxidation of food.

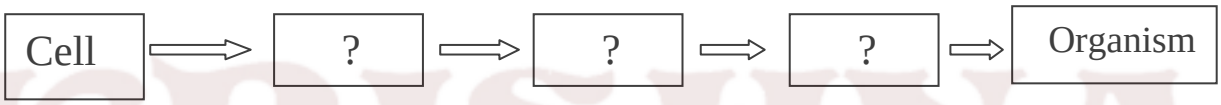
d. Chromoplasts provide different _____ to the flowers and fruits.

e. Green plastids contain _____ that help in photosynthesis.

7. What are the main postulates of the cell theory?

8. Differentiate between unicellular and multicellular organisms with examples.

9. Complete the following flow chart :



10. Write the correct words by putting letters in correct sequence-

i) duesaopidop

ii) suites

Answer Key:-

1. c
2. b
3. c
4. b

5. a. v, b. i, c. iv, d. iii, e. ii.

6. cell, genes, mitochondria, colour, chlorophyll.

7. i) All living organisms are made up of cells. Hence cells are structural and functional units of living organisms.
   ii) All cells are similar in their structure and function but they are not identical.
   iii) New cells are formed through division in the pre-existing cells.

8. Such living organisms in which all life processes for entire organism are performed within a single cell are called unicellular organisms. For example: amoeba, paramecium etc.
   Those organisms in which body is made up of more than one cell are known as multicellular organisms. For example: fishes, frogs, birds. humans etc.

9. tissue, organ, organ system.

10. i) pseudopodia
    ii) tissue

*****

CBSE Worksheet-36

Class–VIII Science (Cell structure and functions)

1. The largest cells in our body are :-
   a. blood cells
   b. liver cells
   c. kidney cells
   d. brain cells

2. The part of cell that provides shape to it is :-
   a. nucleus
   b. cytoplasm
   c. plasma membrane
   d. nucleoplasm

3. Cells can be seen through :-
   a. hand lens
   b. microscope
   c. naked eye
   d. both b & c

4. Control centre of a cell is :-
   a. nucleus
   b. endoplasmic reticulum
   c. mitochondria
   d. golgi body

5. Match the column :-

a. mitochondria	i) contains cell sap
b. vacuole	ii) power house of cell
c. plastids	iii) cellular digestion
d. ribosomes	iv) kitchen of the cell
e. lysosomes	v) protein synthesis

6. Fill in the blanks :-

a. All the life functions take place in the _____ of a cell.

b. The nucleus of a cell is surrounded by _____ membrane.

c. The process of colouring different parts of a cell is called _____ .

d. A group of similar cells that are specialized to perform specific functions is called _____ .

e. Kidney shaped cells in plant leaves are called _____ cells.

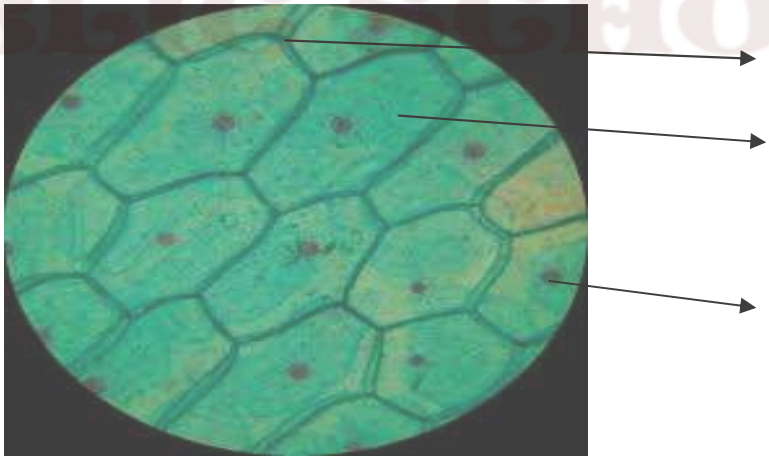
7. How is a cell wall different from plasma membrane?

8. List the different functions performed by cell membrane.

9. Pick the odd word out of the following:

Amoeba/Paramecium/Bacteria/Euglena/Plasmodium/Yeast.

10. Identify in the following :



Answer Key:-

1. d
2. c
3. b
4. a
5. a. ii, b. iv, c. i, d. v, e. iii.

6. cytoplasm, nuclear, staining, tissue, guard .

7. Organisms like plants, fungi and bacteria have an additional outer wall surrounding the plasma membrane. This outer wall is called the cell wall. It is made up of cellulose in plants. It provides protection against temperature variations, changing moisture content, high wind speed etc.

   Plasma membrane or cell membrane is a thin and delicate membrane that forms the outer boundary of the cell. It is made up of fats and proteins.

8. i) It separates cells from each other.
   ii) It keeps the cells separated from surrounding external medium.
   iii) It gives shape and size to the cell.
   iv) It allows movement of selected substances inside and outside the cell.

9. All are eukaryotic organisms except bacteria which is a prokaryote.

10. It is an onion peel showing:
    i) cell wall
    ii) cytoplasm
    iii) nucleus

*****

CBSE Worksheet-37

Class–VIII Science (Cell structure and functions)

1. The cell organelle responsible for storage and secretion of materials from cell is :-
   a. golgi complex
   b. lysosomes
   c. endoplasmic reticulum
   d. nucleus

2. Pollen grains of sunflower are:-
   a. tissue
   b. organ
   c. cell
   d. organ system

3. Cells are :-
   a. transparent
   b. colourless
   c. both a & b
   d. opaque & coloured

4. Deoxyribonucleic acid is found to be present within :-
   a. endoplasmic reticulum
   b. nucleus
   c. lysosome
   d. ribosome

5. Match the column :-

a. dead cells	i) Schwann & Schleiden
b. living cells	ii) Robert Brown
c. cell theory	iii) Leeuwenhoek
d. lysosome	iv) Robert Hooke
e. nucleus	v) Christian de duve

6. Fill in the blanks :-
   a. _____ is a spherical body present inside the nucleus.
   b. The function of receiving and transferring messages is carried out by _____ cells.
   c. _____ of a non dividing nucleus, condenses in a dividing nucleus to form chromosomes.
   d. _____ are parts of DNA that are passed from parents to their offsprings.
   e. _____ is the dense fluid like granular substance of a nucleus.

7. What are genes? How are they important to organism?

8. Are nuclei of prokaryotic and eukaryotic cells different from each other?

9. Fill with correct words :
   i) pseudopodia : false feet :: neurons : ?
   ii) cell wall : bacteria :: centrosome : ?

10. Write the correct words by putting letters in correct sequence-
   i) romeomocsh
   ii) romeobis

Answer Key:-

1. a
2. c
3. c
4. b

5. a. iv, b. iii, c. i, d. v, e. ii.

6. nucleolus, nerve, chromatin, genes, nucleoplasm.

7. Thread like structures called chromatin are present inside nucleus. These condense to form chromosomes during cell division. Chromosomes contain DNA in them. DNA is our hereditary material and segments of DNA are called genes.
   Genes contain all the information needed by the cell to function and to reproduce further cells of next generation. So, genes are responsible for inheritance of characters.

8. In prokaryotic cells there is no well defined nucleus rather it is called a nucleoid. Such nuclear organisation lacks nuclear envelope and nucleolus altogether.
   In eukaryotic cells the nucleus is well defined with nuclear membrane, nucleoplasm, nucleolus and chromatin network.

9. i)nerve cells,
   ii) animal cell.

10. i) chromosome
    ii) ribosome

*****

CBSE Worksheet-38

Class–VIII Science (Cell structure and functions)

1. The water filled spaces found in plant cells are :-
   a. lysosomes
   b. vacuoles
   c. cell membrane
   d. centrosome

2. Centrioles of an animal cell help in :-
   a. food oxidation
   b. transport
   c. transfer of characteristics
   d. cell division

3. Which of the following is not a stain ?
   a. safranine
   b. eosin
   c. methylene blue
   d. glycerine

4. Different types of tissues form together :-
   a. organs
   b. cellular organisation
   c. epidermis
   d. muscles

5. Match the column :-

a. WBC	i) hereditary vehicles
b. chromosomes	ii) found in Euglena
c. protoplasm	iii) found in blood
d. centriole	iv) living material of cell
e. flagella	v) chromosomal movement

6. State whether the following statements are true or false :-

   a. Nerve cells both in rat and elephants perform the same function.

   b. In animal cells nucleus is shifted to one side of the cell.

   c. Cellular respiration occurs in the vacuoles.

   d. Epidermis is an organ.

   e. Animal cells contain small sized vacuoles.

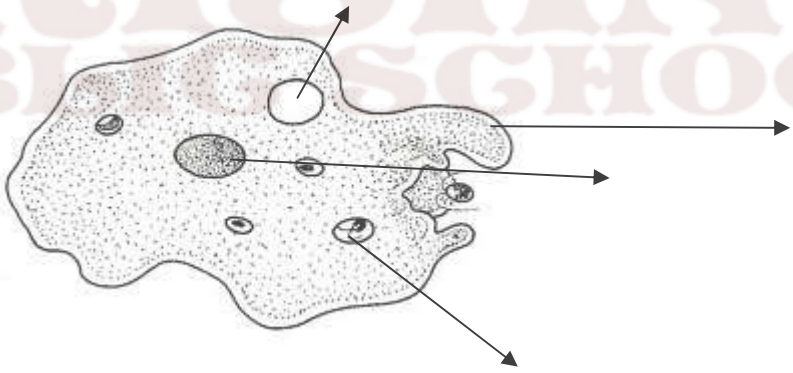
7. What is the need of staining the cells? Name any four stains.

8. Define a vacuole inside a cell and mention its importance?

9. Complete the following:

   Protoplasm = nucleus + ?

10. Label in the following diagram :



Answer Key:-

1. b
2. d
3. d
4. a
5. a. iii, b. i, c. iv, d. v, e. ii.
6. true, false, false, false, true.

7. Cells are transparent and colourless. They do not offer any sort of contrast with their surrounding materials. Since transparent materials which are also colourless, are difficult to observe under a microscope. Therefore, to observe cells and their inclusions different coloured stains or dyes are used.
   Stains react with specific parts of cells and make them clearly visible under a microscope.
   Four stains : safranine, eosin, methylene blue, acetocarmine.

8. Cells contain water filled, sac like structures called as vacuoles. They are large sized in plant cells while either absent or small sized in animal cells.
   In animal cells like that of amoeba, two types of vacuoles are found : food vacuole that carries food and allows its digestion inside; contractile vacuole that controls the amount of water present inside the cell.

9. cytoplasm.

10. i) contractile vacuole
    ii) pseudopodium
    iii) nucleus
    iv) food vacuole

*****

CBSE Worksheet-39

Class–VIII Science (Cell structure and functions)

1. The cell wall of a plant cell is made up of :-
   a. cellulose
   b. starch
   c. glucose
   d. glycogen

2. Ribosomes are found in :-
   a. plant cells
   b. animal cells
   c. viruses
   d. only a & b

3. Food taken in by amoeba is digested in a :-
   a. ribosome
   b. golgi body
   c. centrosome
   d. vacuole

4. Scattered in the cell are many small structures called :-
   a. chromosomes
   b. genes
   c. organelles
   d. WBCs

5. Match the column :-

a. chromoplasts	i) unicellular alga
b. chloroplasts	ii) unicellular fungus
c. leucoplasts	iii) colourless plastids
d. Chlamydomonas	iv) coloured plastids
e. Yeast	v) green plastids

6. State whether the following statements are true or false :-

a. The size of a cell is related to body size of the organism.

b. An amoeba is irregular in shape.

c. In plant cells, the nucleus is shifted to one side of the cell.

d. Golgi body of a plant cell is called dictyosome.

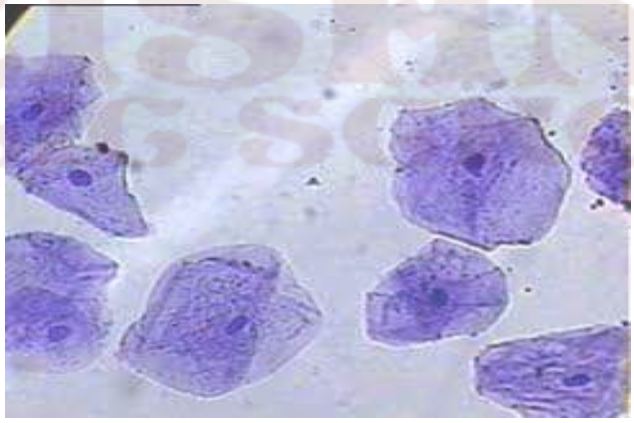
e. Leucoplasts have pigments of different colours that give colour to flowers and fruits.

7. Name the organelle that can be called as kitchen of the cell also explain why it can be called so?

8. i)Name the organelle that helps in cell division?

ii) How is cell division important to unicellular and multicellular organisms?

9. Name the slide prepared and also mention the stain used to colour the cell structures?



10. Write the correct words by putting letters in correct sequence-

i) sorchltopla

ii) clueoav

Answer Key:-

1. a
2. d
3. d
4. c
5. a. iv, b. v, c. iii, d. i, e. ii.

6. false, true, true, true, false.

7. Chloroplast i.e. the green plastids are better known as the kitchen of the cell because it contains chlorophyll for the process of photosynthesis. Through this process, plant cell prepares food which is ultimately stored in the form of starch.

8. i) Centrosome.
   ii) In unicellular organisms, cell division helps to increase their number (reproduce), while in multicellular organisms cell division is required for growth as well as repair in the body.

9. It is a human cheek slide and methylene blue stain is used to colour the cellular components.

10. i) chloroplast
    ii) vacuole

*****

CBSE Worksheet-40

Class–VIII Science (Reproduction in Animals)

1. For sexual reproduction number of parents required are :-
   a. only one
   b. two
   c. three
   d. four

2. Frogs are found to exhibit :-
   a. external fertilization
   b. sexual reproduction
   c. ovipary
   d. all the above

3. Offsprings produced by asexual reproduction are also called :-
   a. drones
   b. gametes
   c. zygotes
   d. clones

4. Binary fission can take place only in :-
   a. unicellular organisms
   b. prokaryotic cells
   c. eukaryotic cells
   d. multicellular organisms

5. Match the column :-

a. Zygote	i) reproductive organ
b. Sperm	ii) a clone
c. Egg	iii) male gamete
d. Flower	iv) female gamete
e. Dolly	v) first cell of new organism

6. Fill in the blanks :-

a. Because of _____ life continues from generation to generation.

b. Bisexual organisms are also known as _____ .

c. The process of fusion of sperm nucleus with egg nucleus is called _____ .

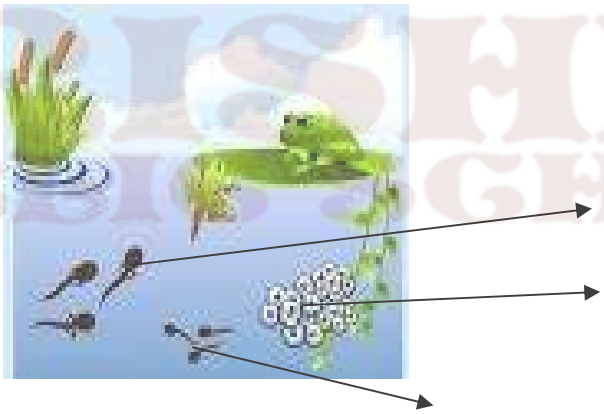
d. _____ fertilization occurs in most of the aquatic organisms.

e. _____ reproduction begins with fusion of male and female gametes.

7. Define an embryo? How is it different from zygote and foetus?

8. Which type of fertilization occurs in human beings ? How is human embryo development different from development of a hen's embryo?

9. In the following life cycle label different stages as asked for :



10. Write the correct words by putting letters in correct sequence-

i) noisfis

ii) dubnigd

Answer Key:-

1. b
2. d
3. d
4. a

5. a. v, b. iii, c. iv, d. i, e. ii.

6. reproduction, hermaphrodites, fertilization, internal, sexual.

7. An embryo is a ball of cells formed by the repeated cell divisions of zygote.
   A zygote is a single celled structure which represents the first cell of a new organism. It is formed by the fusion of male and female gametes. Hence embryo is a multicellular structure. On the other hand the stage of an embryo which start resembling features of a human being is called as foetus.

8. In human beings and hen both, the fusion of male and female gametes takes place inside the body of the female partner. This type of fertilization is known as internal fertilization. But hens lay eggs while humans give birth to young ones.
   So the development of embryo into baby takes place inside the body of human female and the chick development occurs outside the body of hen.

9. (top to bottom) late tadpole, fertilized eggs, early tadpoles.

10. i) fission
    ii) budding

*****

CBSE Worksheet-41

Class–VIII Science (Reproduction in Animals)

1. Male gametes produced by fishes are released in the :-
   a. water body
   b. female reproductive tract
   c. air
   d. vector or carrier

2. The first animal to be cloned was a :-
   a. goat
   b. rat
   c. sheep
   d. frog

3. Internal fertilization takes place in :-
   a. frog
   b. humans
   c. sheep
   d. both b & c

4. Chick is the young one of a :-
   a. cat
   b. butterfly
   c. hen
   d. cow

5. Match the column :-

a. foetus	i) carries testes
b. fallopian tube	ii) ball of cells
c. embryo	iii) where body parts can be identified
d. scrotum	iv) fertilized egg
e. zygote	v) site for fertilization

6. Fill in the blanks :-

a. The process by which life continues on Earth is _____ .

b. Through _____ hen provides sufficient warmth to the egg to develop.

c. Change in shape and form from larva to adult is called _____ .

d. In frogs, eggs hatch into larvae called _____ .

e. In butterflies, eggs hatch into worm like larvae known as _____ .

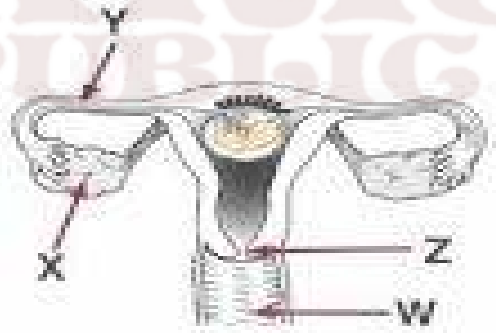
7. Differentiate between clones and test tube babies?

8. Compare asexual and sexual reproduction?

9. Pick the odd word out of the following:

sperm, ovum, tadpole, zygote, frog egg.

10. Label w,x,y and z in the following diagram



Answer Key:-

1. a
2. c
3. d
4. c
5. a. iii, b. v, c. ii, d. i, e. iv.
6. reproduction, brooding, metamorphosis, tadpoles, caterpillars.
7. The production of an exact copy of a cell, any of the body parts, or a complete organism from single parent is referred to as cloning and the cell or part or individual thus formed is known as a clone for eg in asexual reproduction the daughter cells are clones to the parent cell.

   If a woman's oviduct is blocked, then she can't bear baby because sperms can't reach the egg. Medical science has developed the technique of IVF (in vitro fertilization) for those couples. Babies born through IVF are called test tube babies. Fertilization of sperm and egg takes place under lab conditions and the zygote is transferred to mother's uterus.
8. That mode of reproduction in which a single organism is able to reproduce one or more of its kind as a single parent is called asexual reproduction. For example amoeba, paramecium, bacteria etc.

   The other mode of reproduction which involves two parents in the process of new individual formation is called sexual reproduction. Each parent produces gametes. For example in human beings the males produce sperms (male gamete) and the females produce ova (female gamete).
9. All are single cell except a tadpole.
10. w→ vagina

    x → ovary

    y → fallopian tube

    z → cervix

*****

CBSE Worksheet-42

Class–VIII Science (Reproduction in Animals)

1. In human female reproductive system, fertilization takes place in the :-
   a. ovary
   b. oviduct
   c. uterus
   d. vagina

2. In human male reproductive system sperm formation takes place inside :-
   a. testis
   b. sperm duct
   c. seminal vesicle
   d. penis

3. A human sperm represents :-
   a. single cell
   b. two cells
   c. three cells
   d. more than million cells

4. Choose the correct life cycle pattern for a mosquito :-
   a. egg → adult → larva → pupa
   b. egg → pupa → larva → adult
   c. adult → larva → pupa → egg
   d. egg → larva → pupa → adult

5. Match the column :-

a. Marsupial	i) silkworm
b. Bisexual	ii) yeast
c. fragmentation	iii) leech
d. metamorphosis	iv) planaria
e. budding	v) kangaroo

6. Fill in the blanks :-

   a. In human males, testis lie within the _____ outside the abdominal cavity.

   b. After repeated divisions in the embryo, the embryo attaches to the wall of _____ in the female reproductive tract.

   c. Embryo obtains nutrients and oxygen from mother's blood through _____ .

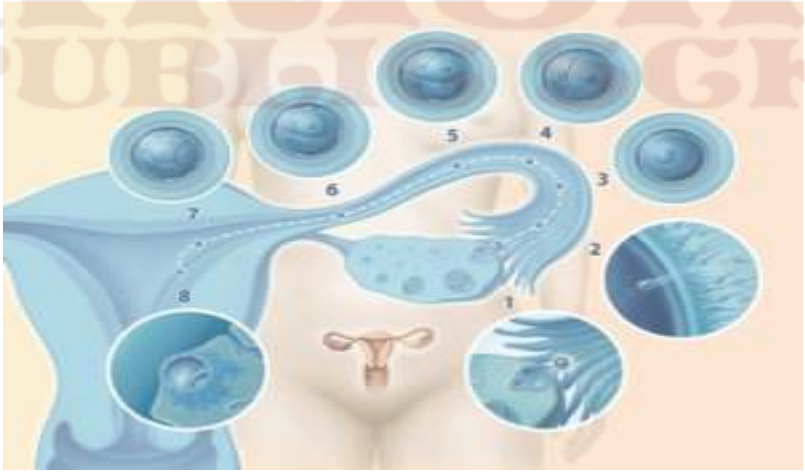
   d. Part of female reproductive system that receives sperms is _____ .

   e. In human females, _____ egg is released every month by either of the two ovaries.

7. What are unisexual and bisexual organisms?

8. Describe male reproductive system of humans?

9. In the following diagram select the number which shows the stage for implantation of the embryo?



10. Write the stages in life cycle of a butterfly in correct sequence-
    caterpillar, adult butterfly, pupa, eggs.

Answer Key:-

1. b
2. a
3. a
4. d
5. a. v, b. iii, c. iv, d. i, e. ii.

6. scrotum, uterus, placenta, vagina, one/single .

7. Those animals in which male and female gametes are produced by different individuals are called unisexual organisms such as humans in which males produce sperms while females produce eggs.
   On the other hand in earthworms and some other animals both the male and female gametes are produced by the same individual. Such animals are called as bisexual or hermaphrodites.

8. The human male reproductive system comprises of following:
   i) Testes – A pair of testes are located within the scrotal sacs outside the abdominal cavity. They produce male gametes or sperms.
   ii) Sperm duct – Also called vas deferens, they are two in number and carry sperms to the urethra via seminal vesicle.
   iii) Seminal vesicle – It adds seminal fluid to sperms (semen) and leads through urethra into penis.
   iv) Penis – It is a muscular organ that is used to pass urine and semen as well.

9. number 8 is the answer because at this stage the embryo gets embedded into the uterus.

10. egg , caterpillar, pupa, adult butterfly.

*****

CBSE Worksheet-43

Class–VIII Science (Reproduction in Animals)

1. The stage of life cycle of silkworm that yields silk is :-
   a. adult
   b. eggs
   c. larva
   d. pupa

2. Zygote contains chromosomes :-
   a. from father only
   b. from mother only
   c. from both father and mother
   d. only newly formed chromosomes

3. Uterus of human female opens into :-
   a. oviduct
   b. ovary
   c. vagina
   d. penis

4. In birds eggs are fertilized :-
   a. inside the body
   b. outside the body
   c. not fertilized at all
   d. asexual reproduction occurs so no fertilization

5. Match the column :-

a. unisexual	i) tapeworm
b. development	ii) cockroach
c. bisexual	iii) embryo to adult
d. binary fission	iv) attachment of embryo to uterus
e. implantation	v) two daughter cells

6. State whether the following statements are true or false :-

a. A thin and coiled tube that joins uterus with ovary is called fallopian tube.

b. Sperm ducts deliver sperms into the vagina of the female partner.

c. Ovum is the unfertilized egg.

d. During rainy season a female frog lays shelled eggs in water.

e. One ovum is fertilized by more than one sperm.

7. Name the parts of female reproductive system and its functions?

8. What do you mean by the following terms:

i) gestation period

ii) implantation

9. Pick the odd word out of the following:

ostrich, turtle, crocodile, Siberian crane, blue whale, rohu fish.

10. Label A and B in the following diagram :

Answer Key:-

1. d
2. c
3. c
4. a
5. a. ii, b. iii, c. i, d. v, e. iv.
6. true, false, true, false, false.

7. Human female reproductive system is made up of the following parts :
   i) Ovaries – A pair of ovaries are situated in abdominal cavity of female body. Single mature ovum is produced and released every four weeks alternately by either ovary.
   ii) Oviduct – They are a pair of thin and muscular tubes that joins uterus to ovary and contains cilia that helps in movement of ovum and zygote.
   iii) Uterus – It is a broad muscular chamber which receives and attaches the dividing zygote.
   iv) Vagina – It is a wide muscular tube that leads upto the opening of female reproductive tract.

8. In human beings fertilization is internal i.e. fusion of sperm and ovum takes place inside the body of female partner. The fertilised egg is called as zygote. Zygote divides to make a ball of cells and this structure fixes itself into the wall of uterus and this phenomenon is called implantation. The multicellular structure or embryo starts developing into a foetus. The period for which embryo or foetus develops inside the body of female is called gestation period for example in humans gestation period is 9 months.

9. All lay eggs except blue whale that gives birth to young ones.

10. A) sperm head
    B) sperm tail

*****

CBSE Worksheet-44

Class–VIII Science (Reproduction in Animals)

1. Which of following do not produce buds :-
   a. hydra
   b. sponges
   c. sea star
   d. sea anemone

2. In hen, development of embryo takes place :-
   a. inside the body
   b. outside the body
   c. no development occurs
   d. in a pouch like structure

3. The human foetus remains connected with mother's blood circulation through :-
   a. oviduct
   b. fimbriae
   c. umbilical cord
   d. vagina

4. Human foetus shows:-
   a. features similar to adult
   b. metamorphosis
   c. attachment to mother via placenta
   d. both a & c

5. Match the column :-

a. earthworm	i) budding
b. amoeba	ii) hermaphrodite
c. hydra	iii) oviparous
d. starfish	iv) fission
e. birds	v) external fertilization

6. State whether the following statements are true or false :-

a. Like all other systems, reproductive system is also essential for survival of an organism.

b. Plants can reproduce by both asexual as well as sexual methods.

c. Number of eggs produced at a time is different for different mammals.

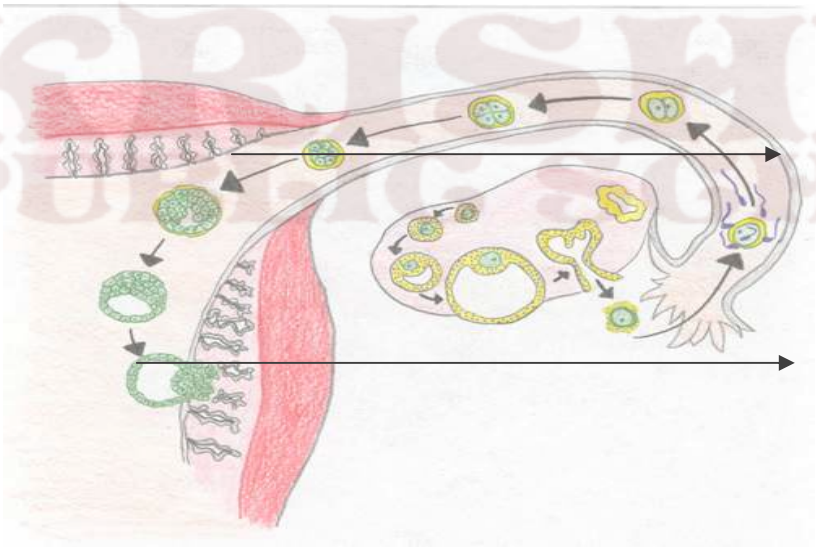
d. New individual inherits characteristics from mother only.

e. Animals that give birth to young ones are called viviparous.

7. Define metamorphosis with suitable examples.

8. How did cloning experiments begun? Is cloning safe and absolutely successful?

9. Label the parts or stages asked for in the following diagram :



10. Write the correct words by putting letters in correct sequence-

i) rationlifetiz

ii) terphisosomam

Answer Key:-

1. c
2. b
3. c
4. d
5. a. ii, b. iv, c. i, d. v, e. iii.

6. false, true, true, false, true.

7. A human baby, a kitten, a puppy etc have similar shape and feature as their parents have. In frogs, butterfly, silkworm, mosquitoes etc the young ones that hatch out of eggs look very different from the adult organisms. However they gradually transform through various stages. This transformation of immature or larval stages through drastic changes into mature or adult organism is called metamorphosis.

8. Dr. Ian Wilmut and his co-workers at the Roslin Institute in Edinburgh, Scotland, produced a baby sheep named Dolly without using the sperm in year 1997.
   Dolly was developed from a cell taken from the mammary gland of a female sheep and an unfertilised egg taken from other female sheep. The nucleus of unfertilised egg was replaced with nucleus from mammary gland cell and cell started developing into embryo inside a third female sheep. But success of cloning experiment is limited and cloned animals also die at less age or are born with abnormalities.

9. ball of cells, uterus (top to bottom).

10. i) fertilization
    ii) metamorphosis

*****

CBSE Worksheet-45

Class–VIII Science (Reaching the Age of Adolescence)

1. Which of the following is a ductless gland :-
   a. sweat gland
   b. salivary gland
   c. sebaceous gland
   d. pituitary gland

2. Adolescence brings in the individual :-
   a. mental maturity
   b. reproductive maturity
   c. emotional maturity
   d. all the above

3. In boys, voice box protrudes out in throat region and is called :-
   a. custard's apple
   b. adam's apple
   c. eve's apple
   d. both b & c

4. A female secondary sexual characteristic is :-
   a. voice becoming shrill
   b. voice becoming hoarse
   c. growth of adam's apple
   d. growth of hair on the chest

5. Match the column :-

a. infancy	i) 11 to 12 yrs
b. adolescence	ii) 14 to 15 yrs
c. puberty in female	iii) from birth to 2 yrs
d. childhood	iv) from 11 to 18 yrs
e. puberty in male	v) 2 to 11 yrs

6. Fill in the blanks :-

a. Time period when body undergoes changes, leading to reproductive maturity is called_____. b. Teenagers is the other name used for _____ .

c. At _____, sweat and sebaceous glands become more active.

d. In girls, first menstrual flow and is called _____ .

e. As a woman grows old, menstrual cycle stops which is termed as _____.

7. What are ductless glands?

8. Define hormones and their special features?

9. Pick the odd word out of the following:
adrenalin/amylase/thyroxine/testosterone/oestrogen

10. Write the correct words by putting letters in correct sequence-
i) trepbuy
ii) carhenem

Answer Key:-

1. d
2. d
3. b
4. a
5. a. iii, b. iv, c. i, d. v, e. ii.

6. adolescence, adolescents, puberty, menarche, menopause.

7. Such glands which do not have ducts and release their secretions directly into the bloodstream are known as ductless glands. These glands secrete chemicals called hormones that act on specific targeted cells only. These glands are also known as the endocrine glands since they form the endocrine system of our body.

8. To attain proper growth and development our body needs certain chemicals called hormones. These chemicals are also known as chemical messengers because they carry information from endocrine glands to various parts of the body.
   Hormones are carried by blood to various specific target sites within body. They are essential for body but in very small quantities.

9. Other than amylase which is an enzyme all others are hormones.

10. i) puberty
    ii) menarche

*****

CBSE Worksheet-46
Class–VIII Science (Reaching the Age of Adolescence)

1. Hormones are secreted into :-
   a. lymph
   b. ducts
   c. blood
   d. nerves

2. Along with testicular hormones, sperm formation also needs hormones from :-
   a. thyroid gland
   b. pituitary gland
   c. adrenal gland
   d. pancreas

3. In girls, the ovaries secrete during puberty :-
   a. estrogen
   b. progesterone
   c. both a & b
   d. ovulation hormone

4. Nucleus of each human cell contains :-
   a. 23 pairs of chromosomes
   b. 22 pairs of chromosomes
   c. 48 chromosomes
   d. 40 chromosomes

5. Match the column :-

gland	**hormone secreted**
a. pancreas	i) testosterone
b. testis	ii) insulin
c. pituitary	iii) epinephrine
d. ovary	iv) growth hormone
e. adrenal	v) estrogen

6. Fill in the blanks :-

a. Hormones are required in very _____ quantity.

b. Hormones are secreted from _____ glands directly into bloodstream.

c. Diet for an adolescent has to be a _____ one.

d. Adolescents must take proper care of personal _____ .

e. Hormone named _____ prepares the body to fight or flight.

7. Name the specific term used for characteristics that help to distinguish males from females and give examples of those as well.

8. Name the gland which regulates secretion of hormones from male and female gonads also mention functions of male and female sex hormones.

9. Write the following sentences related to menstrual cycle in their correct sequence :

a) release of egg from ovary

b) breakdown of thickened inner wall of uterus

c) thickening of wall of uterus

d) maturation of ovum

10. Write the correct words by putting letters in correct sequence-

i) nancyfi

ii) turamyit

Answer Key:-

1. c
2. b
3. c
4. a
5. a. ii, b. i, c. iv, d. v, e. iii.

6. small, endocrine, balanced, hygiene, adrenalin.

7. The physical feature which help to differentiate between the male and the female individuals are called secondary sexual characteristics. Examples of such characteristics are as follows :

   In males → growth of pubic hair, beard and moustaches, hair on chest and under arms, deepening of voice, etc & also adam's apple in some boys.

   In females → enlargement of breasts and hips, growth of pubic hair and hair under arms etc.

8. The master endocrine gland i.e. pituitary gland controls the secretion of hormones from the male gonad i.e. testis and female gonad i.e. ovary.

   The male sex hormone is testosterone. It is released by testis in the male body. Function of this hormone is to help in growth and development of secondary sexual characteristics in boys. The female sex hormone if estrogen. It is released by ovaries in the female body. Function of this hormone is to regulate development of secondary sexual characteristics in girls.

9. d, a, c, b.

10. i) infancy
    ii) maturity

*****

CBSE Worksheet-47
Class–VIII Science (Reaching the Age of Adolescence)

1. Number of sex chromosomes in human kidney cell :-
   a. one
   b. two
   c. four
   d. zero

2. The term used for production of male gametes in humans is:-
   a. spermatogenesis
   b. spermgamogenesis
   c. oogenesis
   d. spermtestogenesis

3. To keep their body healthy teenagers need :-
   a. protein rich diet
   b. fat rich diet
   c. balanced diet
   d. carbohydrate rich diet

4. Production of sex hormones is under the control of :-
   a. thyroid gland
   b. adrenal gland
   c. testis
   d. pituitary gland

5. Match the column :-

hormone	**function**
a. thyroxine	i)develops secondary sexual characters in female
b. testosterone	ii) prepares body for emergency
c. estrogen	iii) overall body growth
d. growth hormone	iv) regulates rate of metabolism
e. adrenal	v) develops secondary sexual characters in male

6. Fill in the blanks :-

a. Chips, burgers, cakes, colas etc are _____ food.

b. In males, sex hormones are secreted by _____ .

c. In females, sex hormones are secreted by _____ .

d. Bleeding in women due to breakdown of inner wall of uterus is called _____ .

e. _____ occurs in a human female at the age of 45 to 50 yrs.

7. List the changes and related problems that adolescents face during puberty.

8. What kind of diet an adolescent should be provided with and why?

9. Label in the following diagram :

10. Write the correct words by putting letters in correct sequence-

i) neghyei

ii) sixreece

Answer Key:-

1. b
2. a
3. c
4. d
5. a. v, b. iv, c. i, d. iii, e. ii.
6. junk, testes, ovaries, menstruation, menopause.
7. **i)** The sweat glands and sebaceous glands become more active during this period resulting into pimples, acne and underarm odour.

   ii) Hormonal secretions lead to mood swings which can cause aggressiveness and depression at times.

   iii) Adolescents feel insecure with the changes taking place at a fast pace in their body.

   can you think of any more problems, discuss amongst yourselves……

8. The adolescent should be provided with a balanced diet. To stay healthy during adolescence phase and cope up with growth and development rate, one needs the following ingredients in his/her balanced diet :

   carbohydrate → 60%

   fats → 15 %

   proteins → 25%

   minerals and vitamins are also required in requisite amount.

   Other than above roughage and sufficient water are also essential for proper health.

9. Adam's apple

10. i) hygiene

    ii) exercise

*****

CBSE Worksheet-48

Class–VIII Science (Reaching the Age of Adolescence)

1. The body part where a hormone reaches and produces its effect is called :-
   a. end site
   b. regulator site
   c. tropic site
   d. target site

2. Number of sex chromosomes in a gamete :-
   a. one
   b. two
   c. four
   d. eight

3. The process by which mature ovum is released from ovary is called :-
   a. oogenesis
   b. oogamy
   c. fertilisation
   d. ovulation

4. Thyroid gland is located in the :-
   a. head region
   b. near heart
   c. throat region
   d. gonad region

5. Match the column :-

a. XX	i) male gonad
b. testis	ii) sex chromosomes of boy
c. XY	iii) female gonad
d. ovary	iv) sex chromosomes of girl
e. chemical messenger	v) hormone

6. State whether the following statements are true or false :-

   a. Girls begin going through puberty a little earlier than boys.

   b. During puberty, testis secretes testosterone.

   c. Ovum from mother always carries an X chromosome.

   d. Gender of a child depends upon the kind of egg that fuses with the sperm.

   e. Sperm from father always carries a Y chromosome.

7. Define personal hygiene and explain its importance in an adolescent's life.

8. Give a brief description of menstruation and menstrual cycle in females.

9. Name the plant and the drug it provides :

:

10. What problem is the adolescent shown in following picture facing?

Answer Key:-

1. d
2. a
3. d
4. c
5. a. iv, b. i, c. ii, d. iii, e. v.

6. true, true, true, false, false.

7. The word hygiene refers to cleanliness. To keep one's own body clean by taking proper bath, wearing clean clothes, eating clean and protected food with washed hands etc and also keeping the house clean, all are collectively called personal hygiene. Personal hygiene is very important for adolescents. Taking a bath everyday and cleaning all parts of the body helps preventing body odour and bacterial infection. Among girls, special care about hygiene is required during menstruation.

8. In females, at the onset of puberty, one of the two ovaries produces an egg every 28-30 days. Release of the mature egg from ovary is known as ovulation. If this egg is not fertilised (fused with sperm) then lining of uterus is shed off along with its blood vessels containing blood. It results into bleeding. This bleeding phase lasts for 4 to 6 days and is called menstruation or period. Every 28 to 30 days the same sequence is repeated so the menstrual flow cycle is called as menstrual cycle.

9. It is a tobacco plant and it is a source of nicotine.

10. i) Acne
    ii) Pimples

*****

CBSE Worksheet-49

Class–VIII Science (Reaching the Age of Adolescence)

1. Pituitary gland is located at the base of :-
   a. heart
   b. lungs
   c. brain
   d. pancreas

2. Pancreas is :-
   a. exocrine gland
   b. endocrine gland
   c. type of sweat gland
   d. both a & b

3. Baby is going to be a girl or a boy depends on :-
   a. type of sperm
   b. type of ovum
   c. amount of sex hormone
   d. amount of regulatory hormone from pituitary

4. Deficiency of iodine in adolescent's diet causes a disease called :-
   a. infertility
   b. goitre
   c. dwarfism
   d. irregular menstruation

5. Match the column :-

a. adolescent	i) produces sperms
b. larynx	ii) master endocrine gland
c. testis	iii) produces ova
d. ovary	iv) teenager
e. pituitary	v) voice box

6. State whether the following statements are true or false :-

a. During puberty, ovary secretes oestrogen.

b. Oogenesis term represents formation of zygote from mature ovum.

c. Maleness is decided by the presence of Y chromosome.

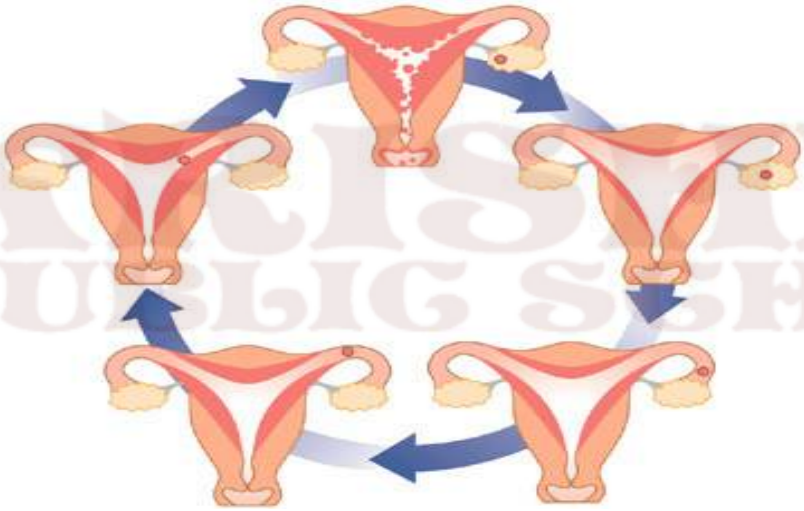
d. Every egg cell has two X chromosomes.

e. Chromosomes from the female parent decides the sex of the child.

7. How metamorphosis in frog tadpole is delayed or improper if iodine is insufficient?

8. What are drugs and how are they detrimental to adolescents?

9. What does the following picture depicts ?



10. Write the correct words by putting letters in correct sequence-

i) norsoeget

ii) setgoneprore

Answer Key:-

1. c
2. d
3. a
4. b
5. a. iv, b. v, c. i, d. iii, e. ii.

6. true, false, true, false, false.

7. Metamorphosis in tadpole larva requires hormone thyroxine which is secreted by another endocrine gland named thyroid. The formation of thyroxine needs iodine as a raw material hence in the absence or less amount of iodine, the thyroxine hormone formed is very less, as a result metamorphosis of tadpole into frog is either delayed or is improper.

8. During adolescence, teens are physically, mentally and emotionally agitated due to lot of changes taking place in their body and mind. They sometimes feel confused and insecure due to the stress caused by hormonal secretions. By this time they may prey to drugs and alcohol. Drugs are medicines that are very addictive and once taken, teen develops tendency to take them again and again. Drugs harm the body in long run destroying health and happiness.

9. It is showing the various stages of a menstrual cycle in human female.

10. i) oestrogen
    ii) progesterone

*****

CBSE Worksheet-50

Class–VIII Science (Force and Pressure)

1. Example of non contact force is/are :-
   a. magnetic force
   b. gravitational force
   c. electrostatic force
   d. all the above

2. 1 kg-wt is equivalent to :-
   a. 9 N
   b. 9.8 N
   c. 8 N
   d. 8.8 N

3. A push or a pull applied on an object is defined as :-
   a. force
   b. area
   c. pressure
   d. speed

4. Tennis player will send the ball to his contender by :-
   a. pushing
   b. pulling
   c. hitting
   d. lifting

5. Match the column :-

a. force	i) contact force
b. pressure	ii) measure of gravity on object
c. friction	iii) force per unit area
d. gravity	iv) push and pull
e. weight	v) action at a distance force

6. Fill in the blanks :-

a. _____ is required to move things .

b. _____ can stop a moving object.

c. Moving object has its own force, due to its _____ .

d. The _____ of an object is the measure of force of gravity produced on it.

e. To open a car door and get inside we must _____ the door.

7. Define resultant force ?

8. A force of 35 N acts over an area of 7 square meter. Calculate the pressure ?

9. Recognise which kind of force is imparted to the child in the following image?

10. Write the correct words by putting letters in correct sequence-

i) car : fuel :: body : ?

ii) weight : Newton :: pressure : ?

Answer Key:-

1. d
2. b
3. a
4. c
5. a. iv, b. iii, c. i, d. v, e. ii.

6. force, force, motion, weight, pull .

7. Resultant force is also known as the net force. In many situations more than one force acts on a body at the same time. All these forces collectively produce the same effect in the body as a single force hence it is defined as the single force which acts on a body to produce the additive effect of all the forces that work on that object.

8. Pressure = 35 N/7 m^2
   = 5 N/ m^2

9. It is a pull force.

10. i) food
    ii) Newton/m^2

*****

CBSE Worksheet-51

Class–VIII Science (Force and Pressure)

1. Pressure has another unit named :-
   a. Pascal
   b. Tesla
   c. Ohm
   d. Joule

2. It is a tug of war and the force applied is :-
   a. push
   b. pull
   c. hit
   d. kick

3. What does the given image imply?
   a. force can stop a moving object
   b. force can change speed of an object
   c. force can change shape of an object
   d. force can change direction of an object

4. Force can be described by stating its :-
   a. speed
   b. magnitude
   c. direction
   d. both b & c

5. Match the column :-

a. Barometer	i) gravitational force
b. Movement of carom coins	ii) pressure
c. Satellite orbiting earth	iii) weight
d. Attracting paper pins	iv) impact force
e. Spring balance	v) magnetic force

6. Fill in the blanks :-

   a. Forces that work on an object at rest are _____ .

   b. _____ is used to exert force.

   c. Force changes the _____ of an object in motion.

   d. The invisible attraction force that earth exerts on all sorts of matter is called _____ force.

   e. _____ is defined as the force exerted per unit area..

7. Describe weight and its cause?

8. Why do astronauts appear floating inside a spaceship?

9. What is the player going to do with the ball in the following image?

10. Write the correct words by putting letters in correct sequence-

    i) resresup

    ii) taryvgi

Answer Key:-

1. a
2. b
3. c
4. d
5. a. ii, b. iv, c. i, d. v, e. iii.
6. balanced, energy, direction, gravitational, pressure .

7. Weight is a measure of the gravitational force acting on an object. It is measured in Newtons.
   An object is felt heavy due to the force of gravity acting on that object when you try to lift it up. Gravity or gravitational force acts upon an object and gives it weight.

8. Force of gravity pulls object down towards earth but in the outer space, where the force of gravity is very weak. Because of no or very weak gravitational force in space objects are almost weightless and therefore appear floating. Hence astronauts can't stand in their spaceship but float.

9. The soccer is going to kick the ball.

10. i) pressure
    ii) gravity

*****

CBSE Worksheet-52

Class–VIII Science (Force and Pressure)

1. To increase the speed of swing the child's father must :-

   a. pull the swing
   b. kick the swing
   c. push the swing
   d. lift the swing

2. The force involved in picking up a school bag is :-
   a. gravitational force
   b. muscular force
   c. magnetic force
   d. electrostatic force

3. The correct relation between force, pressure and area is :-
   a. pressure= area/force
   b. area= pressure/force
   c. force= pressure/area
   d. pressure= force/area

4. If 2 or more forces act on a body in the same direction :-
   a. net force decreases
   b. net force increases
   c. net force remains the same
   d. pressure decreases

5. Match the column :-

a. contact force	i) gravity
b. non contact force	ii) pressure x area
c. weight	iii) maximum at sea level
d. force	iv) electrostatic
e. atmospheric pressure	v) friction

6. Fill in the blanks :-

a. Pressure depends on _____ over which the force is spread.

b. Pressure exerted by air is called as _____ pressure.

c. A _____ is used to measure the air pressure.

d. The pressure of water _____ with depth.

e. Force can make a _____ object move faster.

7. What is necessary to apply force?

8. What happens when more than one force works on an object and that to in opposite directions?

9. Recognise which kind of force is imparted to the person walking ahead in the following picture?

10. Write the correct words by putting letters in correct sequence-

i) gamecitn

ii) coalsettrict

Answer Key:-

1. c
2. b
3. d
4. b
5. a. v, b. iv, c. i, d. ii, e. iii.

6. area, atmospheric, barometer, increases, moving.

7. A force can be applied only when there occurs a mutual interaction of two objects. For example when a child pulls a dog, the dog also pulls the child. Another example is of two speeded cars that hit each other i.e. they interact with each other so force is applied on both of them.
   Conclusion says that to apply a force , minimum of two bodies are required to interact with each other.

8. In such cases the net or resultant force will move the object in the direction of bigger force if two opposite forces are unequal but if the opposite forces are equal in magnitude then both cancel each other. As a result the object doesn't move at all.

9. It is a push force.

10. i) magnetic
    ii) electrostatic

*****

CBSE Worksheet-53

Class–VIII Science (Force and Pressure)

1. The force we use while ploughing is :-
   a. magnetic force
   b. muscular force
   c. frictional force
   d. gravitational force

2. Pressure exerted by a liquid on the wall of vessel is :-
   a. more towards bottom
   b. equal in all directions
   c. more on the sides
   d. both a & c

3. Pressure in liquids increases with :-
   a. depth of liquid
   b. density of solute
   c. nature of vessel
   d. all the above

4. While opening a drawer you are :-
   a. pushing
   b. hitting
   c. pulling
   d. lifting

5. Match the column :-

a. lifting a school bag	i) kicking
b. closing a drawer	ii) shape changes
c. making a stationary football move	iii) pulling
d. squeezing a sponge	iv) makes it longer
e. pulling a rubber band	v) pushing

6. State whether the following statements are true or false :-

a. The unit of force is pascal.

b. Weight is measured in newton.

c. Pulling a cart needs direct contact with the object.

d. Direction in which an object is pushed or pulled is measure of magnitude of force.

e. Interaction between two objects always involve direct physical contact.

7. What is meant by direction of a force?

8. To slow down an object in which direction should be force applied?

9. By what best possible way these two people should carry the table?

10. Write the correct words by putting letters in correct sequence-

i) somerichtap

ii) taiganorvit

Answer Key:-

1. b
2. b
3. a
4. c
5. a. iii, b. v, c. i, d. ii, e. iv.

6. false, true, true, false, false.

7. Any force can be described by stating its magnitude and the direction in which it acts. The direction in which an object is pushed or pulled is called the direction of the force

8. Applying force in the opposite direction in which the object is moving can slow down or stop the moving object. For example : a goalkeeper slows down or stops a football by applying force in opposite direction in which ball is moving.

9. They must lift the table and carry it along with them. So they must carry it by lifting.

10. i) atmospheric
    ii) gravitation

*****

CBSE Worksheet-54

Class–VIII Science (Force and Pressure)

1. In a given situation what does a child do while playing with moulding clay?
   a. lifting
   b. hitting
   c. pulling
   d. pushing

2. Acting force on a surface is :-
   a. perpendicular to that surface
   b. parallel to that surface
   c. diagonal to that surface
   d. linear to that surface

3. CGS unit of pressure is :-
   a. Newton
   b. Newton/m^2
   c. dyne/cm^2
   d. kg/Newton

4. Which force will act between two charged objects?
   a. gravitational force
   b. electrostatic force
   c. frictional force
   d. muscular force

5. Match the column :-

a. force	i) non contact force
b. change in object	ii) contact force
c. magnet pulling iron pins	iii) air pressure
d. pulling the window pane	iv) effect
e. bloating of tube of cycle tyre	v) cause

6. State whether the following statements are true or false :-

   a. The relation between force, pressure and area says: force= pressure x area.

   b. Force cannot make a moving object slow down.

   c. Both water and air will apply equal force in all directions.

   d. With the increasing depth, pressure of liquid decreases.

   e. Weight is due to the earth's friction acting on an object.

7. What are the applications of atmospheric pressure of earth?

8. Describe the force due to which Earth keeps on revolving around the Sun.

9. Pick the odd word out of the following:

   gravitational, magnetic, muscular, electrostatic, comb rubbed on hair

10. Write the correct words by putting letters in correct sequence-

    i) capsal

    ii) wonten

Answer Key:-

1. d
2. a
3. c
4. b
5. a. v, b. iv, c. i, d. ii, e. iii.

6. true, false, true, false, false.

7. Applications are as follows:
   For safe landing on the ground, by using a parachute during paradropping. While falling down from an aircraft the person uses atmospheric pressure against gravity. Here the parachute blocks the air (in a localised area of the atmosphere) acting in an upward direction that further slows down the rate of falling and as such the person lands safely.

8. Earth keeps revolving around Sun, moon keeps revolving around Earth due to the gravitational force. It is also known as gravity. This force exists everywhere in the universe.
   Earth has a huge mass so it attracts every object towards it via the gravitational force. That is why a ball thrown upwards finally comes down, a ripened fruit when detached from tree falls down on the earth.

9. Muscular force is a contact force while all other forces can act on an object from a distance hence non contact forces.

10. i) pascal
    ii) newton

*****

CBSE Worksheet-55

Class–VIII Science (Friction)

1. Force of friction does not depend upon :-
   a. weight of object in motion
   b. nature of surface in contact
   c. area of surfaces in contact
   d. external force applied on object

2. If applied force is increased then friction will :-
   a. increase at the same rate
   b. decrease at the same rate
   c. increase at a different rate
   d. decrease at a different rate

3. Which of the following is not a type of friction?
   a. static friction
   b. rolling friction
   c. kinetic friction
   d. magnetic friction

4. That maximum force of friction when block just starts to move is :-
   a. highest friction
   b. limiting friction
   c. lowest friction
   d. sliding friction

5. Match the column :-

a. sliding friction	i) heat production
b. static friction	ii) applying brakes
c. polishing surfaces	iii) greater than kinetic friction
d. advantage of friction	iv) greater than rolling friction
e. disadvantage of friction	v) decreases friction

6. Fill in the blanks :-

a. Frictional force is caused by the interaction of a body with _____ .

b. None of the solid surfaces are perfectly _____ .

c. Two _____ surfaces when placed together meet only at certain points.

d. The interlocking of the irregularities of the surfaces in contact causes _____ .

e. There is no relative motion between the two surfaces in contact in case of _____ friction..

7. A ball moving on a horizontal surface stops after sometime without applying any force. Why ?

8. Friction is wasteful at times so why we need to increase it in some cases?

9. What will be the direction of friction in the following image?

10. Write the correct words by putting letters in correct sequence-

i) mendealrist

ii) blintucar

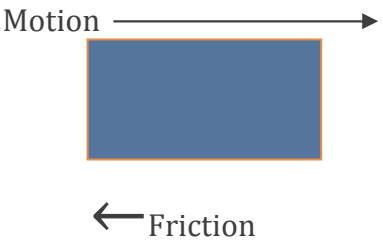
Answer Key:-

1. c
2. a
3. d
4. b
5. a. iv, b. iii, c. v, d. ii, e. i.

6. surroundings, smooth, rough, friction, static.

7. The ball stops because the surface opposes the motion of the ball i.e., the ball experiences a force, which opposes its motion. This force is called the force of friction or simply friction.
   Frictional force is a contact force that works along the two surfaces in contact. It always opposes the relative motion between the two bodies in contact irrespective of the direction of motion.

8. Friction is very much advantageous as well. Grooves are made on tyres to increase friction, which prevents the slipping of the vehicles, athletes wear shoes with spikes to increase their grip on ground and therefore friction, gymnasts use coarse substance on their hand to improve their grip etc.

9. 

10. i) streamlined
    ii) lubricant

*****

CBSE Worksheet-56

Class–VIII Science (Friction)

1. Choose the correct order :-

   a. static friction > rolling friction > sliding friction

   b. sliding friction< static friction< rolling friction

   c. rolling friction > sliding friction > static friction

   d. static friction > sliding friction > rolling friction

2. Friction prevents motion until applied force is :-

   a. more than frictional force

   b. less than frictional force

   c. equal to frictional force

   d. more than weight of object

3. Without friction we :-

   a. cannot walk

   b. cannot light a matchstick

   c. cannot stop our bicycle

   d. all the above

4. Friction generates :-

   a. gravity

   b. heat

   c. lubrication

   d. fluidity

5. Match the column :-

a. Polishing	i) friction is helpful
b. wear & tear	ii) increases friction
c. lighting a matchstick	iii) reduces friction
d. car engine getting hot after use	iv) result of friction
e. Wrestlers rubbing soil on hand	v) friction is troublesome

6. Fill in the blanks :-

a. Friction always _____ the motion.

b. Friction is caused due to _____ of the two surfaces in contact.

c. Force of friction has a remarkable property of adjusting its _____ .

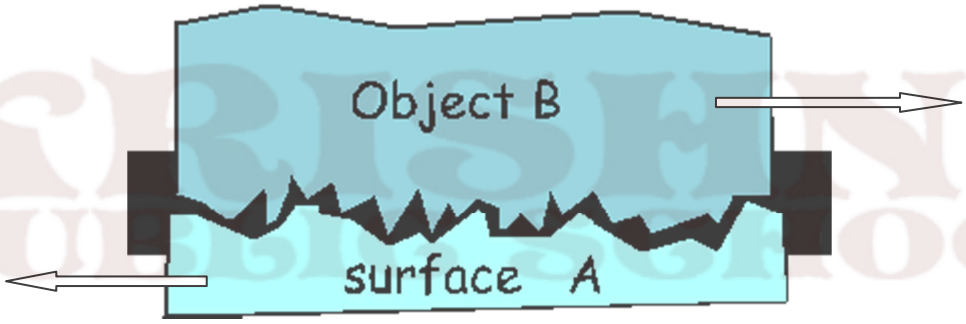
d. Force of friction exerted by fluids is called _____ .

e. A _____ shape of an object offers least resistance due to friction.

7. Why is it difficult to stop a boat?

8. What is a streamlined shape? Explain with four examples.

9. In the following image in which condition will the object B move?



If the upper arrow represents external force and lower arrow represents friction.

10. Select the odd word out of the following :

ships/aeroplanes/birds/camels/fishes.

Answer Key:-

1. d
2. a
3. b
4. b
5. a. iii, b. iv, c. i, d. v, e. ii.

6. opposes, roughness, magnitude, drag, .

7. The friction due to water is much less than that between solid surfaces and hence it is difficult to stop ships or boats. Other than this ships and boats have a streamlined shape that reduces friction hence further prevents them from stopping. That is why to stop a ship the engine is fired in the opposite direction.

8. A streamlined body has a somewhat long, pointed and sloppy shape, which can let fluid flow past over it easily. Hence such a body shape helps an object through air or water (fluid) to overcome friction. In a streamlined body, the front portion of the object is narrower than the back. Examples are : boats, ships, birds, cars etc.

9. When external/applied force will be greater than the frictional force then the object B will move.

10. Other than camels all have a streamlined body.

*****

CBSE Worksheet-57

Class–VIII Science (Friction)

1. The deformation of a motor car tyre in contact with the road is an example of :-
   a. sliding friction
   b. rolling friction
   c. static friction
   d. limiting friction

2. Friction is exerted by :-
   a. solid
   b. liquid
   c. gas
   d. all the above

3. A shower of meteors or shooting stars is caused due to :-
   a. friction of air
   b. friction of only Carbon dioxide
   c. friction from spaceship
   d. friction due to streamlined shape

4. An object/body moves due to :-
   a. force applied on it
   b. friction
   c. resultant force
   d. weight

5. Match the column :-

a. rough	i) interlocking of surfaces
b. absolutely smooth	ii) all solid surfaces
c. cause of friction	iii) self adjusting
d. applied force & friction	iv) highly polished surface
e. small frictional force	v) no solid surface

6. State whether the following statements are true or false :-

   a. It is difficult to roll a body than to slide it along the ground.

   b. It is easy to walk on floor without friction.

   c. Maximum value of static friction is called limiting friction.

   d. Friction is always a nuisance.

   e. Saliva in our mouth is a lubricant.

7. What are lubricants and what are they meant for?

8. Does any friction occurs in fluids? Name it and describe the same.

9. Name the shape shown through paper rockets in the following image that minimizes friction:

10. Write the correct words by putting letters in correct sequence-

    i) cattis

    ii) ciiktne

Answer Key:-

1. b
2. d
3. a
4. c
5. a. ii, b. v, c. i, d. iii, e. iv.

6. false, false, true, false, true.

7. Lubricant is a substance that reduces friction between two moving surfaces. Such as oil/grease forms a thin layer between two surfaces that separates those two surfaces from each other. This reduces chances of interlocking of the two surfaces and thus reduces friction.
   Soap solution and saliva are also lubricants.

8. Scientifically, any substance that can flow is called a fluid. Since all gases and liquids flow, they are commonly called as fluids.
   Whenever any object moves through a fluid, it experiences friction. This frictional force that fluids exert on objects moving through it is called drag. Objects that need to move through fluids, have to apply a lot of energy to overcome the drag. To get out of this difficulty such objects are given a symmetrical shape called as streamlined shape.

9. Streamlined shape.

10. i) static
    ii) kinetic

*****

CBSE Worksheet-58

Class–VIII Science (Friction)

1. kinetic friction is also known as :-
   a. potential friction
   b. successive friction
   c. resultant friction
   d. dynamic friction

2. Rolling friction will be less when :-
   a. smaller is the flattened area of contact
   b. greater is the flattened area of contact
   c. object is dropped in water
   d. object is cut into two equal halves

3. Friction is directly proportional to the :-
   a. colour of sliding object
   b. direction of motion of sliding object
   c. mass of sliding object
   d. smoothness of sliding object

4. Tyres have grooves on their surface to :-
   a. decrease friction
   b. increase friction
   c. decrease applied force
   d. equalize applied and frictional force

5. Match the column :-

a. Friction	i) same as sliding friction
b. measuring friction	ii) natural force
c. Zero friction	iii) spring balance
d. Ball bearings	iv) not possible
e. Dynamic friction	v) decrease rolling friction

6. State whether the following statements are true or false :-

a. Friction is a necessary evil.

b. Friction is an evil of all motion.

c. Glass is a perfectly smooth surface.

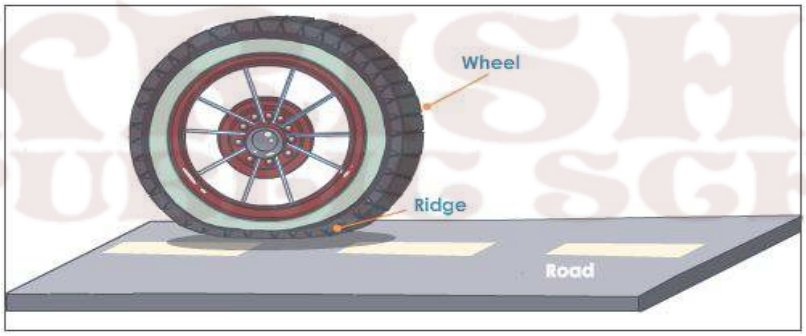
d. Friction is one of the important natural gift to us.

e. Friction transfers the energy of motion always into bright light.

7. Why do meteors burn soon after entering earth's atmosphere?

8. A spaceship tragedy took place with atlantis spaceship which carried Kalpana Chawla and her crew members. What precautions are taken to prevent such accidents?

9. Name the type of friction shown in the following image:



10. Select the odd word out of the following :

ball bearings, oil, soil, electroplating, grease, powder, airplanes.

Answer Key:-

1. d
2. a
3. c
4. b
5. a. ii, b. iii, c. iv, d. v, e. i.

6. true, true, false, true, false.

7. Meteors are pieces of rocks that keep floating in space, when they come nearby earth they get attracted by gravitational force. Gravity pulls meteor with great intensity as a result meteor enter earth's atmosphere at very high speed. So drag is also very large. Due to this, temperature of meteor rises very high and it burns out soon after entering the earth's surface.

8. Just like a meteor when spaceship enters the earth's atmosphere its temperature rises due to increased drag. To protect spaceships from burning during entry to earth's atmosphere, they are provided with a heat shield. If this shield is broken or damaged then accidents like atlantis happen.

9. Rolling friction.

10. Other than soil all are used for reducing friction.

*****

CBSE Worksheet-59
Class–VIII Science (Friction)

1. A boy exerts force of 40N on a block and 60N frictional force operates in opposite direction. Result will be?
   a. A force of 100N will make block move
   b. block will not move due to cancellation of both forces
   c. block will not move because opposing force is more than applied force
   d. block will move with a force of 20N

2. Which of the following is a disadvantageous friction :-
   a. deformation of soles of shoe
   b. writing on paper and blackboard
   c. working of brakes on cycle and car
   d. truck tyres have grooves on it

3. An irregular surface will have :-
   a. lesser friction
   b. greater friction
   c. zero friction
   d. lubrication

4. To increase friction between field and shoes, athletic shoes are provided with :-
   a. grooves
   b. polish
   c. grease
   d. spikes

5. Match the column :-

a. fluid	i) minimizes friction caused by liquid
b. drag	ii) removes 'hills' and 'valleys'
c. streamline shape	iii) friction due to air
d. polishing	iv) causes friction
e. rough surface	v) air & water

6. State whether the following statements are true or false :-

a. Hills and valleys on two surfaces interlock and help in achieving faster motion.

b. Drag does not depend on nature of the fluid.

c. Friction between eraser and paper causes eraser to wear out.

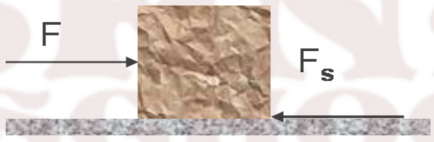
d. Writing on blackboard with chalk would be possible without friction.

e. Both air as well as water exert frictional force on objects.

7. Why do we say that friction is a necessary evil?

8. Differentiate between action of wheels and ball bearings?

9. If in the following image F is a small force applied on to the object what will happen?



10. Write the correct words by putting letters in correct sequence-

i) shodanei

ii) tinrinekgclo

Answer Key:-

1. c
2. a
3. b
4. d
5. a. v, b. iii, c. i, d. ii, e. iv.
6. false, false, true, false, true.

7. Friction has several disadvantages like it causes loss of energy and causes wear and tear of machines. On the other hand our normal daily life would not be possible without friction.
   - ❖ nails and screws hold the wall due to friction.
   - ❖ we are able to walk on the road due to friction.
   - ❖ friction between road and surface allows safe driving.
   - ❖ writing on paper and blackboard is possible due to friction.
   - ❖ application of brake system is possible by friction only.

   Hence friction is a necessary evil.

8. Vehicles have wheels to facilitate their motion. Since it is easier to roll over an object than to slide it as described below.
   When a spherical object rolls on a surface, the resistance it faces is rolling friction. Rolling friction is quite less than sliding friction. Ball bearings are used between the wheel and axis of car that further reduce friction and makes motion smoother.

9. A very small force F will not be able to move the object therefore object remains at rest because Fs opposes the motion of object caused by F.

10. i) adhesion
    ii) interlocking

*****

CBSE Worksheet-60

Class–VIII Science (Sound)

1. Speed of sound increases as it passes through :-
   a. solid < liquid >gas
   b. gas < liquid < solid
   c. liquid < gas < solid
   d. gas > liquid > solid

2. The shape of outer ear resembles a :-
   a. funnel
   b. kernel
   c. tunnel
   d. both a & b

3. A tightly stretched membrane that separates outer ear from middle ear is :-
   a. eartube
   b. earpinna
   c. eardrum
   d. earfiller

4. The part of ear which converts sound energy into electric impulses for brain is :-
   a. outer ear
   b. pinna
   c. middle ear
   d. inner ear

5. Match the column :-

a. Electric	i) middle ear
b. Sound	ii) inner ear
c. Eardrum	iii) stimulus
d. Pinna	iv) guitar
e. Cochlea	v) outer ear

6. Fill in the blanks :-

a. Sound is caused by a source that _____ .

b. _____ cords are present inside the voice box.

c. The sense organ that perceives sound is _____ .

d. The function of outer ear is to _____ sound waves.

e. Inner ear transmits vibrations to brain by _____ nerve.

7. How does a human being produces sound? Explain.

8. Sita felt some irritation in her ears and put a needle into her ears to remove it. Can it be dangerous?

9. Name the instrument and its category also among musical instruments.

10. Write the correct words by putting letters in correct sequence-

i) nlyaxr

ii) sonei

Answer Key:-

1. b
2. a
3. c
4. d
5. a. iv, b. iii, c. i, d. v, e. ii.

6. vibrates, vocal, ear, collect, auditory.

7. When you sing a song, shout, speak, etc, put your hand on your throat. You will find a part of your throat moving up and down. This part of your throat is known as the **voice box** or **larynx**. The larynx or voice box is responsible for producing sounds in humans. It moves when you eat, chew and swallow something. The voice box consists of two vocal chords. These chords are arranged in such a manner that there is a small gap between them. This small gap allows air to pass through. When we speak, air is forced into this small gap by the lungs. (larynx grows larger in boys reaching puberty and called adam's apple).

8. It is very dangerous to put a sharp, pointed or hard thing into our ears. It is so because outer part of the ear channels vibrations down to a thin membranous structure called the eardrum which is stretched very tightly and is flexible but delicate tissue.
   Any of the above mentioned objects can damage the eardrum. Damaged eardrum in turn can impair the hearing process.

9. It is a violin and it belongs to category of stringed instruments.

10. i) larynx
    ii) noise

*****

CBSE Worksheet-61

Class–VIII Science (Sound)

1. In humans sound is produced by :-
   a. layrnx
   b. laryxn
   c. larynx
   d. larnyx

2. The outer ear is also known as :-
   a. pina
   b. peena
   c. piina
   d. pinna

3. Which of the following is not an ear bone?
   a. strammer
   b. hammer
   c. anvil
   d. stirrup

4. Sound will travel fastest in :-
   a. hydrogen
   b. silver
   c. vacuum
   d. water

5. Match the column :-

a. contraction	i) coiled organ of hearing
b. rarefaction	ii) organs of balance
c. amplitude	iii) compressed sound waves
d. cochlea	iv) loudness of sound waves
e. semicircular canals	v) expanded sound waves

6. Fill in the blanks :-

a. The _____ of a note in musical scale tells you now high or how low it is.

b. Humans cannot hear sounds with frequency higher than _____ hertz.

c. The voice box is located at the upper end of _____ .

d. Slower vibrations are also known as _____ .

e. Movement of a body from one extreme position to the other and back is called an _____ .

7. How does an ultrasound machine work in detecting pregnancy or tumor?

8. A Veena player tunes his instrument before a concert. What is this tuning all about ?

9. The image shows a pair of musical instruments. Name them and their category.

10. Write the correct words by putting letters in correct sequence-

i) reeuqcfyn

ii) duplimate

Answer Key:-

1. c
2. d
3. a
4. b
5. a. iii, b. v, c. iv, d. i, e. ii.

6. pitch, 20000 Hz, trachea, oscillations, oscillation.

7. Ultrasonic sound waves have frequency higher than 20000 Hz and are used to investigate structures inside human body. These waves can penetrate human tissue and get reflected back. The reflected rays from the tissues are interpreted by the ultrasound machine and shown on the monitor. So they can be used to check that a baby is developing normally inside mother's body or a tumour and its size in human body.

8. A veena player tunes his instrument before a concert because if he wishes to raise the pitch of a string, he must tighten the string since tighter string will vibrate faster to produce high pitch of the sound while reverse will happen if he loosens string.
   Tuning of stringed musical instrument means tightening or loosening the strings with the help of **pegs** provided in it.

9. They are congo and bongo. They belong to group of percussion instruments.

10. i) frequency
    ii) amplitude

*****

CBSE Worksheet-62
Class–VIII Science (Sound)

1. The pitch of a note depends upon :-
   a. frequency of the sound
   b. amplitude of the sound
   c. speed of the sound
   d. both a & b

2. The loudness of sound depends upon :-
   a. frequency of the sound
   b. amplitude of the sound
   c. speed of the sound
   d. both a & b

3. High pitch notes are produced by stringed instruments when :-
   a. strings are short
   b. strings are thin
   c. strings are tightly stretched
   d. all the above

4. Audible range for humans is between :-
   a. 10 to 10000 Hz
   b. 20 to 10000 Hz
   c. 20 to 20000 Hz
   d. 10 to 20000 Hz

5. Match the column :-

feeling	**range of loudness (db)**
a. normal breathing	i) 90
b. whisper	ii) 110
c. busy traffic	iii) 10
d. normal conversation	iv) 30
e. painful sound	v) 70

6. State whether the following statements are true or false :-

a. We can always see the vibrations when a sound is produced.

b. When we hit the tuning fork on a rubber pad, its prongs oscillate.

c. Vocal cords are thin folds at the top of your foodpipe.

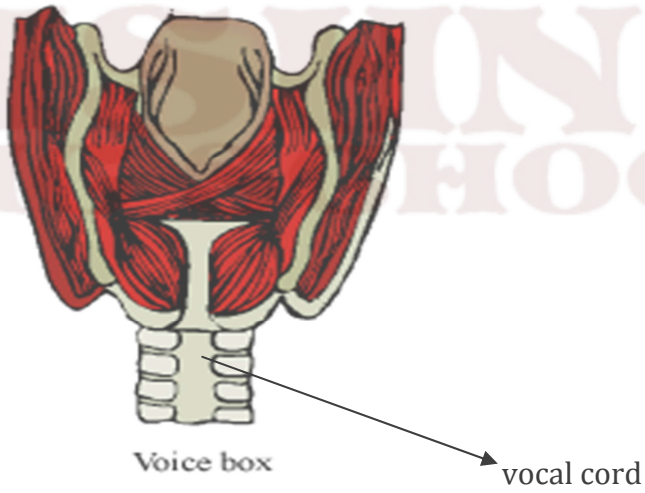
d. Ma is at a higher pitch than ga on a music scale.

e. Re is at a lower pitch than sa.

7. How do we hear sound? Explain stepwise.

8. Why do we need a medium to make sound travel? Name such mediums and compare their ability to propagate sound.

9. Is the labeling correct? If not which part of the image represents vocal cord?



10. Write the correct words by putting letters in correct sequence-

i) nabivtroi

ii) locisilotna

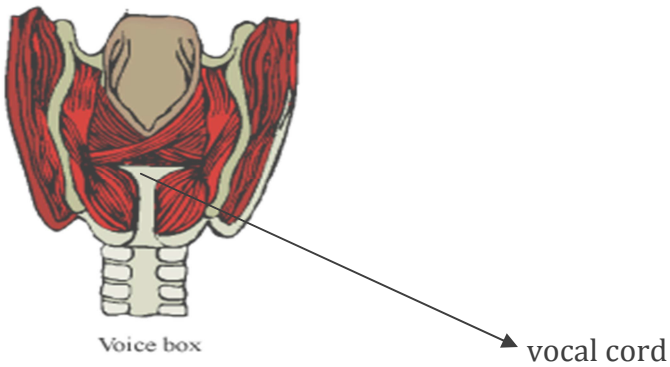
Answer Key:-

1. a
2. b
3. d
4. c
5. a. iii, b. iv, c. i, d. v, e. ii.
6. false, true, false, true, false.

7. Our ears are sense organs for hearing and it occurs as explained in following steps :
   i. Vibrations (sound waves) from air reach our outer ear and are collected then send to eartube.
   ii. Now vibrations strike the eardrum that is a part of middle ear. Eardrum vibrates and causes the bones of middle ear to vibrate.
   iii. Vibrations in ear bones stimulate hearing organ in the inner ear to change vibrations into nerve signals that are transferred to brain and we hear the sound.

8. Our ears perceive sound as vibrations or oscillations in the air molecules. In other words we will not be able to hear anything if air particles are not there.
   In order to make sound travel to our ears from an object like a musical instrument it is necessary to have molecules that can vibrate in the space in between the ear and the matter/object. Those molecules constitute a medium that can be solid or liquid or gas. Sound propagates faster in solids and liquids than in gases.

9. No the labelling is incorrect, the correct labelling is shown below:



10. i) vibration
    ii) oscillation

CBSE Worksheet-63

Class–VIII Science (Sound)

1. Sound is not characterized by :-
   a. quality
   b. time
   c. loudness
   d. pitch

2. Which of the following produce ultrasound waves :-
   a. monkeys
   b. dolphins
   c. bats
   d. both b & c

3. Sounds having frequency less than 20 Hz are :-
   a. sonic sound
   b. subsonic sound
   c. ultrasonic sound
   d. infersonic sound

4. A reflected sound is called an :-
   a. geco
   b. echo
   c. sonar
   d. radar

5. Match the column :-

a. regular vibrations	i) sounds flat
b. irregular vibrations	ii) sounds rich
c. tuning fork	iii) noise
d. sitar	iv) octave
e. musical scale	v) musical sound

6. State whether the following statements are true or false :-

   a. Objects that vibrate slow have a high pitch.

   b. Same note sounds different on different musical instruments.

   c. The shrillness of a sound is called its pitch.

   d. Noise is unwanted and displeasing sound.

   e. Speed of light in air is very much less than the speed of sound in air.

7. What is meant by echolocation? Is it useful?

8. An object completes 900 oscillations in 30 seconds. Calculate its frequency.

9. Name the musical instrument and its category.

10. Write the correct words by putting letters in correct sequence-

    i) oganpatopir

    ii) nimomonuticca

Answer Key:-

1. b
2. d
3. b
4. b
5. a. v, b. iii, c. i, d. ii, e. iv.
6. false, true, true, true, false.

7. Echolocation is a technique of detecting objects with the help of sound waves. A bat flying in the dark uses echo location where it produces high frequency sounds that bounce off objects in its path and the bat hears echoes, which enable it to detect location of objects. Sonar is a form of echolocation used by ships to detect echoes coming from submerged objects. Geologists use sonar to find out oil deposits below the surface of earth.

8. Number of oscillation completed in 30 sec = 900
   Number of oscillations completed in 1 sec = 900/30= 30
   Therefore, frequency = 30 Hz

9. It is a trumpet and it belongs to category of wind instruments.

10. i) propagation
    ii) communication

*****

CBSE Worksheet-64
Class–VIII Science (Sound)

1. Scientists measure the loudness of sound in :-
   a. desibels
   b. decebles
   c. decibels
   d. decibils

2. Speed of sound in air as calculated by scientists is :-
   a. 230 m/s
   b. 330 m/s
   c. 300 m/s
   d. 600 m/s

3. if speed of sound in water is 1500 m/s then in steel it will be :-
   a. 1000 m/s
   b. 1500 m/s
   c. 600 m/s
   d. 6000 m/s

4. A tuning fork produces sound of :-
   a. single frequency
   b. double frequency
   c. triple frequency
   d. multiple frequency

5. Match the column :-

Animals	**audible range**
a. cats	i) 1 to 20000 Hz
b. Elephants	ii) upto 40000 Hz
c. Moths	iii) upto 50000 Hz
d. Dogs	iv) 100 to 60000 Hz
e. Grasshoppers	v) 1000 to 240000 Hz

6. State whether the following statements are true or false :-

a. Sound producing organ in human is pharynx.

b. Objects that vibrate fast have a low pitch.

c. Ultrasound is safer method to detect the baby as compared to X-ray.

d. Sound travels most easily through solids.

e. Sound can travel through a vacuum.

7. Differentiate between infrasonic, sonic and ultrasonic sounds?

8. Calculate distance travelled by sound in air in 15 seconds?

9. Which is this musical instrument and also name its categorical placement.

10. Write the correct words by putting letters in correct sequence-

i) hicpt

ii) cebiled

Answer Key:-

1. c
2. b
3. d
4. a
5. a. iv, b. i, c. v, d. ii, e. iii.

6. false, false, true, true, false.

7. Infrasonic or subsonic sounds are inaudible to human ear as they have frequency below 20 Hz. An infant (human child) can hear infrasound. Sonic sound frequency ranges between 20 to 20000 Hz and this can be heard by humans. While ultrasonic sounds are high frequency sounds greater than 20000 Hz. They are again inaudible to us. Certain animals like dog, cat, monkey etc can hear them and some others can produce them as well.

8. Speed of sound in air is 330 m/s.
   time = 1.5 sec
   distance = speed X time
   = 330 X 1.5
   = 495 m.

9. It is a very popular instrument named synthesizer and it is an electronic instrument.

10. i) pitch
    ii) decibel

*****

CBSE Worksheet-65

Class–VIII Science (Chemical Effects of Electric Current)

1. Which of the following will conduct electricity?
   a. pure water
   b. impure water
   c. distilled water
   d. all the above

2. LED is :-
   a. light emitting diode
   b. light evolving diode
   c. light eliminating diode
   d. light entering diode

3. An electrolytic cell converts :-
   a. electrical energy to light energy
   b. chemical energy to electrical energy
   c. chemical energy to light energy
   d. electrical energy to chemical energy

4. An electric current is generated due to :-
   a. flowing protons
   b. flowing neutrons
   c. flowing electrons
   d. all the above

5. Match the column :-

a. Cathode	i) positively charged ions
b. cations	ii) negative electrode
c. Anode	iii) resist corrosion
d. anions	iv) positive electrode
e. Electroplating	v) negatively charged ions

6. Fill in the blanks :-

   a. An electric current can bring about a _____ change.

   b. An _____ when dissolved in water, breaks up into ions.

   c. _____ are materials that allow electricity to flow through them.

   d. _____ are also called as insulators.

   e. A source of electricity is called a _____ .

7. Define electrolysis. Through diagram represent movement of ions during electrolysis.

8. Write one important application of electrolysis in our daily life.

9. Pick the odd word out of the following:

   salt solution, sugar solution, lime water, tap water, river water.

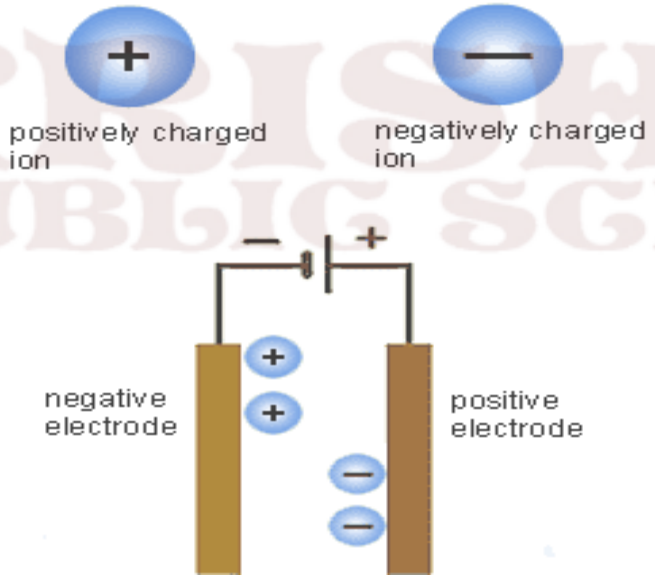
10. Write the correct words by putting letters in correct sequence-

    i) temream

    ii) temaltover

Answer Key:-

1. b
2. a
3. d
4. c
5. a. ii, b. i, c. iv, d. v, e. iii.
6. chemical, electrolyte, conductors, non- conductors, cell.
7. If any substance conducts electricity when dissolved in water and breaks up into its constituents during the process of dissolving, is known as an electrolyte. The process of breaking down of an electrolyte on passing electric current through it is called electrolysis.



8. Electrolysis has many applications in our daily life but the most common of all the applications is electroplating. In the process of electroplating, a thin layer of a metal like gold, silver, chromium, tin, nickel etc is coated over another cheaper metal either to protect the cheaper metal or to make that metal look attractive.
9. Except sugar solution all will conduct electricity.
10. i) ammeter
    ii) voltameter

*****

CBSE Worksheet-66

Class–VIII Science (Chemical Effects of Electric Current)

1. Sugar solution is an :-
   a. electrolyte
   b. non electrolyte
   c. cation
   d. anion

2. Effect/s of electric current includes :-
   a. chemical effect
   b. magnetic effect
   c. heating effect
   d. all the above

3. Lime water conducts electricity because :-
   a. it is acidic in nature
   b. it is basic in nature
   c. it is neutral in nature
   d. it is a salt

4. Protons are :-
   a. negatively charged particles
   b. uncharged particles
   c. positively charged particles
   d. particles not found in an atom

5. Match the column :-

a. pure water	i) negatively charged particles
b. anions	ii) good conductor
c. Impure water	iii) positively charged particles
d. aqueous solution	iv) distilled water
e. cations	v) dissolution in water

6. Fill in the blanks :-

a. Electrolysis is used for _____ one metal over another metal.

b. A combination of cells is known as _____ .

c. In liquid the moving charges are called _____ .

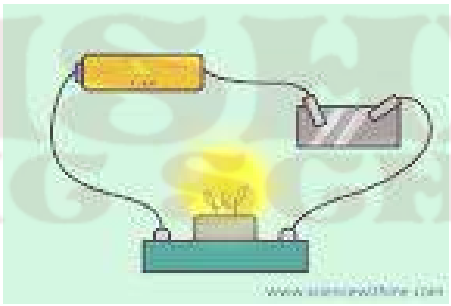
d. The driving force that carries charges around a circuit is _____ force.

e. Electric current is the flow of negatively charged particles called _____ .

7. What is the actual direction of electric current?

8. Why is it dangerous to handle electrical appliances with wet hands or while standing on a wet floor ?

9. What conclusion can be drawn from the circuit shown in the image below :



10. Write the correct words by putting letters in correct sequence-

i) relylescisot

ii) aircoptlengetl

Answer Key:-

1. b
2. d
3. a
4. c
5. a. iv, b. i, c. ii, d. v, e. iii.

6. electroplating, battery, ions, electromotive, electrons.

7. Electrons flow from an electron rich body/object to an electron deficit one. In other words from a body that is negatively charged to a body that is positively charged. However, scientists from earlier days thought that electric current is the flow of positive charge from a positively charged body to a negatively charged body. Therefore, they took this as the direction of flow of current.
   Today, we consider the flow of conventional electric current to be from positive to negative electrode.

8. Small amounts of mineral salts are present naturally in water. They are beneficial for human health. However, these salts make water conducting as such if we touch an electrical appliance with wet hands or while standing on a wet floor, current will flow through our body and result will be an electric shock.

9. Metallic wire shown in the diagram is a good conductor of electricity.

10. i) electrolysis
    ii) electroplating

*****

CBSE Worksheet-67

Class–VIII Science (Chemical Effects of Electric Current)

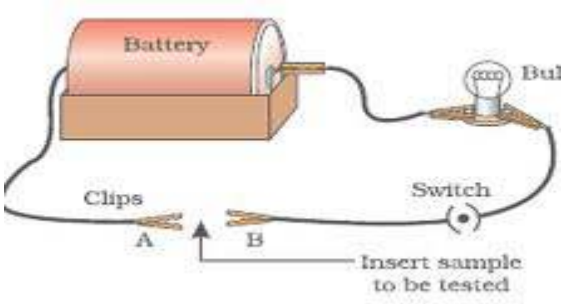
1. The bulb will light up when :-

   a. sample inserted will be non conductor

   b. sample inserted will be conductor

   c. sample inserted will be a non electrolyte

   d. sample inserted will be a thermocoal



2. A charged atom is called as :-

   a. ion

   b. element

   c. compound

   d. complex

3. Plastic coating on wires is a :-

   a. conducting material

   b. electroplating material

   c. insulating material

   d. atomic nucleus material

4. Which of the following will not conduct electricity?

   a. distilled water

   b. glucose solution

   c. pure water

   d. all the above

5. Match the column :-

a. lead	i) electrolyte
b. chloride ions	ii) insulator
c. sodium ions	iii) conductor
d. glass	iv) anion
e. common salt	v) cation

6. State whether the following statements are true or false :-

   a. Every ion has both positive as well as negative charges.

   b. Electricity is a form of energy.

   c. Asbestos is a good conductor of electricity.

   d. Current flows in a closed circuit as well as an open circuit.

   e. Different LEDs may give out light of different colours.

7. Is electric shock lethal? What should be done in case of electric shock?

8. What is deplating? How is it useful?

9. Pick the odd word out of the following:

   nitric acid, sulphuric acid, carbonic acid, sodium chloride, potassium hydroxide.

10. Write the correct words by putting letters in correct sequence-

    i) neplacpai

    ii) eiddo

Answer Key:-

1. b
2. a
3. c
4. d
5. a. iii, b. iv, c. v, d. ii, e. i.

6. false, true, false, false, true.

7. The electric shocks vary in their effect, as they can be mild to severe, sometimes they even lead to death i.e. lethal.
   Electric shocks can cause severe burns and tissue damage. The function of the heart can also be disrupted by a strong electric shock. Irreparable injury to vital organs result into lethality. If shock occurs indoors, immediate disconnection of power supply is required. If a person is in contact with source of electric current, stand on a dry rubber mat, wooden slab etc and try to move the person using a completely dry wooden pole.

8. The process just opposite to electroplating is deplating. In this process, the object to be deplated is used as the anode (positively charged electrode) and the recovered metal is deposited on a cathode (negatively charged electrode) usually of the same metal.
   To recover gold and other valuable metals from the circuits of computers, mobiles, other electronic goods, the process of deplating is very useful.

9. Except carbonic acid all are strong electrolytes.

10. i) appliance
    ii) diode

*****

CBSE Worksheet-68

Class–VIII Science (Chemical Effects of Electric Current)

1. A non metal that conducts electricity is :-
   a. graphite
   b. diamond
   c. sulphur
   d. nitrogen

2. During electrolysis of water, hydrogen gas collects at :-
   a. cathode
   b. anode
   c. diode
   d. both electrodes

3. A good conductor of electricity will be :-
   a. distilled water + common salt
   b. distilled water + vegetable juice
   c. distilled water + fruit juice
   d. all the above

4. The container which carries electrolyte along with electrodes is called :-
   a. electrometer
   b. electrolyter
   c. voltameter
   d. ammeter

5. Match the column :-

a. electro deposition	i) ionize partially
b. weak electrolyte	ii) collect on positively charged electrode
c. cations	iii) ionize completely
d. anions	iv) electroplating
e. strong eletrolyte	v) collect on negatively charged electrode

6. State whether the following statements are true or false :-

   a. Natural water that runs down the hills is 100% pure water.

   b. Formation of a new chemical compound by electricity is electrolysis.

   c. Kerosene is a non electrolyte.

   d. Lemon juice is an electrolyte.

   e. All liquids conduct electricity.

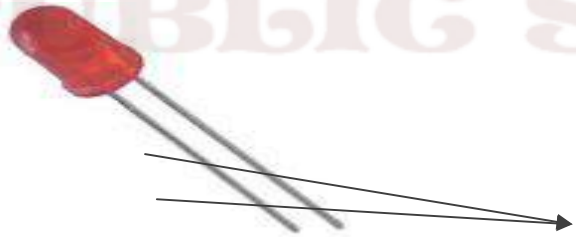
7. Are conductors and electrolytes same? If not explain differences between them with examples.

8. Purification of metals is possible through electrolysis. Describe this application.

9. Pick the odd word out of the following:

   Sulphur, Quartz, Glass, Brass, Plastic, Dry wood.

10. Label the arrow in the following image :



Answer Key:-

1. a
2. a
3. d
4. c
5. a. iv, b. i, c. v, d. ii, e. iii.
6. false, false, true, true, false.

7. Materials that allow electricity to flow through them are called conductors. Conductors like, silver, gold, copper, mercury, aluminium, iron, graphite etc are elements, and remain unchanged when they conduct electricity.
   Substances which conduct electricity when dissolved in water or when melted are called electrolytes. In solution or in molten state, electrolyte decomposes into ions that are charged particles and conduct electricity. Example: common salt, vinegar, caustic soda etc.

8. Purification of metals can be done by electrorefining, where metals are refined by electrolytic method. For example: copper, silver, nickel, gold, aluminium etc purified through electrorefipning.
   The purified metal after electrolysis deposits at the negatively charged electrode i.e. the cathode and is collected from time to time.

9. Brass is a conductor while all others are insulators.

10. Those two are called leads in an LED.

*****

CBSE Worksheet-69

Class–VIII Science (Chemical Effects of Electric Current)

1. In the process of electrolysis of water :-
   a. hydrogen gas collects at anode
   b. oxygen gas collects at cathode
   c. oxygen gas collects at anode
   d. no gases are collected at either electrodes
2. Electrolysis is _____ effect of electric current :-
   a. magnetic
   b. chemical
   c. heating
   d. physical
3. Iron is electroplated with _____ to protect is from corrosion :-
   a. tin
   b. copper
   c. silver
   d. chromium
4. The person who had shown that if electrodes were immersed in water, and a current was passed, bubbles of oxygen and hydrogen were produced:-
   a. Nicholson
   b. Sir Humphrey Davy
   c. Faraday
   d. Galvani
5. Match the column :-

Salt	**At cathode**
a. sodium chloride	i) copper
b. lead nitrate	ii) silver
c. copper sulphate	iii) aluminium
d. silver nitrate	iv) lead
e. Aluminium chloride	v) hydrogen gas

6. State whether the following statements are true or false :-

a. Passing electric currents through a conducting liquid causes chemical changes.

b. Electrolysis is an application of electroplating.

c. Vinegar is a conductor of electricity.

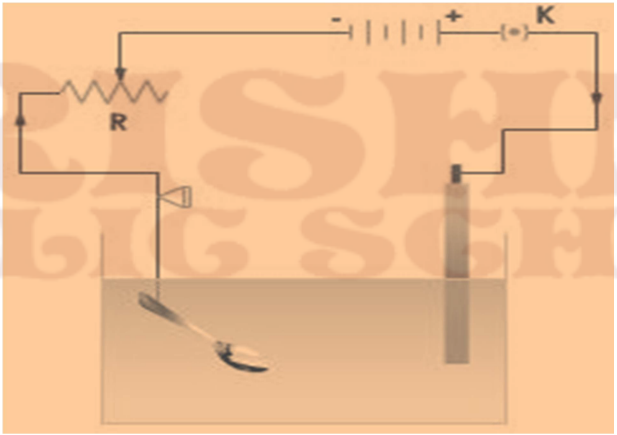
d. A solution that contains oppositely charged ions conducts electricity.

e. Glucose solution is an electrolyte and hence conducts electricity.

7. Describe the specific features of an LED?

8. Chrome plating is very popular in the industry. What are its pros and cons?

9. What does the following image depicts?



10. Write the correct words by putting letters in correct sequence-

i) ciswht

ii) doceterel

Answer Key:-

1. c
2. b
3. d
4. a
5. a. v, b. iv, c. i, d. ii, e. iii.

6. true, false, true, true, false.

7. An LED or light emitting diode is an electronic device. It lights up (starts emitting light) even when a very weak current flows through it. It contains two leads (as shown in worksheet 68) one of which is longer than the other. The longer lead is connected to the cell/battery. Hence when current flowing through the circuit is too weak then bulb may not glow at all so for such cases we can utilise LED which is a more sensitive detector of current.

8. Chrome plated objects have a good lustrous shine and appear attractive. They are scratch and corrosion resistant. Therefore, chromium plating is done on large number of objects, like fancy lights, bathroom accessories, kitchen appliances, automobile parts etc.

   However, chrome plating is done in a bath (solution) of chromic acid, which is considered carcinogenic and has been known to be poisonous/toxic and cause sores and ulcers etc.

9. The image shows electroplating taking place on to the spoon dipped in the electrolyte.

10. i) switch
    ii) electrode

*****

CBSE Worksheet-70

Class–VIII Science (Some Natural Phenomena)

1. When a comb is rubbed against hair, force generated in it is :-
   a. muscular force
   b. gravitational force
   c. frictional force
   d. electrostatic force

2. Clouds can charge tall buildings and trees by :-
   a. friction
   b. induction
   c. conduction
   d. gravitation

3. The waves generated by an earthquake are called :-
   a. tectonic waves
   b. internal waves
   c. seismic waves
   d. tsunami

4. Charges are of two kinds:-
   a. negative and positive
   b. negative and neutral
   c. positive and neutral
   d. neutral and static

5. Match the column :-

a. glass rod rubbed with silk	i) attract each other
b. like charges	ii) positive charge
c. ebonite rod rubbed with wool	iii) transferring of charge
d. Earthing	iv) repel each other
e. unlike charges	v) negative charge

6. Fill in the blanks :-

a. The electrical charges generated by rubbing are _____ .

b. Tall buildings are protected from damage by lightning through a lightning _____ .

c. The simplest form of a seismograph is a simple _____ .

d. Magnitude and intensity of earthquake is measured by _____ scale.

e. Lithosphere of earth is divided into about 20 parts called _____ plates.

7. Describe how tsunamis form?

8. What causes an earthquake?

9. Name the type of electricity that will be produced?

10. Write the correct words by putting letters in correct sequence-

i)

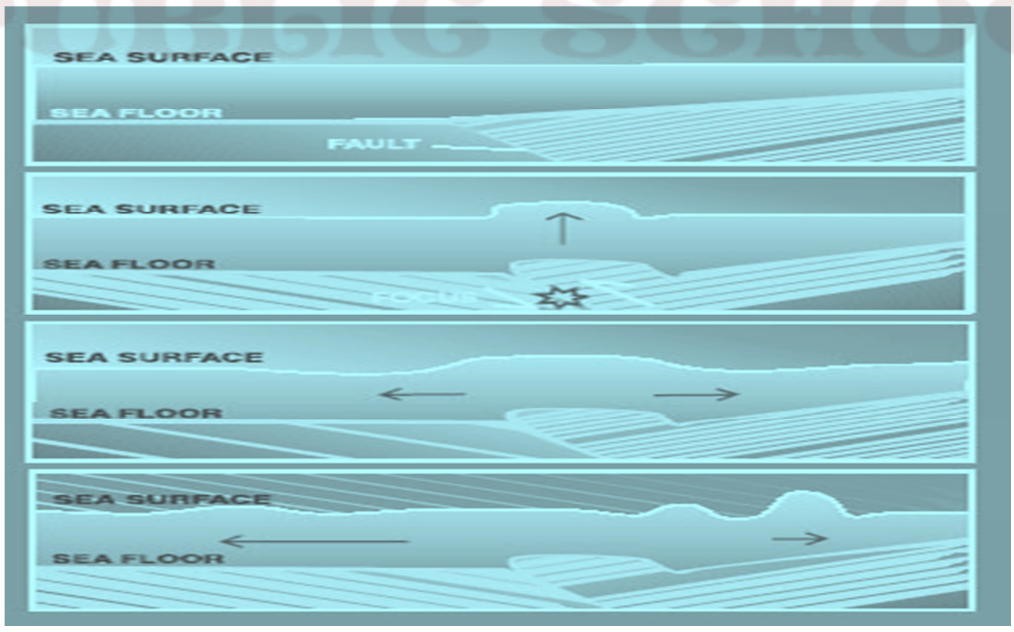
ii)

Answer Key:-

1. d
2. b
3. c
4. a
5. a. ii, b. iv, c. v, d. iii, e. i.

6. static, conductor, pendulum, Richter, tectonic.

7. A disturbance such as an earthquake, landslide, volcanic eruption, or meteorite impact can generate a series of waves in an ocean or other body of water. Undersea earthquakes occur around tectonic plates and faults cause the water above to be moved up or down. When movement along a fault moves the seafloor upward, water is also pushed upward and becomes tsunami waves. As the waves approach shallower water, they become higher.



8. An earthquake is the vibration, sometimes violent, of the Earth's surface that follows a release of energy in the Earth's crust. This energy can be generated by :

i. a sudden dislocation of segments of the crust i.e. faults.

ii. volcanic eruptions

iii. man-made explosions

iv. movement of tectonic plates

The most common kind of quakes, the most destructive and the kind people generally have in mind when we think of earthquakes are the ones that are caused by the sudden dislocation of large rock masses along the faults within the earth's crust. A fault is a fracture within some particular rocky mass within the earth's crust. Fault sizes can vary greatly, as some faults can be miles long. Earthquakes are caused by active faults, which are, faults along which the two sides of the fracture move with respect to each other.

In short, an earthquake is caused by the sudden movement of the two sides of a fault with respect to another.

9. It is the static electricity that will be produced.

10. i) conductor

ii) tectonic

*****

CBSE Worksheet-71

Class–VIII Science (Some Natural Phenomena)

1. Static electricity charges :-
   a. insulators
   b. conductors
   c. electrolytes
   d. all the above

2. Clouds contain :-
   a. positive charges
   b. negative charges
   c. neutral charges
   d. both a & b

3. The plates of hard rock that covers the surface of earth are :-
   a. seismic plates
   b. tectomic plates
   c. seasonal plates
   d. tectonic plates

4. Central portion of the earth is mainly made up of :-
   a. nickel
   b. aluminium
   c. iron
   d. both a & c

5. Match the column :-

a. fault lines	i) region of eruption
b. volcano	ii) single land mass
c. lava	iii) earthquake under a river bed
d. Pangea	iv) place where tectonic plates meet
e. flood	v) molten matter thrown out of earth

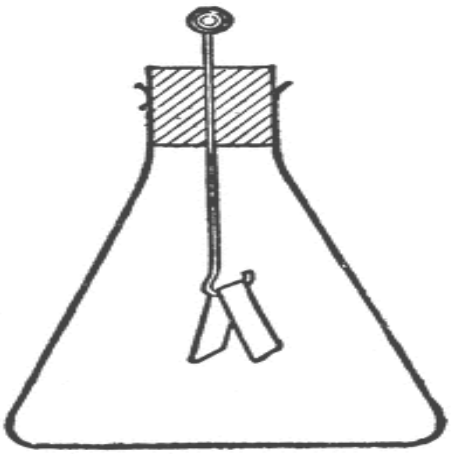
6. Fill in the blanks :-
   a. _____ are the zones of weakness in the earth's crust.
   b. _____ is a device that can be used to check whether an object is carrying a charge or not.
   c. The process of transferring charge from a charged object to the earth is called _____ .
   d. Outermost layer of the earth is called _____ .
   e. Layer of the earth below the tectonic plates is called _____ .

7. Describe different ways of charging a body?

8. Mention the principle on which an electroscope is based upon. What are the uses of a gold leaf electroscope?

9. Pick the odd word out of the following:
   hurricanes, cyclones, tornadoes, rainfall, drought, tsunamis

10. Identify the instrument shown in the following image :



Answer Key:-

1. a
2. d
3. d
4. d
5. a. iv, b. i, c. v, d. ii, e. iii.
6. faults, electroscope, earthing, crust, mantle.

7. A body can be charged by following ways:
   a) Charging by friction : When two objects are rubbed together, there is a frictional force created between them which makes them charged.
   b) Charging by conduction : If an uncharged object is brought in contact with a charged body some charge gets transferred to the uncharged body. This is called charging by conduction.
   c) Charging by induction : An uncharged body can also be charged by bringing a charged body near it but not touching it. In this way the uncharged object acquires opposite and equal charge to that of body charging it.

8. An electroscope is a device based on the principle that electric charge can be transferred from a charged object to another through a metal conductor. The strips within an electroscope get charged negatively by conduction when touched with an ebonite rod. So two strips repel each other and open out (repulsion is the confirmatory test for charged body).
   The gold leaf electroscope is used for :
   i. to detect and measure charge on a body.
   ii. to find the nature of charge on a body.

9. Except rainfall all others are natural misfortunes or disasters.

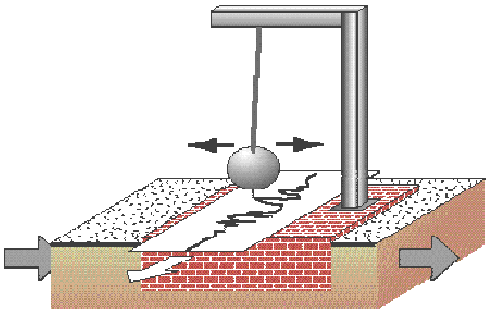
10. It is an electroscope.

*****

CBSE Worksheet-72

Class–VIII Science (Some Natural Phenomena)

1. What is the name of instrument shown in the following image :-



   a. sesmograph
   b. siezemograph
   c. seismograph
   d. siesmograph

2. Static electricity word refers to :-
   a. dynamic
   b. stationary
   c. mobile
   d. flowing

3. Deforestation can cause :-
   a. lanslides
   b. floods
   c. draught
   d. all the above

4. An INSAT picture shows a circular mass of clouds that will indicate:-
   a. a cyclone
   b. a tsunami
   c. a forest fire
   d. an earthquake

5. Match the column :-

a. crust	i) molten rock
b. mantle	ii) supports life
c. core	iii) greatest bulk of earth
d. magma	iv) solid layer
e. lithosphere	v) thinnest layer

6. State whether the following statements are true or false :-

a. Static electricity consists of electric charges which do not flow.

b. Tectonic plates that cover the earth surface are clearly visible.

c. Earthquakes are natural means of releasing stress built up in the mantle.

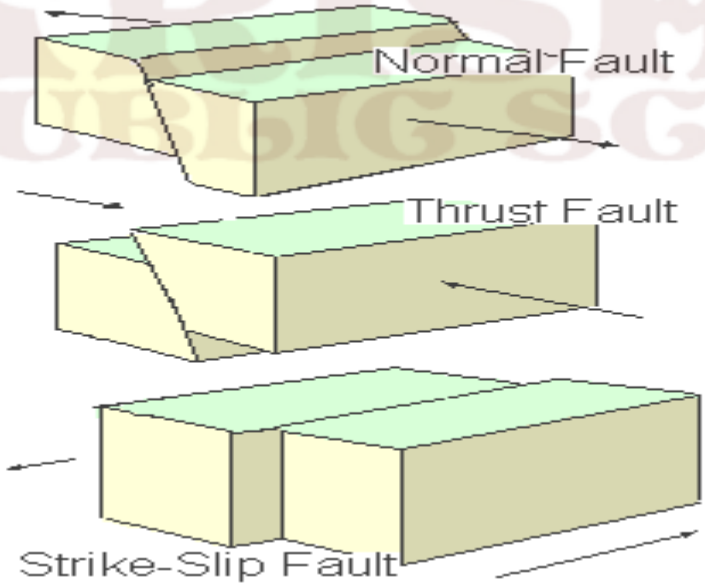
d. Heavy rainfall brings about a kind of natural disaster named famine.

e. Seismogram is the instrument that detects and records earthquake.

7. What is the process for discharging a electroscope for next use?

8. When a lightning conductor containing building is struck with lightning what will happen?

9. In the following images the relative movements of faults or fractures will lead to which type of natural disaster?



10. Write the correct words by putting letters in correct sequence-

i) netcipere

ii) nagretih

Answer Key:-

1. c
2. b
3. d
4. a
5. a. v, b. iii, c. iv, d. i, e. ii.

6. true, false, true, false, false.

7. The process of removing the charge from a charged object is called discharging.The process applied for discharging an electroscope before it can be used for next experiment involves earthing.
   If you touch the disc of a charged electroscope with your fingers, the metal leaves collapse because the charge flows through your body to the earth. This transfer of charge from a charged object to the earth is known as earthing.

8. Lightning conductor is a safety device that protects a tall building from lightning strike, by providing an easy and alternative path to the heavy charge attack of lightning. It consists of a long metal rod fixed with side wall of tall building such that its upper end like trishul protrudes much above the building while lower end runs deep under earth and joins a large metal plate (like copper) that helps in quick distribution of charges in earth.

9. They might lead to an earthquake.

10. i) epicentre
    ii) earthing

*****

CBSE Worksheet-73
Class–VIII Science (Some Natural Phenomena)

1. The layer between core and crust of earth is :-
   a. magna
   b. mantel
   c. mantle
   d. mental

2. In a simple gold leaf electroscope the gold leaves hang from a :-
   a. glass rod
   b. copper rod
   c. gold rod
   d. brass rod

3. During thunderstorm :-
   a. +ve charges accumulate near upper edges of cloud
   b. –ve charges accumulate near upper edges of cloud
   c. – ve charges do not accumulate in the cloud
   d. both a & b are true.

4. In a lightning conductor :-
   a. a large non metal plate is kept buried in damp earth
   b. a large metal plate is kept buried in damp earth
   c. a thin copper wire is kept buried in damp earth
   d. an iron rod is kept buried in the damp earth connected to core of earth

5. Match the column :-

Scientists	**contribution**
a. Benjamin Franklin	i) measurement of intensity of an earthquake
b. Charles F. Richter	ii) lightning is a huge electric spark among clouds
c. Mercalli	iii) gold leaf electroscope
d. Thales	iv) measurement of magnitude of an earthquake
e. Abraham Bennet	v)attracting ability of amber on rubbing with fur

6. State whether the following statements are true or false :-

   a. 50% earth surface is covered by water.

   b. The effect of an earthquake on the Earth's surface is called the intensity.

   c. Oceanic crust of earth is thinner as compared to crust in continental areas.

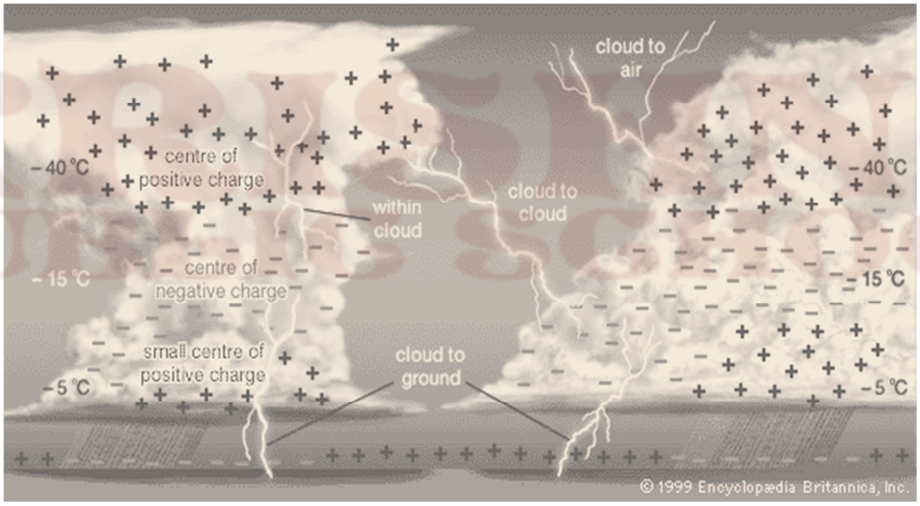
   d. Two bodies repel each – other if they have unlike charges.

   e. When a charged body touches an electroscope, the latter acquires equal and opposite charge.

7. What is a focus and an epicenter?

8. Describe the modified Mercalli scale for measuring intensity of earthquake?

9. What causes lightning as per the image given below?



10. Write the correct words by putting letters in correct sequence-

    i) memosraigs

    ii) rosectelpeco

Answer Key:-

1. c
2. d
3. a
4. b
5. a. ii, b. iv, c. i, d. v, e. iii.
6. false, true, true, false, false.

7. Focus is the point deep within the earth's crust from where an earthquake originates. As earthquake occurs along tectonic plate margins, when these plates move faster due to friction force they get stuck at times. This causes pressure to build up and earthquake results when this pressure is released.
   Energy waves move rapidly from the focus point of earthquake and the point at ground level, directly above the focus is called as the epicentre.

8. This scale measures the intensity of an earthquake over a range of 1 to 12 , depending on the impact it has.

I	Instrumental
II	feeble
III	slight
IV	moderate
V	rather strong
VI	strong
VII	very strong
VIII	destructive
IX	ruinous
X	disastrous
XI	extremely disastrous
XII	catastrophic

9. Accumulation of charges in the atmospheric clouds leads to lightning.

10. i) seismogram
    ii) electroscope

*****

CBSE Worksheet-74
Class–VIII Science (Some Natural Phenomena)

1. During thunderstorm :-
   a. –ve charges accumulate near lower edges of cloud
   b. –ve charges accumulate near upper edges of cloud
   c. – ve charges do not accumulate in the cloud
   d. both a & b are true.

2. If earth : ground then earthing :: ? :-
   a. crusting
   b. charging
   c. grounding
   d. inducing

3. Which of the following non metal will conduct charge :-
   a. chlorine
   b. carbon
   c. sulphur
   d. nitrogen

4. Seismic focus for earthquake is also known as :-
   a. pericentre
   b. radial centre
   c. epicentre
   d. hypocentre

5. Match the column :-

Reading on Richter scale	**Effect of earthquake**
a. 6 to 6.9	i) not felt but recorded
b. 4 to 5.9	ii) causes serious damage
c. 0 to 3	iii) can be destructive in a small area
d. 7 to 7.9	iv) often felt but damage less
e. 8 and above	v) total damage due to great earthquake

6. State whether the following statements are true or false :-

   a. Seismic energy travels through the crust in the form of waves.

   b. Intensity of an earthquake decreases when the distance from the epicenter deacreases.

   c. Each point increase on Richter scale represents an increase of ten times in magnitude of earthquake.

   d. Tremor is discharge of static electricity between the clouds.

   e. Franklin discovered atmospheric electricity.

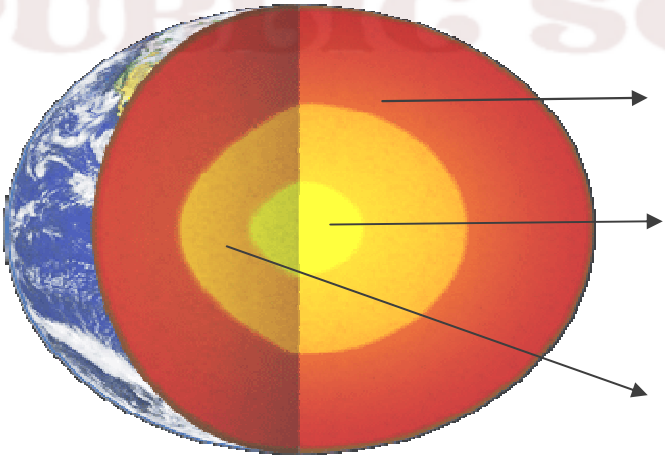
7. What causes thunder and lightning ?

8. Describe briefly the following terms:

   a) aftershocks

   b) convection currents

9. Label the locations asked for in the following image in top to bottom order:



10. Write the correct words by putting letters in correct sequence-

    i) somehtrdutnr

    ii) gardiehcs

Answer Key:-

1. a
2. c
3. b
4. d
5. a. iii, b. iv, c. i, d. ii, e. v.

6. true, false, true, false, true.

7. Clouds contain tiny crystals of ice and droplets of water, which move against each other (friction). This can cause huge amounts of charge to build up in clouds. Generally, nothing happens due to this charge build-up because air is poor conductor of charges but when accumulation of the charge is great enough and the wind bring clouds close together then charge can jump from one cloud to another through the air. This electric discharge is called lightning.
   Layers of air get rapidly heated up due to the heat produced at the time of lightning and expand, this rapid expansion of air sends a disturbance produced as sound and heard as thunder.

8. a) Aftershocks are minor earthquakes that usually follow a major earthquake.
   b) Convection currents are the movement in fluid magma that occur due to difference in the temperature between mantle and solid core. These currents move magma towards the surface and as it moves, it drags tectonic plates that float on it causing disturbances.

9. mantle, outer core, inner core.

10. i) thunderstorm
    ii) discharge

*****

CBSE Worksheet-75

Class–VIII Science (Light)

1. The amount of light that is reflected depends on :-
   a. the material of the surface
   b. the length of the surface
   c. the nature of the surface
   d. only a & c

2. Form of energy that gives us sensation of sight is :-
   a. reflection
   b. light
   c. refraction
   d. dispersion

3. Moon is a :-
   a. non-luminous body
   b. luminous body
   c. semi-luminous body
   d. black body

4. Which of the following is possible?
   a. sunlight
   b. moonlight
   c. earthlight
   d. all the above

5. Match the column :-

a. smooth surface	i) upright image
b. erect	ii) diffused reflection
c. uneven surface	iii) splitting of light into colours
d. spectrum	iv) regular reflection
e. Dispersion	v) band of colours

6. Fill in the blanks :-

a. Images are visible only on _____ surface.

b. _____ is the light sensitive area in the eye.

c. _____ spot is the area of no vision in eye.

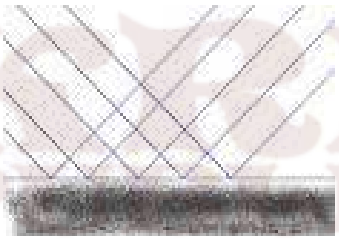
d. Bouncing back of light rays from the surface of an object is called _____ .

e. A smooth and highly polished reflecting surface is called _____ .

7. What are the laws of reflection?

8. Through a well labeled figure show various terms related to reflection?

9. State difference between following two images:

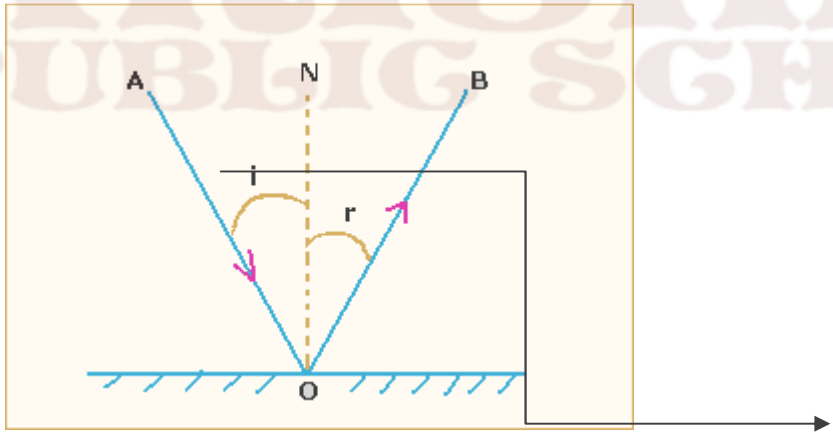


10. Write the correct words by putting letters in correct sequence-

i) dictenin

ii) dertclef

Answer Key:-

1. d
2. b
3. a
4. d
5. a. iv, b. i, c. ii, d. v, e. iii.
6. polished, retina, blind, reflection, mirror.
7. When light falls on a plane smooth surface, it follows certain laws that are called the laws of reflection:
   i) When a ray of light falls on a plane smooth surface, it reflects in the same medium in such a way that the angle of reflection is equal to the angle of incidence.
   ii) The incident ray, the reflected ray and the normal all lie in the same plane.
8. 

   Normal OA is incident ray, OB is reflected ray, angle i is angle of incidence, angle r is angle of reflection.
9. The first image shows regular reflection while second image shows irregular reflection.
10. i) incident
    ii) reflected

*****

CBSE Worksheet-76

Class–VIII Science (Light)

1. The most comfortable distance at which one can read with a normal eye is about :-
   a. 20 cm
   b. 22 cm
   c. 25 cm
   d. 30 cm

2. Impression of an image persists on retina for about:-
   a. $1/12^{th}$ of a second
   b. $1/16^{th}$ of a second
   c. $1/10^{th}$ of a second
   d. $1/15^{th}$ of a second

3. The visually impaired can also read with fingers using a special alphabet called :-
   a. Bralle
   b. Brialle
   c. Brallie
   d. Braille

4. Image formed on retina is/are :-
   a. upside down
   b. flat
   c. reversed left to right
   d. all the above

5. Match the column :-

a. nearsightedness	i) old age eye defect
b. farsightedness	ii) area of no vision
c. cataract	iii) plenty of cones
d. blind spot	iv) hypermetropia
e. yellow spot	v) myopia

6. Fill in the blanks :-

a. The objects which shine in the light of other objects are called _____ objects.

b. When a light ray falls on a mirror, it gets _____ along a particular direction.

c. Brain interprets image signals from both eyes to provide a _____ dimensional image.

d. Nerve fibres of rods and cones join to form _____ nerve.

e. Sunlight is made up of seven different colors which make up the _____ .

7. Differentiate between image formed by regular and diffused reflection?

8. Describe lateral inversion. Do you find any application of it in daily life?

9. Name the device shown in the following image :

10. Write the correct words by putting letters in correct sequence-

i) rodpensisi

ii) vionsiner

Answer Key:-

1. c
2. b
3. d
4. d
5. a. v, b. iv, c. i, d. ii, e. iii.

6. illuminated, reflected, three, optic, spectrum.

7. In the situation of regular reflection all the rays of light that fall on a smooth reflecting surface, bounce back along a particular direction. So, a smooth surface gives a sharp and clear image.
   When light rays fall on an irregular/rough surface, they bounce back in different directions. As a result, the reflected light falls over a larger area and the image formed in case of diffused reflection is not sharp and clear.

8. In the image formed by a plane mirror, there is an interchange of left and right. The objects on the right side appear to be on the left in the image and vice a versa.
   This phenomenon in which the left of an object appears to be the right and right appears to be the left is called lateral inversion. It is an important property of the plane mirror image. That is why the letters of the word AMBULANCE are written laterally inverted in front of the ambulance. This makes the word appear the correct way in rear view mirrors of other vehicles.

9. It is a kaleidoscope.

10. i) dispersion
    ii) inversion

*****

CBSE Worksheet-77
Class–VIII Science (Light)

1. What will be the angle of incidence if a ray of light is reflected back at an angle of 30^0 :-
   a. 60^0
   b. 75^0
   c. 30^0
   d. 15^0

2. A person sees blurred images of all objects around him or her. That person is suffering from :-
   a. myopia
   b. hypermetropia
   c. night blindness
   d. cataract

3. The eye perceives an object as moving when images are flashed on the eye at a rate :-
   a. faster than 10 per second
   b. slower than 10 per second
   c. faster than 16 per second
   d. slower than 16 per second

4. A triangular piece of glass that breaks up white light into spectrum is :-
   a. presm
   b. prism
   c. mirror
   d. convex lens

5. Match the column :-

a. Owl's eye	i) good eye sight
b. convex lens	ii) large number of rods
c. Eagle's eye	iii) corrects myopia
d. Vitamin A	iv) large number of cones
e. concave lens	v) corrects hypermetropia

6. State whether the following statements are true or false :-

a. The sunlight reflected from earth surface is called Earth light.

b. A highly polished and smooth surface does not reflect any light.

c. In any mirror, silver layer acts as the non reflecting surface.

d. For a given incident ray of light falling on a mirror, there is only one reflected ray.

e. All objects reflect light.

7. Are cataract and glaucoma different from each – other?

8. What is meant by multiple reflection and what are its consequences?

9. What does the following images show ?

10. Write the correct words by putting letters in correct sequence-

i) rindeafr

ii) letratlivou

Answer Key:-

1. c
2. d
3. c
4. b
5. a. ii, b. v, c. iv, d. i, e. iii.
6. true, false, false, true, true.

7. Cataract is the disease of the eye which makes the eye lens opaque and cloudy. This can be treated by removing the affected lens by surgery and an artificial plastic lens is implanted for clear vision.
   Glaucoma is the disease of eye that damages the optic nerve of eye and may result in vision loss and blindness. It occurs when normal fluid (aqueous and vitreous humour) pressure inside our eyes gradually increases.

8. The phenomena of light ray getting reflected more than once is called multiple reflection. This can happen if two or more plane mirrors are used and by varying the angle between the two mirrors. As such we can get any number of images. Hence we get multiple images like in a kaleidoscope and periscope.

9. It is the Braille system of English alphabets developed for visually impaired people.

10. i) infrared
    ii) ultraviolet

*****

CBSE Worksheet-78

Class–VIII Science (Light)

1. The earth light can be seen from :-
   a. sun
   b. earth surface
   c. another galaxy
   d. moon

2. If the angle of reflection is 55^0 then angle of incidence will be :-
   a. 45^0
   b. 90^0
   c. 55^0
   d. 35^0

3. If the angle between incident and reflected ray is 60^0 what will be angle of reflection?
   a. 60^0
   b. 30^0
   c. 50^0
   d. 10^0

4. If a person has blue eyes that means :-
   a. his iris is blue
   b. his cornea is blue
   c. his sclera is blue
   d. his retina is blue

5. Match the column :-

a. Sclera	i) help to focus the image
b. Cornea	ii) gives color to the eye
c. Ciliary muscles	iii) outermost tough covering
d. Iris	iv) opening in the iris through which light enters
e. Pupil	v) transparent outer layer that refracts light

6. State whether the following statements are true or false :-

   a. Blindness is always acquired never inborn.

   b. A kaleidoscope contains only one mirror.

   c. Periscope is used to see ships on water surface from a submarine.

   d. Spectrum of white light is formed due to refraction.

   e. Red light travels fastest and violet light travels slowest out of VIBGYOR.

7. Define persistence of vision in human eye?

8. Differentiate between sensations of still pictures and movies?

9. In the following image which device is represented above water surface?

10. Write the correct words by putting letters in correct sequence-

    i) tosruvie

    ii) cancontijvu

Answer Key:-

1. d
2. c
3. b
4. a
5. a. iii, b. v, c. i, d. ii, e. iv.

6. false, false, true, false, true.

7. Persistence of vision is the phenomenon of the eye by which the impression of an image remains on the retina of eye for one sixteenth of a second. If another image is imposed before the first image has been wiped out then the images seem to be moving.

8. For viewing still pictures the gap between the changing of pictures are more than one sixteenth of a second.
   Movie is a short form used for moving pictures. They are actually still pictures but there are so many pictures which move so fast one after the other that they seem to be moving.

9. It represents a periscope.

10. i) vitreous
    ii) conjuctiva

*****

CBSE Worksheet-79
Class–VIII Science (Stars and solar system)

1. The clusters of stars forming recognizable patterns on a clear night :-
   a. phases
   b. eclipses
   c. milky way
   d. constellations

2. If the distance of Saturn from the sun is 1427 million km then the distance of Neptune should be :-
   a. 780 million km
   b. 1420 million km
   c. 4498 million km
   d. 58 million km

3. The planet also known as evening star is :-
   a. Mercury
   b. Venus
   c. Mars
   d. Jupiter

4. A planet with well developed set of rings is :-
   a. Neptune
   b. Jupiter
   c. Uranus
   d. Saturn

5. Match the column :-

a. mercury	i) brihaspati
b. jupiter	ii) shani
c. venus	iii) Saptarishi
d. saturn	iv) budh
e. Ursa Major	v) shukra

6. Fill in the blanks :-

a. Changes in the shape and size of the moon are called its _____ .

b. Moon takes _____ days to rotate on its axis.

c. Moon is the earth's only _____ .

d. Meteors which on the earth without getting completely burnt are called _____ .

e. _____ is no longer a planet of the solar system.

7. What is a lunar month?

8. Differentiate between a new moon and full moon ?

9. In the given image changes show which phenomenon?

10. Write the correct words by putting letters in correct sequence-

i) eontoscatlnli

ii) latesitle

Answer Key:-

1. d
2. c
3. b
4. d
5. a. iv, b. i, c. v, d. ii, e. iii.

6. phases, 29, satellite, meteorites, Pluto.

7. The time period between two consecutive full moons is named as a month according to Indian calendars. It is approximately 29 days, 11 hours and 43 minutes. This is also called a lunar month.
   In other words the time from one new moon to next or from one full moon to the next constitutes a lunar month.

8. Full moon : When rays from the sun fall directly on moon, it appears as a full circular disc and is called as full moon. The full moon day is called purnima.
   New moon : When earth and sun are on opposite sides of the moon, we cannot see the moon. This is known as the new moon. The new moon day is called amavasya.

9. Phases of the moon are changing and it occurs every month.

10. i) constellation
    ii) satellite

*****

CBSE Worksheet-80

Class–VIII Science (Stars and solar system)

1. Next nearest star for Earth after Sun is :-
   a. Ursa major
   b. Ursa minor
   c. Orion
   d. Alpha Centauri

2. Science that deals with the study of universe is :-
   a. Astronomy
   b. Astrology
   c. Agronomy
   d. Spacionomy

3. Pole star is a part of which of the following constellations?
   a. ursa major
   b. ursa minor
   c. orion
   d. cassiopeia

4. _____ is the dwarf planet :-
   a. neptune
   b. uranus
   c. pluto
   d. mercury

5. Match the column :-

a. Sputnik I	i) shooting stars
b. Asteroids	ii) a star that appears stationary
c. Meteors	iii) rocks found between mars and jupiter
d. Polaris	iv) our galaxy
e. Milky way	v) first artificial satellite

6. Fill in the blanks :-

a. When sun rays fall directly on moon, it is called _____ moon.

b. When sun rays fall only on a part of the moon, it is called _____ moon.

c. When we cannot see the moon, it is a _____ moon.

d. _____ is also called the Red planet.

e. _____ is the first Indian satellite launched on 19th April,1975.

7. Compare stars and planets?

8. Differentiate between meteors and comets?

9. What does the following image depict?

10. Write the correct words by putting letters in correct sequence-

i) viruesen

ii) restmanoro

Answer Key:-

1. d
2. a
3. b
4. c
5. a. v, b. iii, c. i, d. ii, e. iv.

6. full, crescent, new, Mars, Aryabhatta.

7.

i) Stars are made up of highly compressed gases, mainly hydrogen and helium.	i) Planets are made up of solid rocks, liquids and gases.
ii) In stars, energy is produced due to nuclear fusion process.	ii) Planets have only thermal energy due to the hot mass deep inside.
iii) Stars shine due to their own light.	iii) Planets do not have their own light, they shine due to the light of the nearest star falling on them.
iv) Stars appear to twinkle.	iv) Planets do not twinkle.
v) Position of a star at a particular time at night remains almost unchanged.	v) Positions of planets appear to change.

8. Meteors are small objects, rather chunks of rocks, floating in the space. A meteor enters the earth's atmosphere with high speed. It is heated by friction with air, and in most of the cases it is burnt into ashes in a very short time. As it heats up and burns, it appears as a glowing streak of light and is called a shooting star, or falling star.
   Comets are lumps of ice and dust, which periodically reach upto the centre of the solar system from somewhere outside. A comet appears like a ball of fire with a long bright tail as it approaches the Sun.
9. Earth accompanied by moon revolving round the Sun in its respective orbit.
10. i) universe
    ii) astronomer

*****

CBSE Worksheet-81

Class–VIII Science (Stars and the Solar System)

1. Sun is a :-
   a. planet
   b. star
   c. comet
   d. satellite

2. Study by astronomers has proved that :-
   a. universe is contracting
   b. universe is breaking into pieces
   c. universe never existed
   d. universe is expanding

3. Distance travelled by sunlight in one year is :-
   a. 9.46 x10^{12} km
   b. 2.33 x 10^{12} km
   c. 3.26x 10^{12} km
   d. 1x 10^{12} km

4. Path on which a planet revolves around the sun is called :-
   a. arbit
   b. pole
   c. orbit
   d. radius

5. Match the column :-

a. Polaris	i) hunter
b. Big question mark	ii) tail of ursa minor
c. Orion	iii) largest asteroid
d. Moon	iv) great bear
e. Ceres	v) natural satellite of earth

6. State whether the following statements are true or false :-

   a. Distance travelled by light in air in one year is called a light year.

   b. Mercury is the hottest planet in the solar system.

   c. Earth has only one natural satellite.

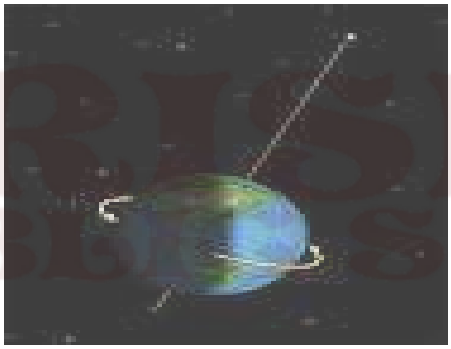
   d. APPLE and INSAT are artificial satellites.

   e. Moon's atmosphere is rich in hydrogen.

7. What are artificial satellites? How are they useful to us?

8. Why is Pluto not considered as a planet anymore?

9. Name the star shown in the given image?



10. Select the odd word out of the following :

    mercury, Venus, Earth, Mars, Uranus, Neptune

Answer Key:-

1. b
2. d
3. a
4. c
5. a. ii, b. iv, c. i, d. v, e. iii.

6. false, false, true, true, false.

7. Scientists have been designing some objects and sending them out to revolve around the Earth in their fixed orbits for some special purpose. Such objects are called man made or artificial satellites.

   Usefulness of artificial satellites :

   i. They help in television and radio transmission.
   ii. They help in telephone communication.
   iii. They help to study and forecast the weather by sending cloud pictures to the Earth, taken from space.
   iv. They help in locating mineral elements by remote sensing (collecting information from distance).
   v. They help the scientists to explore the universe in a better way.

8. Pluto got demoted from planet status in August 2006. It failed to abide by the definition of a classical planet as per The International Astronomical Union (IAU). It is now considered as a dwarf planet. Other dwarf planets known are Ceres and Eris.

9. It's a pole star.

10. Except mercury(has a circular orbit) all other planets orbit in an eclipse.

*****

CBSE Worksheet-82
Class–VIII Science (Pollution of Air and Water)

1. Water is a :-
   a. renewable
   b. non renewable
   c. recyclable
   d. both a & c

2. Extracts from neem tree are example of :-
   a. non biodegradable pesticide
   b. biodegradable pesticide
   c. pollutants
   d. fertilizers

3. Water that is fit for drinking is called :-
   a. portable water
   b. pourable water
   c. potable water
   d. ground water

4. A poisonous gas that has a strong smell of rotten eggs is :-
   a. hydrogen sulphide
   b. hydrogen chloride
   c. carbon monoxide
   d. sulphur dioxide

5. Match the column :-

Air pollutant	Source
a. CO	i) drycleaning
b. Acid fumes	ii) stone crushers
c. Smoke	iii) automobile exhausts
d. Dust	iv) fungicides
e. Mercury	v) combustion of fossil fuels

6. Fill in the blanks :-

a. _____ is made from natural organic substance, is a biodegradable fertilizer.

b. Filtered water may still have _____ in it.

c. _____ the water for 20 minutes kills all microbes.

d. _____ is the combination of smoke and fog.

e. Very small particles of solids and liquids suspended in air are called _____ .

7. Describe greenhouse effect? Name any four greenhouse gases and measures to reduce them.

8. List some of the most hazardous effect of air pollution on human society?

9. What does the following image show?

10. Write the correct words by putting letters in correct sequence-

i) ribsoncith

ii) pantectouiihor

Answer Key:-

1. d
2. b
3. c
4. a
5. a. iii, b. i, c. v, d. ii, e. iv.
6. compost, germs, boiling, smog, particulates.

7. A greenhouse is an enclosure of glass in which plants are kept to protect them from the cold air outside. The glass traps the heat of the sun, making the air inside warmer. In a quite similar way the carbon dioxide in the air traps the heat of the sun radiated back by the earth. This makes the air warm and comfortable for living beings, and in fact makes it possible for life to exist on the earth.
   But excess increase in carbon dioxide has made much more warmer than required and this is known as greenhouse effect. Greenhouse gases include carbon dioxide, methane, ozone, water vapour, nitrogen oxides etc.

8. **(i) Global warming →** Due to increase in the thickness of layer of greenhouse gases in atmosphere more heat is being retained thus raising the earth's average temperature. This increase in temperature worldwide is called global warming. This would affect agriculture & cause melting of ice caps, irregular rainfall, warmer weather etc.
   (ii) Acid rain → Sulphur dioxide and nitrogen dioxide are produced by burning of fossil fuels and in the atmosphere they react with water vapour to form sulphuric and nitric acid. Both are strong and highly corrosive in nature. They come down with rain, making rain water significantly acidic. Such rain is called acid rain. They particularly harm stone structures and buildings, damages crops and forests, makes lakes and streams acidic and unsuitable for organisms.

9. It shows a eutrophic pond.

10. i) bronchitis
    ii) eutrophication

*****

CBSE Worksheet-83

Class–VIII Science (Pollution of Air and Water)

1. Acid rain pollutes :-
   a. air
   b. water
   c. soil
   d. both b & c

2. Water pollution can be classified as :-
   a. chemical
   b. biological
   c. both a & b
   d. economical

3. An air pollutant that combines with hemoglobin present in the blood is :-
   a. CO
   b. CO_2
   c. HCl
   d. H_2S

4. Which of the following will cause the minamata disease :-
   a. lead poisoning
   b. mercury poisoning
   c. Arsenic poisoning
   d. all the above

5. Match the column :-

a. Bhopal gas tragedy	i) asbestos fibre
b. Lung cancer	ii) SPM
c. Asthma	iii) carbon dioxide
d. Greenhouse gas	iv) sewage
e. Contaminated water	v) methyl isocyanate

6. Fill in the blanks :-

a. _____ petrol does not release toxic lead on burning.

b. _____ is a cleaner vehicle fuel.

c. CFCs converts _____ to oxygen.

d. Nowadays domestic water purifiers are using a technique called _____ .

e. Chlorination is a method used for purifying _____ .

7. Differentiate between effect of ozone in different layers of atmosphere?

8. What are the methods of reducing air pollution?

9. Which type of pollution will be caused by the materials shown in following image?

10. Write the correct words by putting letters in correct sequence-

i) asgewe

ii) ratsoncivnoe

Answer Key:-

1. d
2. c
3. a
4. b
5. a. v, b. i, c. ii, d. iii, e. iv.
6. unleaded, CNG, ozone, RO, water.

7. Ozone gas present in the upper layer of atmosphere (troposphere) shields our earth from harmful ultraviolet rays of the sun. But at the ground level, the ozone gas present works as an air pollutant. When inhaled ozone causes coughing, irritation in eyes, decrease in lung efficiency, lowered body resistance etc.

8. We can reduce air pollution by :
   i) Modifying automobile engines such that complete combustion of fuel takes and less amount of harmful gases are released.
   ii) Using unleaded petrol will generate lead (poisonous) free exhaust and keep air cleaner.
   iii) Using CNG i.e. compressed natural gas that burns completely and produces less pollutants when used as automobile fuel.
   iv) Using cleaner souces of energy like hydroelectricity, solar energy, wind energy etc instead of burning fossil fuels (coal and petroleum) that on burning produce many air pollutants.

9. They will cause solid waste pollution.

10. i) sewage
    ii) conservation

*****

CBSE Worksheet-84
Class–VIII Science (Pollution of Air and Water)

1. Water is pure when :-
   a. transparent
   b. clear
   c. free of physical, chemical and biological impurities
   d. treated with HCl

2. Ozone gas is :-
   a. [O]
   b. O_2
   c. OZn
   d. O_3

3. A region of a lake turned into a dead zone, reason may be :-
   a. eutrophication
   b. acid rain
   c. washed off fertilizers in the lake
   d. all the above

4. Process used to obtain pure water for industrial purpose is :-
   a. distillation
   b. sedimentation
   c. filteration
   d. chlorination

5. Match the column :-

pollutant	**Impact on health**
a. Nitrogen oxide	i) unconsciousness
b. Sulphur dioxide	ii) chest pain
c. Carbon monoxide	iii) heart diseases
d. Lead	iv) reduced visibility
e. Flyash	v) decreased Hemoglobin

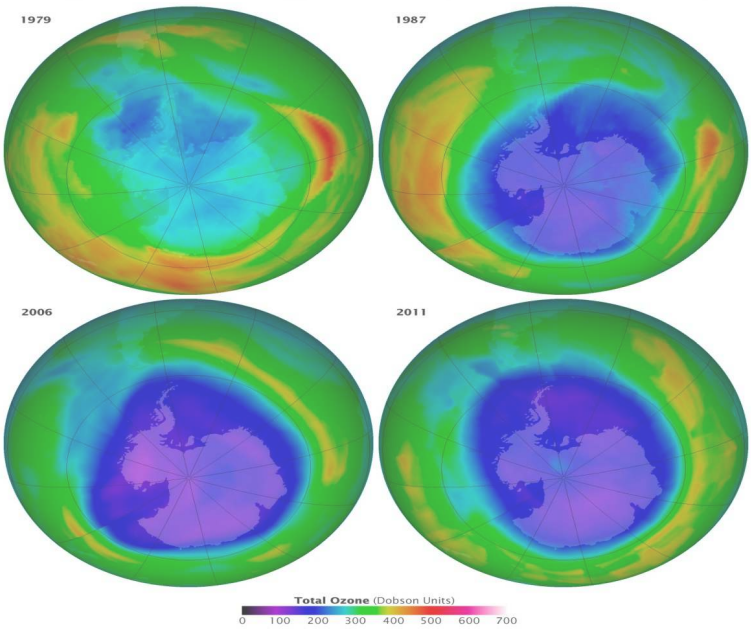
6. State whether the following statements are true or false :-
   a. High temperature waste water from industries leads to thermal pollution.
   b. Pesticides get washed off by rain into water sources and make ground water germ free.
   c. Chemical fertilizers and pesticides decompose by natural methods.
   d. Germs can be killed by adding iodine to the water.
   e. Water completely free from all solid and dissolved impurities is not necessarily potable as well.

7. What is reverse osmosis? Mention its uses.

8. Explain the phenomenon of eutrophication?

9. Pick the odd word out of the following:
   lead, arsenic, chlorine, cadmium, mercury, nickel.

10. Name the phenomenon that is depicted in the following images of earth?



Answer Key:-

1. c
2. d
3. d
4. a
5. a. ii, b. iii, c. i, d. v, e. iv.
6. true, false, false, false, true.

7. In the method of RO, sea water(saline water) is taken in a tank fitted with a semi permeable membrane. A high pressure is applied on saline water so that pure water passes through the membrane to the other side and can be used for drinking purpose and impurities cannot pass through the membrane. These days domestic water purification systems have RO technology in them as they remove solid and chemical impurities and germs as well.

8. When too much of fertilizers and organic waste is present in the water bodies, aquatic organisms like blue – green algae (cyanobacteria) and other microbes grow rapidly. This occurs because organic matter supplies plenty of nutrients for their growth and during their growth dissolved oxygen is used up fast that results in increased BOD(biological oxygen demand). Rest of the aquatic animals and plants due to less oxygen in water begin to die and this process is called eutrophication. On the surface of a eutrophic lake you can easily find algal blooms floating over that add up to the death of aquatic organisms(refer worksheet 1 Q9.)

9. Chlorine is a non metal and used in water purification but all others are toxic metals.

10. The images represent ozone depletion leading to formation of ozone hole.

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