

Question Bank

Class: VII

General Science

I SEMESTER

Lesson - 1

FOOD AND ITS CONSTITUENTS

I. Fill in the blanks:-

1. _____ is not an energy source for our body.
2. Oligosaccharide has _____ simple sugars.
3. _____ is the principal energy source in our body.
4. A simple lipid which remains a solid at room temperature is _____.
5. _____ is an example of a conjugated protein.
6. Hydrogen and oxygen are present in the ratio of _____ in carbohydrates.
7. Proteins are made up of _____.
8. An example of animal starch is _____.

II. Answer in one sentence:-

1. Name a fruit sugar?
2. What is the linkage between 2 single sugars called?
3. What is the pentose sugar present in our genetic material?
4. Which protein helps in transport of oxygen?
5. What is milk sugar called?

III Answer the following:-

(2)

1. Which of the two constituents of food provide energy for our body?
2. Mention two importance of lipids
3. Name the storage carbohydrates in plants and animals.
4. Define simple proteins. Give an example.
5. What is a conjugated protein. Give an example.
6. Write the difference between fats and oils. Give an example of each.

IV. Answer the following:-

(3m)

1. Name the different constituents of our food.
2. What are carbohydrates? Give two examples.
3. What are lipids? Give two examples.
4. Mention 3 importance of carbohydrates

V Answer the following:-

(4m)

1. Mention four importance of proteins.
2. Write any two difference between monosaccharides and oligosaccharides. Give an example of each.

Lesson - 2
CELLULAR ORGANIZATION

I. Fill in the blanks :-

1. Anton Van Leeuwen Hoek invented the _____
2. The cell was discovered by _____
3. A true nucleus is present in a _____ cell.
4. Mitochondria is also called the _____ of the cell.
5. A group of cells with similar structure and functions is a _____.
6. Parameody organisationcium is an example of a _____ organism.
7. The cell is enclosed by a membrane called _____.
8. _____ is a prokaryote.

II. Answer the following (1m)

1. What is the jelly like substance in the cell called ?
2. Mention the advantage of tissue organ level of body organisation?
3. What are cell organelles?
4. What is a primitive nucleus?
5. What is the function of centriole?
6. What is the nucleus also called?
7. What is the lysosome also called?

III. Answer the following (2m)

1. What are the two basic types of cells?
2. What are unicellular organisms? Give examples.
3. What are multicellular organisms? Give examples.
4. What is the function of the ribosome? What is it also called?
5. Write 2 functions of vacuoles.

IV. Answer the following (3m)

1. Differentiate between an organ and a tissue . Give examples.
2. Describe a prokaryotic cell with a neat diagram.
3. Name the four levels of body organisation in organisms.
4. Describe the structure of a cell and name any four cell organelles.
5. Mention the functions of lysosomes.

V. Answer the following: - (4m)

1. Draw a neat labelled diagram of a eukaryotic cell.
2. Define a cell. Explain briefly any 3 cell organelles.

Lesson - 3
FRICTION

I Fill up:-

1. Friction is mainly caused due to _____ of the surface.
2. Frictional force always acts in the direction _____ to motion.
3. Frictional force which acts on the body when it does not allow the body to slide over the other is _____ friction.
4. Friction produces _____
5. Static friction is _____ than sliding friction.
6. Frictional force is _____ in smooth surfaces.
7. Lubricants _____ the friction between the surface in contact.

II Answer the following :- (1M)

1. What reduces the friction in aircrafts?
2. What increases the friction between the road and tyre?
3. Why does a footballer not fall when running on wet ground?
4. What causes friction?
5. Why is talcum powder used in a carom board?

III Answer the following : (2m)

1. Name the 2 important factors which affect friction?
2. State two advantages of friction?
3. State two disadvantages of friction.
4. What is a lubricant . Give two examples.
5. How does a lubricant reduce friction?

IV Answer the following : (3m)

1. What is friction. Explain how it is caused?
2. Make a list of the effects of friction?
3. How can you say that sliding friction is greater than rolling friction?
4. Explain why objects moving in fluids must have a streamlined shape.

V Answer the following: (4M)

1. Why is friction called a necessary evil?
2. Give reasons for the following:
 - a. A ball rolling on the ground slows down.
 - b. The surface of a conveyor belt is made rough and tight.
 - c. Worn out tyres are discarded.

Lesson - 4
ACCELERATION

I Fill up:-

1. If a body moves with uniform velocity then its acceleration is _____.

2. Acceleration of a body is the rate of change of _____.
3. A physical quantity having both magnitude and direction is _____.
4. The S.I unit of acceleration is _____.
5. Negative acceleration is called _____.
6. If a moving body comes to a stop, its final velocity is _____.
7. The velocity gained in 5 seconds by a body moving with uniform acceleration of 1m/s is _____.
8. A scalar quantity has only _____.

II. Answer the following:- (1m)

1. What is increase in velocity called?
2. What sort of motion occurs when there is unequal change in position of the body?
3. What is decrease in velocity called?
4. What is an equal change in velocity called?
5. What sort of motion occurs when there is an equal change in position of the body?

III Answer the following:- (2m)

1. Define acceleration with an example.
2. Define deceleration with an example.
3. What is uniform motion?
6. What is non-uniform motion?
7. What is uniform acceleration? State its S.I unit?
8. Even though acceleration and deceleration are different why do they both have the same unit?

IV. Answer the following:- (3m)

1. Calculate the acceleration of a body if it starts from rest and attains a velocity of 20 m/s in 10 seconds?
2. Why is a car travelling on an uneven mud road an example of non-uniform motion?
3. What does it imply if :
 - a) Acceleration of a body is zero m/s?
 - b) Initial velocity of a body is zero m/s?
 - c) Final velocity of a body is zero m/s?

V Answer the following:- (4m)

1. An object moving at a velocity of 24m/s is brought to a halt in 8 seconds by applying a force in the direction opposite to motion. Calculate the acceleration.
2. If a vehicle is accelerated to 5m/s, how much time does it take to attain a velocity of 27m/s, which initially starts with 2m/s?
3. Find the acceleration gained by a body in 5 seconds if its initial velocity is 20m/s and final velocity is 40m/s
4. A motor cyclist moving with a certain velocity comes to rest in 6 seconds. Calculate the initial velocity if he was decelerated by 3m/s

Lesson – 5
ENERGY

I Fill up:-

1. Mechanical energy is a combination of _____ and _____ energy.
2. Potential energy of a body increases with increase in _____.
3. The object which has greater kinetic energy has _____ mass.
4. The S.I unit of work is _____.
5. Work is said to be done when a body is _____ along the force applied.
6. Water stored in an overhead tank is an example of _____ energy.
7. Flowing water is an example of _____ energy.
8. Kinetic energy is measured by the amount of work the body can do before coming to _____.
9. If two bodies are moving at the same speed the body with the greater _____ has greater kinetic energy.
10. Amount of work done increases with increase in magnitude of _____.

II Answer the following :- (1M)

1. What is the formula for potential energy?
2. What are the two forms of mechanical energy?
3. In which case do we consider Potential energy to be zero?
4. What is the formula for Kinetic energy?
5. What is the formula for force?
6. What is the formula for work?
7. When does a body possess kinetic energy?

III Answer the following : (2m)

1. What do you mean by Potential energy. Give two examples
2. What do you mean by kinetic energy. Give two examples.
3. Differentiate between potential energy and kinetic energy.
4. Name two factors which affect the work done by a body.

IV Answer the following : (3 m)

1. Explain the formula $P.E = m \cdot g \cdot h$ joules.
2. On what factors do the potential energy of a body depend.
3. What is the relationship between kinetic energy of a body to its mass and speed.
4. What is the displacement of a toy car when 30 joules of work is done by applied force of 6 N.

V Answer the following: (4M)

1. Calculate the displacement of an object in the direction of force applied if 40 joules work is done by the force of 5 N.

2. Calculate the amount of work done when you push a table through a displacement of 8.5 m, with an applied force of 20 N.
3. 68 joules of work is done by a compressed spring when released. If it displaces an object through 8 m, calculate the force exerted by the spring.

Lesson - 6

PROPERTIES OF SOLIDS LIQUIDS AND GASES

I. Fill ups:

1. Physical states of matter are due to their _____ arrangement.
2. There are _____ states of matter.
3. The fourth state of matter is _____.
4. _____ have a definite shape.
5. _____ do not have a definite shape and volume.
6. _____ diffuse.

II. Answer the following:- (1m)

1. Name two substances that flow.
2. Name two substances that are invisible and diffuse
3. Name two substances that have a definite shape.
4. What is the reason for the different states of matter?

III. Answer the following:- (2m)

1. Solids have a definite shape. Why?
2. Liquids are capable of changing their shape. Why?
3. Though camphor is a solid it can be smelt from short distances. Why?
4. A bucket filled with water will be heavier than an empty bucket. Why?

IV. Answer the following:- (3m)

1. What is diffusion? Can liquids diffuse?
2. Gases can be compressed. Why?
3. How are the properties of a brick different from that of air?

V. Answer the following:- (4m)

1. Explain with a labelled diagram an experiment to show that solids expand on heating.
2. Explain with a labelled diagram an experiment to show that gases diffuse.

Lesson – 7

HEAT AND TEMPERATURE

I. Fill up: (1m)

1. The primary source of heat is _____
2. In hot water the movement of molecules is _____

3. Temperature is measured by _____
4. The S.I unit of heat is _____
5. The S.I unit if temperature is _____
6. _____ is a device to measure temperature.
7. Heat is a form of _____
8. To reduce cross contamination between patients the thermometer should be _____.
9. Normal human body temperature is _____
10. The bulb of a clinical thermometer is filled with _____

II. Answer in short: - (1m)

1. Why does dirt wash easily with hot water?
2. Why do atoms and molecules have kinetic energy?
3. What is temperature?

III. Answer the following:- (2m)

1. What are the two types of thermometer?
2. What is heat? What is its S.I unit
3. What is the use of the constriction in a mercury thermometer

IV. Answer the following (3m)

1. Draw a neat labelled diagram of a laboratory thermometer and explain?
2. Draw a neat labelled diagram of a clinical thermometer and explain?

V Answer the following (4m)

1. List the difference between heat and temperature
2. Write the difference between a laboratory thermometer and a clinical thermometer.

Lesson – 8

ACIDS, BASES AND SALTS

I Fill up:-

1. Hydrochloric acid is used to purify _____
2. Tartaric acid is found in _____
3. Vitamin C is chemically called _____ acid.
4. Mineral acids are also called _____ acids.
5. Bases that dissolve in water are called _____.
6. _____ acids are found in milk.
7. Acids on dissolving in water split up into hydrogen part and _____ part.
8. Bases are _____ to taste.
9. Acids are _____ to taste.
10. Human body functions in a pH range between _____ and _____.

II. Answer the following:**(1m)**

1. What is the chemical name of common salt
2. What is the chemical name of caustic soda.
3. What is the chemical name of washing soda.
4. What is the chemical name of slaked lime?
5. What is the chemical name of baking soda.
6. What is the chemical name of epsom salt.
7. What happens when a litmus paper is dipped in lime juice?
8. What happens when a base reacts with an acid?

III. Answer the following:-**(2m)**

1. How can acids be classified?
2. What are organic acids ? Give examples?
3. What are inorganic acids? Give examples?
4. What is an acid?
5. What are the two parts of an acid?
6. List two physical properties of acids?
7. List two physical properties of bases?
8. Write two properties of salts.
9. Write two uses of sodium chloride
10. Write two uses of baking soda
11. Write two uses of washing soda
12. What is a neutralisation reaction?

IV. Answer the following**(3m)**

1. What is pH scale? If the pH value of a substance is 13, what does it indicate? What is the pH value of an acidic and basic solution
2. What are indicators? Give two examples of indicators?
3. What is the importance of pH in our daily life?
4. Mention in brief three applications of neutralisation reaction ?

V Answer the following**(4m)**

1. Hydrogen is liberated when acids react with metals. Explain this with the help of an experiment.
2. Explain the reaction of an acid with calcium carbonate with the help of a diagram.
3. Explain with a diagram an experiment to show neutralisation of a base with an acid.
4. Make a list of four differences between the properties of acids and bases.
5. Give reasons for the following:-
 - a) Person bitten by red ants experience a burning sensation on skin.
 - b) A drop of concentrated sulphuric acid on cloth creates a hole in it.
 - c) Acids are not stored in metal containers.
 - d) All alkalis are bases but all bases are not alkalis.

I Fill in the blanks:-

1. The smallest particle of matter according to Maharishi Kanada is _____.
2. The term atom means _____.
3. The maximum number of electrons that the N shell can hold is _____.
4. The scientist who named electron is _____.
5. The scientist who discovered the neutron is _____.
6. The symbol of hydrogen atom is _____.
7. _____ revolve around the nucleus of the atom.
8. _____ have neutral charge.
9. Atoms of all elements except _____ have neutrons.
10. The maximum number of electrons in the M shell is _____.

II. Answer in short**(1m)**

1. Who discovered neutron?
2. What is the relative mass of a proton or a neutron?
3. What is the relative mass of an electron?
4. What is the charge of an electron and a proton?
5. What is the electronic configuration of neon?
6. What is the electronic configuration of hydrogen?
7. What are the smaller particles in an atom called?
8. Why neutrons are called neutral particles?

III. Answer the following:-**(2m)**

1. Name the sub-atomic particles of an atom.
2. Name the sub-atomic particles present in the nucleus of an atom.
3. Draw the electronic configuration of Sodium (atomic no: 11)
4. Draw the electronic configuration of Magnesium (atomic no: 12)
5. What is the formula to calculate the maximum number of electrons in each shell?
Calculate the number of electrons in the 1st and 2nd shell using the formula.
6. What is electronic configuration? Write the electronic configuration of carbon atom(atomic no: 6).

IV. Answer the following:-**(3m)**

1. What is atomic number and atomic mass number? Explain with an example.
2. What are the characteristics of
 - a. electrons
 - b. protons
 - c. neutrons
3. Calculate the maximum number of electrons in shells K, L and M using the formula.

IV. Answer the following:**(4m)**

1. Make a list of any four postulates of Dalton's atomic theory.
2. Draw and write the electronic configuration of the following:-
 - b. Oxygen
 - c. Neon

Lesson 10

Hard and Soft Water

I Fill in the blanks:-

1. The chemical formula for calcium bicarbonate is _____.
2. Permanent hardness of water is due to the dissolved chlorides and sulphates of _____.
3. The number of protons, neutrons and electrons in deuterium is _____.
4. Temporary hardness of water is due to the dissolved bicarbonates of _____ and _____.
5. Water for commercial needs can be purified using _____.
6. Hydrogen has _____ protons and _____ neutrons.
7. The temperature at which heavy water freezes is _____.
8. Hard water boils at _____ degree Celsius.
9. The total number of _____ and _____ in an atom is its mass number.
10. Temporary hardness of water can be removed by _____.

II. Answer in short

(1m)

1. Name the isotope of hydrogen in heavy water.
2. Name the scientist who discovered deuterium.
3. Name the mixture of the oxides of sodium, aluminium, sand and water.
4. Why should hard water not be used to wash clothes?
5. What happens to the utensils if they are constantly washed in hard water?

III. Answer the following:-

(2m)

1. Write two disadvantages of hard water.
2. What is hard water? Give two examples of hard water.
3. What is soft water? Give two examples of soft water.
4. Why is heavy water unfit for agriculture?
5. At what temperature does heavy water freeze and boil?

IV Answer the following:- (3m)

1. What are the uses of soft water?
2. What is zeolite? Mention its uses?

V. Answer the following:- (4m)

1. Explain two methods of softening hard water.

2. Differentiate between hard and soft water.