

Class VIII – SCIENCE WORKSHEET

Physics

Light

Give one word for the following :

1. The invisible energy which causes in use the sensation of vision.
2. The ray of light which travels towards a mirror.
3. A line which is drawn at right angles to the mirror surface at the point of incidence.
4. Name one type of mirror which always form virtual image.
5. What type of image is formed on the cinema screen ?
6. Which cells on the retina respond to the intensity of light.
7. The part of the eye which preserves its shape and protects it from external injuries.
8. The phenomenon due to which we can judge depth.
9. The most sensitive part of the retina.

Fill in the blanks :

1. The point at which the incident ray falls on the mirror is called _____
2. If a ray of light is incident on a plane mirror at an angle of 30° , its angle of reflection is _____.
3. If a ray of light is incident normally on a mirror, $\angle i =$ _____ and $\angle r =$ _____
4. The image of our face in a plane mirror is an example of _____ image.
5. The distance of the image behind the plane mirror is _____ to the distance of the object in front of it.
6. The principle of _____ is made use of in motion picture projection in cinematography.
7. The presence of _____ cells on the retina helps us to see in dim light.
8. The coned shaped cells of our retina respond to _____
9. Due to the absence or insufficient number of _____ cells a person becomes colour blind.
10. Owls and bats are able to see at night due to the presence of _____ cells in their retina.

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11. The thin, saline liquid that fills the anterior part of the eye is _____.
12. _____ is the jelly like fluid found in the posterior part of the eye.
13. In a spectrum formed by a prism _____ colour deviates the least and _____ colour deviates the most.

Multiple choice questions :

1. The scientist who discovered that white light is composed of 7 colours. [Louis Braille, Dalton, Issac Newton]
2. _____ can be donated after death, to enable a blind person see. [optic nerve, cornea, iris]
3. The part of the retina which is insensitive to light. [cornea, yellow spot, blind spot]
4. Focal length of the eye lens can be adjusted by the action of [choroid, ciliary muscles, optic nerve]
5. Formation of multiple images in the eyes is avoided by the action of [iris, pupil, choroid]
6. The colour of a person's eye is determined by his [pupil, iris, retina]
7. Electric pulses from retina to brain is conveyed through [ciliary muscles, optic nerves, pupil]

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FORCE AND PRESSURE

1. S.I unit of pressure is _____.
2. The amount or the strength of force is called its _____.
3. Pressure in solid depends upon _____ and _____.
4. Pressure in liquids depends upon _____ and _____.
5. Force generated by moving of non living materials is called _____.
6. Give 2 examples of contact forces.
7. Name the scientist who invented a pump to extract air from a _____ vessel.
8. Name the force which acts upon another body without any _____ connector.
9. Name the type of force involved in the following.
 - a) To pick your school bag.
 - b) To collect scrap iron from garbage.
 - c) To push or pull a loaded trolley ay supermarket.
 - d) Flying of seeds away from each other in plastic bag when gently _____ rubbed.
10. Name the device used to measure pressure in fluids.
11. How much force is required to lift a mass of 1Kg (10N/1N).
12. A rolling ball stops after sometime due to (gravitational force/ _____ Frictional force).
13. When 2 forces are applied at the same point but in opposite directions the net force is equalto the (sum/ difference) of forces _____ acting separately.
14. Force used to stretch the spring is (muscular force/ magnetic force)
15. Application of force brings the change in
 - a) shape and size of object
 - (b)speed and direction of object
 - (c) position of object
 - (d) all the above

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[CHEMISTRY]

METALS AND NON METALS

Name the following questions:-

1. Name some common non-metals used in our daily life.
2. Hardest naturally occurring substance.
3. Property of metals which make them useful as electric wires.
4. Non – metal which has metallic luster.
5. Two non metals which are soft solids.
6. Non metals do not conduct electricity or heat except for one . Name it.
7. An allotrope of carbon which is as tensile as steel.
8. Metals that are not attacked by cold water, boiling water or steam.
9. The property of metals by virtue of which these can be beaten into sheets.
10. Non metals used in disinfection of drinking water.

II. Answer the following(in one or two words)

1. What are the elements called which can neither fit with metals nor non metals?
2. Which of the following metals is the best conductor of heat and electricity?
Gold, Silver, Copper, Aluminum
3. Which property of metals makes them useful as ringing bells?
4. Arrange the following elements in order of increasing reactivity.
Sodium, Magnesium, Copper, Zinc, Aluminum
5. An oxide solution of which of the following elements will turn blue litmus red.
6. Which non-metal is used in making pencil lead?
7. Identify the most reactive and least reactive metal amongst the following
Aluminum, Potassium, Copper, zinc, Gold
8. State the nature of oxides of non-metals.
9. Give an example of neutral oxide .
10. Which non metal is kept under water and why?

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BIOLOGY

THE CELL

1. Basic structural units of living organisms are _____
2. Three ways in which cells differ are _____, _____ and _____
3. Largest animal cell is _____
4. Name 2 cells which change shape continuously _____, _____
5. Smallest cell is _____
6. A unicellular Algae _____
7. An egg consists _____, _____
8. Long and branched cell in human body is _____
9. 3 basic cell parts are _____, _____ and _____
10. Animal Cell is bounded by _____
11. Outer layer in plant cell is _____
12. Function of cell membrane and cell wall- _____

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13. Suicide bags of the cell. _____

14. Boss of the cell is _____

15. Power house of the cell is _____

16. Chloroplasts are found only in _____

17. Protoplasm which is between nucleus and plasma membrane is _____

18. Non-Living component of the cell wall. _____

19. Instrument used in biology lab to magnify objects _____

20. Cells lacking nuclear membrane are (Prokaryotic cells/ Eukaryotic cells)

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MICRO-ORGANISM

1. What is microbiology?
2. Study of Algae is called (Phycology/ Mycology)
3. Antibiotic penicillin is made from _____(a fungus)
4. Tuberculosis is caused by _____.
5. Tetanus disease is caused by _____.
6. _____ fixes atmospheric nitrogen useful to plants.
7. _____ is used in production of vinegar from alcohol
8. _____ is used for production of citric acid in soft drink industries
9. Name the protozoan which Causes Malaria. _____
10. Name the carrier of Dengue fever. _____
11. A micro-organism that has no cellular structure. _____
12. Anthrax is caused by (Virus/ Bacteria/ Fungi)
13. The first antibiotic. _____
14. Fungi used in bakeries. _____
15. Algal product used in laboratories. _____
16. Microbes lying on the border of living and non-living. _____
17. Diseases transmitted from infected person to a healthy person are called as _____
18. Why does sugar solution with yeast powder become alcoholic in taste?
19. Name the scientist:
 - a) Who discovered the process of fermentation?
 - b) Who discovered Germ theory of disease?

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c) Who discovered penicillin?

d) Who developed Vaccine?

20. Name 2 Multicellular

(a) Fungi: _____, _____

(b) Algae: _____, _____

21. Name 2 Unicellular

(a) Protozoa _____, _____

(b) Algae: _____, _____

22. Name 2 bacterial diseases that spread through the medium of

a) AIR: _____, _____

b) Contaminated food and water : _____, _____

23. Expand (a) TB (b) BCG (c) DPT (d) OPV

24. Name 2 Fungi causing food poisoning: _____, _____

25. Name 2 Bacteria causing food poisoning: _____, _____

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SOME NATURAL PHENOMENA

I.) DEFINE : 1.Seismology 2.Earthing

3. Earth quake 4.Tsunami

II)

1. Name the device used to protect building from the damage caused by lightning.
2. Name the waves generated in the lithosphere of the earth due to sudden shifting of crustal rocks.
3. Name the molten material present under the lithosphere of the earth.
4. Name the point within the crust or mantle ,where a sudden shift of rocks take place.
5. Name any two causes of earthquakes.
6. Name the instrument which detects and records the intensity of earthquake.
7. Name the device which can detect electrical charge on a body.
8. The electrons are _____ charged particles.
9. The protons carry _____ charge.
10. The neutrons carry _____ charge.
11. Name the three subatomic particles.
12. Which material is used in making a good lightning conductor?
13. _____ as a whole is called a geosphere.
14. By which scale the magnitude of earthquake is most commonly assessed.
15. The watery part of the geosphere or earth is called _____.
16. Name the scientist who proved the cause of lightning.

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Pollution of Air and Water

1. Name two pollutants.
2. Name two diseases caused by drinking polluted water.
3. Name the poisonous gas which was leaked from the factory in Bhopal.
4. Name three methods of making water safe for drinking.
5. Name some gases other than carbon dioxide which contribute to green house effect.
6. What is smog?
7. Define the following
 - a) Pollution
 - b) Global warming
 - c) Potable water
8. State three characteristics of drinking water.
9. What are the two main reasons for increase in earth temperature?
10. State three ways by which water gets polluted

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STARS AND THE SOLAR SYSTEM

I. Answer the following as directed :

1. What is the distance between the sun and the earth ?
2. Which planet is called a red planet ?
3. Name the two moons of Mars.
4. Which constellation appears as a letter “W” ?
5. How much time will be taken by the moon to complete one revolution around the earth ?
6. Name a planet which rotates from east to west about its axis.
7. Which planet has a great red spot ?
8. Name a planet which removed from the solar system.
9. What is Pluton ?
10. What are shooting stars ?

II Answer the following :

1. Define Solar System.
2. What is light minute ?
3. What is a Comet? Why does a Comet develop a tail while approaching the sun?
4. Write the difference between :
 - a) Meteors and Stars
 - b) Meteors and Meteorites
5. What is a star? What makes the star give out vast amount of energy ?

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6. What is New Moon?
7. What are artificial satellites? Give examples.
8. Write three differences between a star and a planet.
9. What is a light year ? Express in km.
10. Draw a neat diagram of a constellation 'Ursa Major'

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CHEMICAL EFFECTS OF ELECTRIC CURRENT

I. Write answer for the following as directly :

1. What is LED ?
2. Name a gas which burns with a pop sound.
3. Which electrode is connected to the negative terminal of a cell ?
4. Name the ions which are positively charged.
5. Name a device which is used for the electrolysis of water ?
6. Write a chemical equation for the electrolysis of water.

II Answer the following in 2 or 3 lines :

1. Define the following :
a) Electrolyte b) Cathode c) Anode d) Jons e) Voltameter
2. What is electroplating ?
3. Draw a neat diagram of voltameter and label it
4. Identify the following as electrolytes and non electrolytes :
a) dil HNO_3 b) Benzene c) Petrol d) Zinc
Chloride solution e) a solution of Naoh g) Ether h)
Alcohol i) Common salt solution
5. State three uses of electrolysis.

III Define the following in detail :

1. Describe an experiment to show chemical effect of electric current.
2. Describe an experiment for the electroplating of an iron object with copper.

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SYNTHETIC FIBRES AND PLANT

Fill up the blanks :

1. Fibres we get from plant and animals are called _____.
2. Artificial fibres are commonly called _____.
3. The simple molecule of molecule in a polymer is called _____.
4. The polymer of natural fibre cotton is called _____.
5. The material which can easily be molded is called _____.
6. The process by which artificial fibres are made from simple fibre is called _____.
7. The raw material used for the production of rayon is _____.
8. _____ is made by the polymerisation of amide molecules.
9. Terylene is obtained by the polymerising the molecule of _____ and _____.
10. Acrylic fibre is obtained by the polymerisation of molecules of _____.
11. Koroseal is the trade name of _____.
12. PVC stands for _____.
13. PET stands for _____.
14. _____ prepared by the polymerization of vinyl chloride molecules.
15. Two examples of thermoplastic.

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- 16. Two examples thermosetting plastic.**
- 17. The materials which get decomposed through natural process such as the action of bacteria are called _____.**
- 18. Name any three synthetic fibres.**
- 19. Write two uses of - RAYON, NYLON, TERYLENE, ACRYLIC FIBRE, KEROSEAL**
- 20. Define Non Biodegradable.**

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COMBUSTION AND FLAME

Name the following

1. The materials which produce heat energy on burning in air.
2. Ignition temperature of Phosphorous.
3. Mixture on which side of match box is coated.
4. Materials which exhibit slow combustion.
5. Any two substances which burst into flames when kept in air for some time.
6. A region of burning gases.
7. The coldest part of candle flame.
8. A fuel with least calorific value.
9. A gas produced during combustion which causes acid rain.
10. Any three examples of inflammable substances.
11. Any three examples of gaseous fuels.
12. Any three examples of solid fuels.
13. Different zones of candle flame.
14. Process of production of energy in sun.

Tick the correct answer :

1. For the combustion reaction temperature of contribute material should be
 - (i) Lower than the ignition temperature.
 - (ii) Higher than the ignition temperature.
 - (iii) Equal to the ignition temperature.
 - (iv) None of the above.
2. Which one is an example of combustible substance.
 - (i) Natural gas
 - (ii) Glass pieces
 - (iii) Iron nails
 - (iv) None of the above.
3. Who were the people who introduced match sticks?
 - (i) Indians
 - (ii) Americans

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- (iii) Egyptians
 - (iv) British
4. Which of the following is having highest calorific value?
- (i) Methane gas
 - (ii) Biogas
 - (iii) Hydrogen gas
 - (iv) CNG (Compressed Natural Gas)
5. Which of the following gas causes death if inhaled in large amounts?
- (i) Carbon dioxide gas
 - (ii) Carbon monoxide gas
 - (iii) Nitrogen dioxide gas
 - (iv) Sulphur dioxide gas
6. In which zone of candle flame a partial combustion of wax vapours takes place.
- (i) Dark inner zone
 - (ii) Blue zone
 - (iii) Luminous zone
 - (iv) Non luminous zone
7. Which one is an example of rapid combustion
- (i) Burning of charcoal pieces.
 - (ii) Kerosene oil wick stones
 - (iii) Burning of cowdung gases
 - (iv) Phosphorous catches fire in air

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COAL AND PETROLEUM

Name the following

1. Inexhaustible natural resources.
2. Exhaustible natural resources [Any three]
3. Remains of dead animals and plants
4. Oldest variety of coal
5. Fossil fuels
6. A foul smelling liquid mined from earth.
7. A combustible gas which comes out along with petroleum from the oil wells.
8. A combustible gas obtained by the destructive distillation of coal.
9. A fuel for heavy vehicles.
10. The useful products obtained from the petroleum
11. Different varieties of coal.
12. Residue left after the destructive distillation of coal tar.
13. The process in which complex organic substances are heated in the absence of air to get simple volatile fractions.
14. Chemical used as moth repellent.
15. The process which is used for the manufacture of petrol from petroleum gas.
16. Alternative sources of energy (any three) Association which offers the tips to conserve petrol & diesel.

Multiple Choice questions

1. The variety of coal which has highest content of carbon
 - (i) Peat
 - (ii) Bituminous
 - (iii) Anthracite
 - (iv) Lignite
2. Fraction of petroleum which is used as aviation fuel.
 - (i) Asphalt

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- (ii) Kerosene oil
 - (iii) Diesel oil
 - (iv) Petrol
3. LPG is the mixture of
- (i) Methane and Hydrogen
 - (ii) Ethane & Carbon monoxide
 - (iii) Ethane and propane
 - (iv) Butane, propane & ethane
4. Chemical which is used for making explosion
- (i) Toluene
 - (ii) Phenol
 - (iii) Naphthalene
 - (iv) None of the above
5. A gas which always collects above the petroleum in an oil well.
- (i) Petroleum gas
 - (ii) Methane gas
 - (iii) Natural gas
 - (iv) Carbon dioxide

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SOUND

Fill in the blanks :

1. Time taken by an object to complete one oscillation is called _____.
2. Loudness is determined by the _____ of vibration.
3. The unit of frequency is _____.
4. Unwanted sound is called _____.
5. Shrillness of a sound is determined by the _____.
6. The number of oscillation in one second is called _____.
7. The hearing range of human ear is _____.
8. Sound cannot travel in _____.
9. Sound can travel in _____.
10. The pitch of sound depends on _____.

Choose the correct answer :

1. Ear drum is a part of _____ [sound producing organ or hearing organ]
2. The voice box is also called _____ [Larynx / mouth]
3. Large amplitude of sound vibrations will produce _____
[Loud sound / slow sound]
4. Voice of which of following is likely to have minimum frequency
_____ [Baby girl / A woman]
5. The unit of loudness is _____ (decibel / Hertz)

Answer the following :

1. Name the sound producing organ in human.
2. How does sound travel from one place to another ?
3. How is sound produced ?
4. What do you mean by musical sound ?
5. How does the amplitude affect the loudness of vibration?

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6. What is noise pollution?
7. What is outer part of ear is called ?
8. What are the two main properties of a sound.
9. Which help us to recognize sound?
10. On which factors loudness of sound depend?
11. What is infrasonic vibration? What is their range in Hertz?

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STARS AND THE SOLAR SYSTEM

Fill in the blanks :

1. Asteroids are found between the orbits of _____ and _____.
2. The celestial body that reaches the earth is called _____.
3. Orion is seen during _____ seasons.
4. On the fifteenth day the moon is not visible. This day is known as _____.
5. The various shapes of the bright part of the moon as seen during a month are called _____.
6. A planet which appears yellowish is _____.
7. _____ is not a member of the solar system.
8. The planet which appears reddish in colour is _____.
9. First artificial satellite launched by India is _____.
10. The smallest planet is _____.

Answer the following questions :

1. What is the speed of light ?
2. Name the star which is nearest to the earth.
3. What is the name of path on which planets revolves around the sun ?
4. Why do we see only the part of the moon?
5. Name the planet where there is no carbon dioxide.
6. Write other name of constellation Great Bear.
7. Which planet is called morning and evening star.
8. Why is the distance between stars expressed in light years ?
9. What is a light year?
10. How big is the sun as compared to earth?
11. Why are stars not visible during daytime ?
12. Why does the pole star not change its position in the sky ?

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REACHING THE AGE OF ADOLESCENCE

Fill in the blanks :

1. The period of life, when the body undergoes changes, leading to reproductive maturity is called _____.
2. The age at which reproductive organs become functionally active is called _____.
3. Increase in height occurs during _____.
4. _____ are external characters which are directly not involved in the process of reproduction.
5. The changes which occur during adolescence are controlled by _____.
6. The hormones are produced in special organ are called _____.
7. Endocrine glands are also called _____ glands.
8. In frog metamorphosis is controlled by _____ hormone.

Answer the following :

1. Name the sex hormone in humans.
2. Name the disease caused due to deficiency of the hormone thyroxine.
3. Name the hormone produced by the adrenal gland.
4. Name the master gland.
5. What are the type of sex hormones produced by males ?
6. How many pairs of chromosomes as human body cell contain ?

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REPRODUCTION IN ANIMALS

Fill in the blanks :

1. _____ is essential for the continuation of a species.
2. _____ reproduction is characterised by the fusion of two cells called gametes.
3. The animals which lay eggs are called _____ animals.
4. The animals which give birth to young ones are called _____.
5. Organisms in which both types of gametes are produced by the same individual are called _____.
6. Organisms in which male and female gametes are produced by two different individuals are called _____.
7. The process of transformation of larva or tadpole into an adult through drastic changes is called _____.
8. The type of asexual reproduction in which an individual reproduces by dividing into two individual is called _____.

Answer the following questions in one or two words :

1. Name the method of asexual reproduction in which individuals develops from the bud.
2. Give two examples of unisexual organism.
3. Give two examples of bisexual organisms.
4. Name the process of reproduction in Amoeba.
5. Give example of an animal which reproduce by budding.