8th Std Science 2nd Term

Book Back + Important Questions

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8th Science 2nd Term – [New Book]

[Book Back + Important Points]

Unit 1: Heat

Heat:

Heat is defined as energy which gets transferred from a higher temperature object to a lower temperature object.

Thermal energy:

The temperature of a body is a measure of a body's average kinetic energy, which is also called thermal energy.

Units of heat:

Since heat is form of energy, its unit is the same as the unit of energy. (i.e.) Joules.
The si unit of heat is joules (j). Another unit of heat bigger than joule is calorie.

One calorie:

One calorie is the amount of heat energy required to raise the temperature of 1 gram of water through $1^{o}c$.

One kilo calorie:

The amount of heat energy required to raise the temperature of 1 kg of water through $1^{o}c$. 1 kilo calorie = 4200 j (approximately).

Heat capacity:

Heat capacity is defined as the amount of heat energy required by a substance to raise its temperature by $1^{o}c$ or 1 k. It is denoted by the symbol c

Specific heat capacity:

Specific heat capacity of a substance is defined as the amount of heat energy required to raise the temperature of 1 kilogram of a substance by $1^{o}c$ or 1 k. It is denoted by the symbol c.

Calorimetry:

the technique used to measure the amount of heat involved in a physical or a chemical process is known as calorimetry.

Calorimeter:

a calorimeter is a device used to measure the amount of heat gained or lost by a substance.

Thermostat:

a thermostat is a device which maintains the temperature of a place or an object constant.

Thermos flask:

the thermos flask (vacuum flask) is an insulating storage vessel that keeps its content hotter or cooler than the surroundings for a longer time.

Formulae to remember:

Heat capacity:

$c' = \frac{Q}{\delta T}$ jk^{-1}

Amount of heat energy:

$q = c' \times \delta t$ j

Specific of heat capacity:

$c = \frac{Q}{m \times \delta T}$ jkg^{-1} k^{-1}

I. Choose the best answer:

1. Heat is a form of _____

(a) electrical energy (b) gravitational energy

(c) thermal energy (d) none of these

2. If you apply some heat energy to a substance, which of the following can take place in it?

(a) expansion (b) increase in temperature

(c) change of state **(d) all the above**

3. Which of the following substances will absorb more heat energy?

(a) solid (b) liquid (c) gas **(d) all the above**

4. If you apply equal amount of heat to a solid, liquid and gas individually, which of the following will have more expansion?

(a) solid (b) liquid **(c) gas** (d) all the above

5. The process of converting a liquid into a solid is called _____

(a) sublimation (b) condensation **(c) freezing** (d) deposition

6. Conduction is the heat transfer which takes place in a _____

(a) solid (b) liquid (c) gas (d) all the above

Additional questions:

7. 1 calorie equals _____

(a) 0.42 j **(b) 4.2 j** (c) 420 j (d) 4200 j

8. The si unit of heat energy is _____

(a) joule (b) calorie (c) kilo calorie (d) none of these

9. Which of the following is not a scale of temperature?

(a) kelvin scale (b) celsius scale

(c) richter scale (d) fahrenheit scale

10. Convection of heat takes place in _____

(a) liquids only (b) gases only

(c) metals only **(d) liquids and gases**

11. In solid substances, heat is transferred by

(a) conduction **(b) radiation** (c) convection (d) only a and b

12. In conduction, heat flows from _____

(a) hotter to hotter region (b) colder to hotter region

(c) hotter to colder region (d) colder to colder region

13. Mud houses are cooler in summer and warmer in winter because

(a) mud is a bad conductor of heat (b) mud is a good conductor of heat

(c) mud is a super conductor of heat (d) none

14. Process of change of state from gaseous state to liquid state is called _____

(a) freezing **(b) condensation** (c) sublimation (d) boiling

15. Substances which allow heat to pass through them are called _____

(a) conductors (b) insulators (c) moderators (d) none

16. When two objects are in thermal contact, the heat is transferred by _____

(a) convection (b) radiation **(c) conduction** (d) none

II. Fill in the blanks:

1. A calorimeter is a device used to measure the _____

ans: heat capacity of water.

2. _____ is defined as the amount of heat required to raise the temperature of 1 kg of a substance by 1°c.

ans: specific heat capacity.

3. A thermostat is a device which maintains _____

ans: temperature of an object constant.

4. The process of converting a substance from gas to solid is called _____

ans: deposition.

5. If you apply heat energy, the temperature of a system will _____

ans: increase.

6. If the temperature of a liquid in a container is decreased, then the interatomic distance will _____

ans: decrease.

Additional questions:

7. In vacuum, heat energy can travel by the process of _____

ans: radiation.

8. In ice cubes the force of attraction between the water molecules is _____

ans: more

9. When we heat water, the force of attraction decreases and the ice cubes becomes _____

ans: water.

10. _____ is the only matter on the earth that can be found naturally in all three states.

ans: water.

11. Radiation is defined as the heat transfer from one place to another in the form of _____

ans: electro-magnetic waves.

12. Heat capacity c' = _____

ans: $\frac{Q}{\Delta T}$

13. 1 calorie = _____ j

ans: 4.186 j

14. Specific heat capacity c = _____

ans: $\frac{Q}{m \times \Delta T}$

15. The device which is used to measure the heat capacity of the liquid is _____

ans: calorimeter

16. _____ is a device which maintains the temperature of a place or an object constant.

ans: thermostat.

17. The vacuum flask was invented by _____

ans: sir jamed dewar.

18. Vacuum flask is also called as _____

ans: dewar flask.

19. The water in the black can becomes _____ than that in white can after exposing to the sun.

ans: hotter.

20. The handles of cooking utensils are made of _____

ans: insulators.

21. Black colour is a _____ absorber of heat.

ans: good.

III. State true or false. If false, correct the statement:

1. The applied heat energy can be realized as an increase in the average kinetic energy of the molecules.

ans: true.

2. The dimensions of a substance are increased if the temperature of the substance is decreased.

ans: false.

correct statement: the dimensions of a substance are increased if the temperature of the substance is **increased.**

3. The process of converting a substance from solid to gas is called condensation.

ans: false.

correct statement: the process of converting a substance from solid to gas is called **sublimation.**

4. Convection is the process by which the thermal energy flows in solids.

ans: false.

correct statement: convection is the process by which the thermal energy flows in **liquids and gases.**

5. The amount of heat gained by a substance is equal to the product of its mass and latent heat.

ans: true.

6. In a thermos flask, the silvered walls reflect and radiate the heat to the outside.

ans: false.

correct statement: in a thermos flask, the silvered walls reflect **radiated heat back to the liquid in the bottle.**

Additional questions:

7. Heat is the transfer of energy between two objects with different temperature.

ans: true.

8. When ice changes into a liquid, it absorbs energy.

ans: true.

9. Heat energy flows from a body at low temperature to a body at higher temperature.

ans: false.

correct statement: heat energy flows from a body at **high** temperature to a body at higher temperature.

10. J/kg^{o}c is the unit of specific heat capacity.

ans: true.

11. Conductors have generally high specific heat capacities and insulators have low specific heat capacities.

ans: false.

correct statement: conductors have generally high specific heat capacities and insulators have **high** specific heat capacities.

12. Temperature is a measure of average kinetic energy of molecules.

ans: true.

13. When a liquid evaporates, it gives off energy.

ans: false.

correct statement: when a liquid evaporates, it **absorbs** off energy.

14. When a liquid boils, energy is absorbed.

ans: true.

15. Water has the lowest specific heat capacity.

ans: false.

correct statement: water has the **very high** specific heat capacity.

16. While a substance is undergoing a change of state, the temperature of the body remains the same.

ans: true.

17. In summer, we prefer light-coloured clothes and in winter we usually wear dark-coloured clothes.

ans: true.

18. The transfer of heat by radiation does not require any medium.

ans: true.

19. Metals like copper, aluminium are good conductors of heat and electricity.

ans: true.

20. In thermos flask, the vacuum between the two walls prevents heat from the inside to the outside by radiation.

ans: false.

correct statement: in thermos flask, the vacuum between the two walls prevents heat from the inside to the outside by **conduction and convection.**

21. Thermostat is a device can measure the heat capacity of the liquid in the container.

ans: false.

correct statement: calorimeter is a device can measure the heat capacity of the liquid in the container.

Iv. Match the following:

1. Conduction (a) liquid

2.	Convection	(b) gas to liquid
3.	Radiation	(c) solid to gas
4.	Sublimation	(d) gas
5.	Condensation	(e) solid

ans: 1-e, 2-a, 3-d, 4-c, 5-b.

Additional questions:

6.	Heat	(a) good absorber
7.	Temperature	(b) form of energy
8.	Black surface	(c) insulator
9.	Rubber, cork	(d) measure of hotness or coldness

ans: 6-b, 8-d, 9-a, 10-c.

10.	Specific heat capacity	(a) dewar bottle
11.	Calorimeter	(b) lavoisier and simon
12.	Vacuum flask	(c) j kg^{-1} k^{-1}
13.	Ice – calorimeter	(d) heat capacity

ans: 10-c, 11-d, 12-a, 13-b.

14.	Conduction	(a) liquids and gases
15.	Convection	(b) poor conductor
16.	Radiation	(c) solids
17.	Snow	(d) vacuum

ans: 14-c, 15-a, 16-d, 17-b.

18.	Solid to liquid	(a) condensation
19.	Liquid to gas	(b) deposition
20.	Gas to solid	(c) melting
21.	Gas to liquid	(d) vaporisation

ans: 18-c, 19-d, 20-b, 21-a.

V. Read the directions given below and answer the questions:

1. Assertion: radiation is a form of heat transfer which takes place even in vacuum.

   Reason: the thermal energy is transferred from one part of a substance to another part without the actual movement of the atoms or molecules.

   (a) If both assertion and reason are true and the reason is the correct explanation of the assertion.
   (b) If both assertion and reason are true, but reason is not the correct explanation of the assertion.
   (c) If the assertion is true, but the reason is false.
   (d) If the assertion is false, but the reason is true.

2. Assertion: a system can be converted from one state to another state.

   reason: it takes place when the temperature of the system is constant.

   (a) If both assertion and reason are true and the reason is the correct explanation of the assertion.
   (b) If both assertion and reason are true, but reason is not the correct explanation of the assertion.
   (c) If the assertion is true, but the reason is false.
   (d) If the assertion is false, but the reason is true.

Additional questions:

3. Assertion: when a very hot liquid is poured into a thick glass tumbler it craks.

   Reason: unequal expansion of the inner and outer glass walls causes the glass to crack.

   (a) If both assertion and reason are true and the reason is the correct explanation of the assertion.
   (b) If both assertion and reason are true, but reason is not the correct explanation of the assertion.
   (c) If the assertion is true, but the reason is false.
   (d) If the assertion is false, but the reason is true.

4. Assertion: radiation is a process of transfer of heat in which a material medium is not necessary.

   Reason: the heat from the sun reaches us through millions of miles of empty space by convection.

   (a) If both assertion and reason are true and the reason is the correct explanation of the assertion
   (b) If both assertion and reason are true, but reason is not the correct explanation of the assertion.
   (c) If the assertion is true, but the reason is false.
   (d) If the assertion is false, but the reason is true.

5. Assertion: temperature is the measure of the heat energy.

reason: energy is the capacity to do work.

(a) If both assertion and reason are true and the reason is the correct explanation of the assertion.
(b) If both assertion and reason are true, but reason is not the correct explanation of the assertion.
(c) If the assertion is true, but the reason is false.
(d) If the assertion is false, but the reason is true.

6. Assertion: small gaps left between railway lines.

reason: it allows for contraction of rails during summer.

(a) If both assertion and reason are true and the reason is the correct explanation of the assertion.
(b) If both assertion and reason are true, but reason is not the correct explanation of the assertion.
(c) If the assertion is true, but the reason is false.
(d) If the assertion is false, but the reason is true.

Unit 2: Electricity

Electric charge:

charge or electric charge is the basic property of matter that causes objects to attract or repel each other.

Transfer of charges by friction:

the process of charging an uncharged body by rubbing a charged body over the other.

Transfer of charges by conduction:

charges can be transferred to an object by bringing it in contact with a charged body. This method of transferring charges from one body to other body is called transfer by conduction.

Transfer of charge by induction:

the process of charging an uncharged body by bringing a charged body near to it but without touching is called induction.

Electric current:

the flow of electric charge per unit time is called electric currecnt.

Conductors:

the materials which allow electric charges to pass through them easily are called conductors of electricity.

Insulators:

materials which do not allow electric charges to pass through them easily are called insulators. Rubber, wood and plastic are insulators.

Ions:

electrically charged atoms or group of atoms.

Anode:

the positive terminal of the battery is called anode.

Cathode:

the negative terminal of the battery is called cathode.

Electrodes:

the metal rods or plates through which the electric current enters or leaves an electrolyte are called electrodes.

Electrolyte:

a liquid that conducts electricity and breaks up chemically during the process is called electrolyte.

Electrolysis:

the decomposition of molecules of a solution into positive and negative ions on passing an electric current through it, is called electrolysis.

Chemical effect of electric current:

when electric current is passed through a conducting solution, some chemical reactions take place in the solution. This chemical reactions produce electrons which conduct electricity. This is called chemical effect of electric current.

Heating effect of electric current:

when electric current passes through a conductor, there is a considerable 'friction' between the moving electrons and the molecules of the conductor. During this process, electrical energy is transformed to heat energy. This is known as heating effect of electric current.

Electric fuse:

a strip of wire that melts and breaks an electric circuit if the current exceeds a dafe level.

Electric circuit:

the path through which electrons flow from one terminal to another terminal of the source, is called electric circuit.

Series circuit:

a series circuit is one that has more than one resistor (bulb) but only one path through which the electrons can travel.

Parallel circuit:

it is a closed circuit in which the current divides into two or more paths before recombining to complete the circuit.

Voltage:

the difference between the potentials (higher potential and lower potential) is known as potential difference, commonly known as voltage.

I. Choose the best answer:

1. When an ebonite rod is rubbed with fur, the charge acquired by the fur is.

   (a) negative **(b) positive**

   (c) partly positive and partly negative (d) none of these

2. The electrification of two different bodies on rubbing is because of the transfer of

   (a) neutrons (b) protons

   (c) electrons (d) protons and neutrons

3. Which of the following a simple circuit must have?

   (a) energy source, battery, load (b) energy source, wire, load

   (c) energy source, wire, switch **(d) battery, wire, switch**

4. An electroscope has been charged by induction with the help of charged glass-rod. The charge on the electroscope is

   (a) negative **(b) positive**

   (c) both positive and negative (d) none of the above

5. Fuse is

   (a) a switch

   (b) a wire with low resistance

   (c) a wire with high resistance

(d) a protective device for breaking an electric circuit

Additional questions:

6. Electroplating is based on _____ effect of electricity.

(a) magnetic **(b) chemical** (c) heating (d) physical

7. A positively charged object will attract _____ charged object.

(a) positively **(b) negatively** (c) both a and b (d) none

8. The method of charging an object by touching is called _____

(a) induction (b) diffusion (c) current **(d) conduction**

9. Lightning occurs due to _____

(a) rain (b) humidity (c) wind **(d) electric discharge**

10. Electric charge can be transferred from a charged object to another through _____

(a) vacuum **(b) conductor** (c) air (d) insulator

11. Electric charge is measured in _____

(a) volt **(b) coulomb** (c) ampere (d) watt

12. The value of charge of an electron is equal to _____

(a) 6.04×10^{-19}c (b) 1.602×10^{-18}c **(c) 1.602×10^{-19}c** (d) 6.10×10^{-18}c

13. Before using electroscope, it should be _____

(a) charged (b) closed **(c) discharged** (d) cleaned

14. Lightning rods are made of _____

(a) copper (b) plastic (c) sand paper (d) wood

15. Electricity produced on rubbing is _____

(a) static electricity (b) current electricity

(c) electromagnet (d) none

16. The materials which allows electric current to pass through it, is called _____

(a) conductor (b) insulator (c) both a and b (d) none

17. The material which does not allow electric current is called _____

(a) solution (b) metal **(c) insulator** (d) electrolyte

18. All metals are _____

(a) conductors (b) insulators (c) electrolytes (d) none

19. An electrolyte _____

(a) has positive charge

(b) has negative charge

(c) should be able to conduct charge without dissociating

(d) should be able to form positive and negative ions.

20. Most common industrial application of chemical effects of electric current is _____

(a) anodising **(b) electroplating** (c) electrolysis (d) none

21. Thee terminal which is connected to a positive terminal of a battery is called _____

(a) anode (b) cathode (c) neutral (d) none

22. Flow of _____ per unit time is called current.

(a) charge (b) proton (c) neutron (d) all of these

23. Liquids that conduct electricity are the solutions of _____

(a) acids (b) bases (c) salts **(d) all of these**

24. A tiny particle which rotates around the nucleus of an atom is _____

(a) proton **(b) electron** (c) neutron (d) both a and b

25. _____ wire is used in the filament of the bulbs.

(a) nichrome (b) copper **(c) tungsten** (d) none

II. Fill in the blanks:

1. _____ takes place by rubbing objects together.

ans: transfer of electron.

2. The body which has lost electrons becomes _____

ans: positive.

3. _____ is a device that protects building from lightning strike.

ans: lightning arrestor.

4. _____ has a thin metallic filament that melts and breaks the connection when the circuit is overheated.

ans: electric fuse.

5. Three bulbs are connected end to end from the battery. This connection is called _____

ans: series circuit.

Additional questions:

6. Comb rubbed with hair _____ electrons from the hair and becomes negatively charged.

ans: gains.

7. Electric charge is measured in _____

ans: coulomb.

8. Since, protons and electrons are equal in number, an atom is electrically _____

ans: neutral.

9. When an ebonite rod is rubbed with fur, the fur transfers _____ to the ebonite rod.

ans: electrons.

10. Before the discovery of electrons, it was considered that electric current is due to the flow of _____ charges.

ans: positive.

11. The gold – leaf electroscope was developed by _____

ans: abraham bennet.

12. _____ is an example of discharge that takes place in clouds.

ans: lightning.

13. During thunderstorm air is moving _____ rapidly.

ans: upward.

14. Huge quantities of electricity are discharged in light flashes and temperatures of over _____ ^{o}c or more can be reached.

ans: 30,000.

15. _____ extreme heat will vaporized the water inside a tree, creating steam that may burn out the tree.

ans: lightning's

16. _____ is a device used to protect buildings from the effects of lightning.

ans: lightning arrestor.

17. _____ is a species of fish which can give electric shocks.

ans: electric cel.

18. In series circuit, the current remains _____ throughout the circuit.

ans: same.

19. _____ is used in extraction and purification of metals.

ans: electrolysis.

20. Copper wire offers very little _____ and does not get heated up quickly.

ans: resistance.

21. A fuse is a strip of alloy wire which is made of lead and tin with a very low _____

ans: melting point.

22. The flow of _____ per unit time is called current.

ans: charge.

III. State true or false. If false, correct the statement:

1. The charge acquired by an ebonite rod rubbed with a piece of flannel is negative.

ans: true.

2. A charged body induces an opposite charge on an unchanged body when they are brought near.

ans: true.

3. Electroscope is a device used to charge a body by induction.

ans: true.

4. Water can conduct electricity.

ans: true.

5. In parallel circuit, current remains the same in all components.

ans: false.

correct statement: in parallel circuit, voltage remains the same in all components.

Additional questions:

6. Materials which do not allow electric charges to pass through them easily are called insulator.

ans: true.

7. Silk cloth has excess of electrons, so it becomes positively charged.

ans: false.

correct statement: silk cloth has excess of electrons, so it becomes **negatively** charged.

8. Electric charge is measured in coulomb.

ans: true.

9. Protons carry negative charge and the electrons carry positive charge.

ans: false.

correct statement: protons carry negative charge and the electrons carry **negative** charge.

10. The gold – leaf electroscope was developed by abraham bennet.

ans: true.

Iv. Match the following:

1.	Two similar charges	(a) acquires a positive charge
2.	Two dissimilar charges	(b) prevents a circuit from overheating
3.	When glass rod is rubbed with silk	(c) repel each other
4.	When ebonite rod is rubbed with fur	(d) attract each other
5.	Fuse	(e) acquires a negative charge

ans: 1-c, 2-d, 3-a, 4-e, 5-b.

Additional questions:

6.	Bulb	(a) conductor
7.	Electroplating	(b) insulator

8.	Pure water	(c) heating effect of current
9.	Salt solution	(d) chemical effect of current

ans: 6-c, 7-d, 8-b, 9-a.

10.	Anode	(a) conducting solution
11.	Cathode	(b) positive terminal
12.	Ions	(c) negative terminal
13.	Electrolyte	(d) positively or negatively charged

ans: 10-b, 11-c, 12-d, 13-a.

14.	Insulator	(a) coulomb
15.	Conductor	(b) electric circuit
16.	Closed path	(c) copper
17.	Electric charge	(d) rubber

ans: 14-d, 15-c, 16-a, 17-b.

Vi. Choose the correct answer from the following directions.

1. Assertion: people struck by lightning receive a severe electrical shock.

   reason: lightning carries very high voltage.

   (a) If both assertion and reason are true and reason is the correct explanation of the assertion.
   (b) If both assertion and reason are true and reason is not the correct explanation of assertion.
   (c) If the assertion is true, but reason is false.
   (d) If the assertion is false, but reason is true.

2. Assertion: it is safer to stand under a tall during lightning.

   reason: it will make you the target for lightning.

   (a) If both assertion and reason are true and reason is the correct explanation of the assertion.
   (b) If both assertion and reason are true and reason is not the correct explanation of assertion.
   (c) If the assertion is true, but reason is false.
   (d) If the assertion is false, but reason is true.

3. Assertion: charges flow higher potential to the lower potential.

   reason: current flows mainly due to flow of electrons.

(a) If both assertion and reason are true and reason is the correct explanation of the assertion.
(b) If both assertion and reason are true and reason is not the correct explanation of assertion.
(c) If the assertion is true, but reason is false.
(d) If the assertion is false, but reason is true.

4. Assertion: parts of car and bicycle are made iron with chromium coating.

reason: chromium does not corrode and resist scratches.

(a) If both assertion and reason are true and reason is the correct explanation of the assertion.
(b) If both assertion and reason are true and reason is not the correct explanation of assertion.
(c) If the assertion is true, but reason is false.
(d) If the assertion is false, but reason is true.

5. Assertion: insulators do not allow flow of current through them.

reason: insulators have no free charge carrier.

(a) If both assertion and reason are true and reason is the correct explanation of the assertion.
(b) If both assertion and reason are true and reason is not the correct explanation of assertion.
(c) If the assertion is true, but reason is false.
(d) If the assertion is false, but reason is true.

6. Assertion: a current carrying wire should be charged.

Reason: the current in a wire is due to flow of free electrons in a definite direction.

(a) If both assertion and reason are true and reason is the correct explanation of the assertion.
(b) If both assertion and reason are true and reason is not the correct explanation of assertion.
(c) If the assertion is true, but reason is false.
(d) If the assertion is false, but reason is true.

7. Assertion: when both the strips of electroscope is charged with similar charge, they repel each other and become wide open.

reason: like charges always repel each other.

(a) If both assertion and reason are true and reason is the correct explanation of the assertion.
(b) If both assertion and reason are true and reason is not the correct explanation of assertion.
(c) If the assertion is true, but reason is false.
(d) If the assertion is false, but reason is true.

Additional questions:

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(d) If the assertion is false, but reason is true.

Chemistry

Unit 3: Air

Rusting:

the process of conversion of iron into its hydrated form of oxide in the presence of air and moisture is called rusting.

Nitrogen fixation:

the process that converts nitrogen in the air into a useful nitrogen compound is called the nitrogen fixation.

Sublimation:

the process of conversion of solid into vapour without reaching liquid state is called sublimation.

Green-house effect:

trapping of radiation from the sun by green-house gases in the atmosphere that leads to rise in the earth's atmospheric temperature.

Haber's process:

synthesis of ammonia from nitrogen and hydrogen with the help of catalyst under 500 atm pressure and 550^{o}c temperature.

Global warming:

global warming refers to an average increase in the temperature of the atmosphere or simply it is the warming of the earth.

Atmosphere:

gaseous jacket that surrounds the earth.

Soda water:

water produces when carbon dioxide is dissolved in water under pressure.

Air:

air is a mixture of gases that surrounds our planet earth.

Acid rain:

pollutants such as oxides of nitrogen and sulphur in the air released by factories, burning fossil fuels, eruption of volcanoes etc.., dissolve in rain water and form nitric acid and sulphuric acid which adds up to the acidity of rain water. Hence, it results in acid rain.

I. Choose the correct answer:

1. Which of the following is true about oxygen?

(a) completely burning gas (b) partially burning gas

(c) doesn't support burning **(d) supports burning**

2. Aerated water contains

(a) air (b) oxygen

(c) carbon dioxide (d) nitrogen

3. Solvay process is a method to manufacture

(a) lime water (b) aerated water

(c) distilled water **(d) sodium carbonate**

4. Carbon dioxide with water changes

(a) blue litmus to red (b) red litmus to blue

(c) blue litmus to yellow (d) doesn't react with litmus

5. Which of the following is known as azote?

(a) oxygen **(b) nitrogen**

(c) sulphur (d) carbon dioxide

Additional questions:

6. _____ is necessary for all acids.

(a) nitrogen (b) co_2 **(c) oxygen** (d) hydrogen

7. Tri oxygen molecule is known as _____

(a) hydrogen (b) oxygen (c) nitrogen **(d) ozone**

8. About 78% by volume of air is _____

(a) carbon dioxide **(b) nitrogen** (c) argon (d) oxygen

9. Carbon dioxide gas is _____

(a) heavier than air (b) lighter than air

(c) as heavy as air (d) none of these

10. A gas which neither burns nor supports burning is _____

(a) oxygen (b) helium (c) hydrogen **(d) carbon dioxide**

11. A gas which is used to remove carbon impurities from steel.

(a) nitrogen **(b) oxygen** (c) carbon dioxide (d) hydrogen

12. Venus' atmosphere consists of roughly 96 – 97% of _____

(a) oxygen (b) nitrogen **(c) carbon dioxide** (d) none

13. Carbon dioxide gas is _____ in nature.

(a) basic **(b) acidic** (c) sweet (d) none

14. _____ gas is essential for the proper growth of all plants.

(a) nitrogen (b) co_2 (c) oxygen (d) none

15. Lighter metals like na, k combine with co_2 to form corresponding _____

(a) nitrates **(b) carbonates** (c) oxide (d) none

II. Fill in the blanks:

1. _____ is called as vital life.

ans: oxygen.

2. Nitrogen is _____ than air.

ans: lighter.

3. _____ is used as a fertilizer.

ans: nitrogen.

4. Dry ice is used as a _____

ans: refrigerant.

5. The process of conversion of iron into hydrated form of oxides is called _____

ans: rusting.

Additional questions:

6. _____ exits in nature as silicate, carbonates, oxides and water.

ans: oxygen.

7. Metals like magnesium, iron and sodium burn with oxygen and given basic _____.

ans: oxides.

8. _____ has ph less than 5.6.

ans: acid rain.

9. Co_2 is used along with _____ in the manufacture of fertilizers like urea.

ans: ammonia.

10. Co_2, n_2o, ch_4 and cfc are known as _____.

ans: greenhouse gases.

11. _____ is used to prepare soft drinks or aerated drinks.

ans: co_2

12. _____ is used as a substitute for compressed air in tyres.

ans: nitrogen.

13. Liquid nitrogen is used as a _____

ans: refrigerant.

14. Oxygen is used to oxidize _____

ans: rocket fuel.

15. Phosphorous burns with suffocating smell and gives _____

ans: phosphorous pentaoxide.

III. Match the following:

1.	Nitrogen	(a) respiration in living animals
2.	Oxygen	(b) fertilizer
3.	Carbon dioxide	(c) refrigerator
4.	Dry ice	(d) fire extinguisher

ans: 1-b, 2-a, 3-d, 4-c

Additional questions:

5.	Oxygen	(a) carbon dioxide
6.	Azote	(b) nitrogen
7.	Solvay process	(c) vital life

8. Gun powder (d) no life

ans: 5-c, 6-d, 7-a, 8-b.

9. Nitrogen (a) acid rain

10. Co_2 (b) global warming

11. Melting of glaciers (c) volcanic gases

12. Corrosion of bridges (d) aerated drinks

ans: 9-c, 10-d, 11-b, 12-a.

Additional questions:

Iv. True or false – if false give the correct statement:

1. Oxygen is the poor conductor of heat and electricity.

ans: true.

2. Nitrogen is about two times more soluble in water then oxygen.

ans: false.

correct statement: oxygen is about two times more soluble in water then oxygen.

3. Nitrogen is an essential element present in proteins and nucleic acids which are the building blocks of living things.

ans: true.

4. Non-metal + nitrogen $\delta\rightarrow$ nitrogen compound.

ans: true.

5. Solid form of co_2 is called as dry ice which undergoes condensation.

ans: false.

correct statement: solid form of co_2 is called as dry ice which undergoes **sublimation.**

6. Acid rain inhibits germination and growth of seedlings.

ans: true.

7. An average increase in the temperature of the atmosphere is called as acid rain.

ans: false.

correct statement: an average increase in the temperature of the atmosphere is called as **global warming.**

8. Rain water is actually the purest form of water.

ans: true.

9. The increase in the levels of greenhouse gases results in the gradual increase of temperature of the earth's surface.

ans: true.

10. Nitrogen gas is so cold that moisture in the air condenses on it, creating a dense fog.

ans: false.

correct statement: solid co_2 gas is so cold that moisture in the air condenses on it, creating a dense fog.

Additional questions:

V. Assertion and reason.

mark the correct choice as:

1. Assertion: green-house gases maintain the temperature.

reason: green-house gases absorbs the infra-red rays.

(a) If both assertion and reason are true and the reason is the correct explanation of the assertion.
(b) If both assertion and reason are true, but the reason is not the correct explanation of the assertion.
(c) If the assertion is true, but the reason is false.
(d) If the assertion is false, but the reason is true.

2. Assertion: carbon dioxide occurs as carbonates in nature.

reason: carbon dioxide can exist as a liquid at atmospheric pressure.

(a) If both assertion and reason are true and the reason is the correct explanation of the assertion.
(b) If both assertion and reason are true, but the reason is not the correct explanation of the assertion.
(c) If the assertion is true, but the reason is false.
(d) If the assertion is false, but the reason is true.

Unit 4: Atomic structure

Valency:

valency is defined as the number of electrons lost, gained or shared by an atom in a chemical combination so that it becomes chemically inert.

Ions:

atoms which carry positive or negative charges are called ions.

Chemical formula or molecular formula:

chemical formula is the shorthand notation of a molecule of a substance (compound). It shows the actual number of atoms of each element present in a molecule of a substance.

Molecule:

a molecule is the smallest particle of an element or a compound that can normally exist independently.

Compound:

the same elements chemically combined together in a fixed ratio is called a compound.

Chemical compound:

a chemical compound is a substance formed out of more than one element joined together by chemical bond. Such compounds have properties that are unique from that of the elements that formed them.

Balanced chemical equation:

a balanced chemical equation is one in which the total number of atoms of any element on the reactant side is equal to the total number of atoms of that element on the product side.

Law of conservation of mass:

it states that during any chemical change, the total mass of the products is equal to the total mass of the reactants.

Law of constant proportions:

law of constant proportions states that in a pure chemical compound the elements are always present in definite proportions by mass.

Cathode:

the negatively charged electrode or an electron donor.

Anode:

the positively charged electrode or an electron donor.

Molecular formula:

it is a formula giving the number of atoms of each of the elements present in one molecule of a specific compound.

Product:

a substance that is formed as the result of a chemical reation.

Reactant:

a substance that takes park in and undergoes change during a reaction.

Discharge tube:

a tube containing charged electrodes and filled with a gas in which ionisation is induced by an electric field.

I. Choose the best answer:

1. The same proportion of carbon and oxygen in the carbon dioxide from different sources proves the law of _____

(a) reciprocal proportion **(b) definite proportion**

(c) multiple proportion (d) conservation of mass

2. Cathode rays are made up of _____

(a) neutral particles (b) positively charged particles

(c) negatively charged particles (d) none of the above

3. In water, hydrogen and oxygen are combined in the ratio of _____ by mass.

(a) 1 : 8 (b) 8 : 1 (c) 2 : 3 (d) 1 : 3

4. Which of the following statements made by dalton has not undergone any change?

(a) atoms cannot be broken.

(b) atoms combine in small, whole numbers to form compounds.

(c) elements are made up of atoms.

(d) all atoms of an elements are alike.

5. In all atoms of an element

(a) the atomic and the mass number are same.

(b) the mass number is same and the atomic number is different.

(c) the atomic number is same and the mass number is different.

(d) both atomic and mass numbers may vary.

Additional questions:

6. Which of the following scientist observed that cathode rays consists of negatively charged particles?

(a) john dalton **(b) j.j. thomson** (c) james chadwick (d) democritus

7. The outer most shell of an atom is known as _____

(a) valency (b) valence electron (c) nucleus **(d) valence shell**

8. The valency of which of the element is zero.

(a) iron (b) hydrogen **(c) helium** (d) oxygen

9. The equation $na + h_2o \rightarrow naoh + h_2$ is _____

(a) correct

(b) incorrect since it is not balanced

(c) incorrect since hydrogen should be written as h and not h_2

(d) none

10. What is the valency of carbon?

(a) 1 (b) 2 (c) 3 **(d) 4**

11. Metals form _____

(a) anions **(b) cations** (c) both a and b (d) none

12. Isotopes exist because atoms of the same element can have different numbers of

(a) protons **(b) neutrons** (c) electrons (d) none

13. An atom differs from its ion in _____

(a) nuclear charge (b) mass number

(c) number of electrons (d) number of protons

14. What is the atomic number of an element whose electronic configuration is 2, 8, 1?

(a) 10 (b) 23 **(c) 11** (d) 8

II. Fill in the blanks:

1. _____ is the smallest particle of an element.

   ans: atom.

2. An element is composed of _____ atoms.

   ans: same kind of

3. An atom is made up of _____, _____ and _____.

   ans: proton, electron, neutron.

4. A negatively charged ions is called _____, while positively charged ion is called _____.

   ans: anion, cation.

5. _____ is negatively charged particle (electron / proton).

   ans: electron.

6. Proton is deflected towards the _____ charged plate. (positively, negatively).

   ans: negatively.

Additional questions:

7. Isotopes have the same _____ number but different _____ numbers.

   ans: atomic, mass.

8. _____ have the same mass number but different atomic numbers.

   ans: isobars.

9. Crookes rays are also called as _____

   ans: cathode rays.

10. Cathode rays are made up of material particles which have mass and _____

    ans: kinetic energy.

11. A proton can be defined as a _____

    ans: hydrogen ion.

12. Atoms of all metals will have _____ electrons in their outermost orbit.

ans: 1 to 3.

13. All non – metals will have _____ electrons in the outermost orbit of their atoms.

ans: 4 to 7.

14. Atoms which carry positive or negative charges are called _____

ans: ions.

15. Maximum number of electrons that can be present in n shell is _____

ans: 32.

16. The atomic theory was first proposed by _____

ans: dalton.

III. Match the following:

1.	Law of conservation of mass	(a) sir william crookes
2.	Law of constant proportion	(b) james chadwick
3.	Cathode rays	(c) joseph proust
4.	Anode rays	(d) lavoisier
5.	Neutrons	(e) goldstein

ans: 1-d, 2-c, 3-a, 4-e, 5-b.

Additional questions:

6.	J.j. thomson	(a) law of definite proportions
7.	Air	(b) law of indestructibility of mass
8.	Hydrogen ion	(c) poor conductor of electricity.
9.	Law of constant proportions	(d) plum pudding model
10.	Law of conservation of mass	(e) h^+

ans: 6-d, 7-c, 8-e, 9-a, 10-b.

11.	Crooke's tube	(a) negatively charged particles
12.	Cathode rays	(b) cathode ray tube
13.	Proton	(c) positively charged particles

14. Anode rays (d) 1.6×10^{-24} g

ans: 11-b, 12-a, 13-d, 14-c.

Iv. True or false – if false give the correct statement:

1. Anode rays travel in straight lines.

   ans: true.

2. James chadwick discovered the fundamental particle called proton.

   ans: false.

   correct statement: james chadwick discovered the fundamental particle called **neutron.**

3. Relative charge of an electron is -1.

   ans: true.

4. Atoms of the same element are identical in all respects.

   ans: true.

5. The first scientific theory about atom was given by j.j. thomson.

   ans: false.

   correct statement: the first scientific theory about atom was given by **john dalton.**

6. In television tube, cathode rays are deflected by magnetic fields.

   ans: true.

7. An atom has a number of orbits and each orbit has protons.

   ans: false.

   correct statement: an atom has a number of orbits and each orbit has **electrons.**

8. The combining capacity of an atom is called valency.

   ans: true.

9. Helium has two electrons in the outermost orbit and so it is chemically inert.

   ans: true.

10. When an atom gives an electron it has more number of electrons and thus it carries positive charge.

    ans: false.

correct statement: when an atom gives an electron it has more number of electrons and thus it carries **negative** charge.

V. Assertion and reason.

mark the correct choice as:

1. Assertion: proton can be defined as a hydrogen ion (h^+).

   Reason: these protons are produced when one electron is removed from one hydrogen atom.

   (a) If both assertion and reason are true and the reason is the correct explanation of the assertion.
   (b) If both assertion and reason are true, but the reason is not the correct explanation of the assertion.
   (c) If the assertion is true, but the reason is false.
   (d) If the assertion is false, but the reason is true.

2. Assertion: helium has four electrons in the outermost orbit.

   reason: neon has eight electron in the outermost orbit.

   (a) If both assertion and reason are true and the reason is the correct explanation of the assertion.
   (b) If both assertion and reason are true, but the reason is not the correct explanation -of the assertion.
   (c) If the assertion is true, but the reason is false.
   (d) If the assertion is false, but the reason is true.

Biology

Unit 5: Movements

Movement:

movement is generally defined "as the act of changing the place or position by one or more parts of the body."

Skeleton:

our body is made up of a frame work of bones called skeleton which helps in the movement of the body.

Cilia:

cilia are the hair like extensions of the epithelium.

Diarthrosis joint:

a synovial joint is a joint which makes connection between two bones consisting of a cartilage lined cavity filled with fluid, which is known as a diarthrosis joint.

Arthritis:

the person feels acute pain in joints particularly while moving joints. This disease is referred to as arthritis.

Free – floating ribs:

2 pairs of lower ribs are free in the front. These are called as free – floating ribs.

Knee cap:

knee is covered by a cap like structure called as patella or a knee cap.

Antagonistic:

muscles often work in pairs which work against each other. These are called antagonistic pairs.

I. Choose the best answer:

1. Which of the following parts of our body help us in movement?

(i) bones (II) skin (III) muscles (iv) organs

choose the correct answer from the options below:

(a) (i) and (III) (b) (II) and (iv) (c) (i) and (iv) (d) (III) and (II)

2. Which one of the following organisms lack muscles and skeleton for movement?

(a) dog **(b) snail** (c) earthworm (d) human beings

3. _____ joints are immovable.

(a) shoulder and arm (b) knee and joint

(c) upper jaw and skull (d) lower jaw and upper jaw

4. Why do underwater divers wear fin-like flippers on their feet?

(a) to swim easily in water (b) to look like a fish

(c) to walk on water surface (d) to walk over the bottom of the sea (sea bed).

5. External ear (pinna) is supported by

(a) bone **(b) cartilage** (c) tendon (d) capsule

6. Cockroach moves with the help of its

(a) leg (b) bone (c) muscular foot **(d) whole body**

7. Which one of the following categories of vertebrae are correctly numbered?

(a) cervical-7 (b) thoracic-10 (c) lumbar-4 (d) sacral-4

Additional questions:

8. Gliding allows _____

(a) movement in two planes **(b) movement in three planes**

(c) movement in one plane (d) no movement

9. The greatest range of movement is seen in _____ joint.

(a) saddle (b) hinge **(c) ball and socket** (d) pivot

10. The wrist bones are examples of _____ joint.

(a) condyloid (b) saddle (c) gliding (d) hinge

11. There are _____ types of movable joint.

(a) 4 (b) 3 (c) 5 **(d) 6**

12. _____ is a immovable joint.

(a) skull (b) lower jaw (c) spine (d) inner ear

13. The _____ is the strongest bone of human skeleton.

(a) femur (b) skull (c) vertebrae (d) ribs

14. Flat bones are seen in _____

(a) legs (b) spine **(c) shoulder** (d) wrist ankle

15. Irregular bones are seen in _____

(a) legs (b) skull **(c) vertebrae column** (d) ribs

16. Phalanges refer to bones of the _____

(a) ankle (b) toes (c) wrist (d) knee

17. _____ is not a characteristic of cardiac muscle.

(a) branched (b) multinucleate (c) involuntary **(d) smooth muscle**

18. _____ is not found in arm bone.

(a) radius (b) humerus **(c) patella** (d) carpals

19. The hardest working muscle is found in the _____

(a) skull **(b) eye** (c) thigh (d) rib cage

20. _____ is a bundle of contractile tissue.

(a) bone (b) skeleton **(c) muscle** (d) joint

II. Fill in the blanks:

1. Movement of organisms from place is called _____

ans: locomotion.

2. _____ refers to change in position of the part of an organisms body.

ans: movement.

3. A structure which provides rigid frame work to the body is called _____

ans: skeleton.

4. Axial skeleton in human consist of _____, _____, _____ and _____.

ans: skull, facial sternum, ribs, vertebral column.

5. Appendicular skeleton in human consists of _____ and _____.

ans: pelvic, pectoral girdle.

6. The place where two bones meet is termed as _____.

ans: joint.

7. _____ is attacked to soft parts of the body like blood vessels, iris, bronchi and the skin.

ans: smooth muscle.

8. _____ muscle makes pupil of eyes wider.

ans: radial.

Additional questions:

9. The body of cockroach is covered with exoskeleton made of _____

ans: chitin.

10. Setae are seen in _____

ans: earthworm.

11. The atlas / axis joint is an example of _____ joint.

ans: pivot.

12. A bone is connected to another bone with a _____

ans: ligament.

13. Bones are connected to muscles by _____

ans: tendon.

14. Inflammation of joints can lead to a disease called _____

ans: arthritis.

15. The bones need two important minerals which are _____ and _____.

ans: calcium, phosphorous.

16. The endoskeleton originates from _____

ans: mesoderm.

17. _____ is the smallest and lightest bone of human skeleton.

ans: stapes.

18. The _____ protects the brain.

ans: cranium.

19. _____ is the bone of the upper arm.

ans: humerus.

20. An immovable joint is found in the _____

ans: upper jaw.

III. State true or false. If false, correct the statement:

1. Skull in human consist of 22 bones.

ans: true.

2. There are 12 pairs of ribs in human body.

ans: true.

3. Pelvic girdle is a part of axial skeleton.

ans: false.

correct statement: pelvic girdle is a part of **appendicular** skeleton.

4. Hinge joint is slightly movable joint.

ans: true.

5. Cardiac muscle if a voluntary muscle.

ans: false.

correct statement: cardiac muscle if an **involuntary** muscle.

6. The flexor and extensor muscle of the arm are antagonistic muscles.

ans: true.

Additional questions:

7. Muscles can contract, relax and lengthen.

ans: false.

correct statement: muscles can contract and relax **but not lengthen**.

8. In the iris, there are two sets of muscles.

ans: true.

9. Non – striated muscles are involuntary muscles.

ans: true.

10. Cardiac muscles are voluntary muscles.

ans: false.

correct statement: cardiac muscles are **involuntary** muscles.

11. There are 14 pairs of ribs.

ans: false.

correct statement: there are **12** pairs of ribs.

12. Bone of upper jaw is a immovable bone.

ans: true.

13. Synovial fluid helps to reduce friction.

ans: true.

14. Joint between rib and breast bone is a fixed joint.

ans: false.

correct statement: joint between rib and breast bone is a **slightly movable** joint.

Additional questions:

Iv. Match the following:

1.	Humerus	(a) fore arm
2.	Radius	(b) leg
3.	Tarsals	(c) upper arm
4.	Atlas	(d) vertebral column

ans: 1-c, 2-a, 3-b, 4-d.

5.	Ball & socket	(a) elbow
6.	Saddle	(b) spine
7.	Hinge	(c) thumb
8.	Gliding	(d) hip

ans: 5-d, 6-c, 7-a, 8-b.

9.	Earthworm	(a) flapping
10.	Cockroach	(b) setae
11.	Birds	(c) slithering
12.	Snake	(d) legs

ans: 9-b, 10-d, 11-a, 12-c.

Unit 6: Reaching the age of adolescence

Development:

maturity along with experience produces a progressive series of change in an organisms. These series of changes are called development.

Developmental stages:

different phases of human development are called developmental stages.

Teenage:

period starts at the age of about 10 to 13 and ends at the age of 19.

Puberty:

puberty is a period of few years in which rapid physical, physiological and psychological changes occur resulting in sexual maturity.

Reproductive phase:

the phase in an individual's life during which there is production of gametes is called reproductive phase.

Menarche:

the first menstrual flow begins at puberty and is termed menarche.

Menopause:

stoppage of menstruation is termed as menopause.

Ovulation:

the release of ovum from the ovary is called ovulation.

Menstruation:

the thick and soft inner lining of uterus along with the blood vessels and the dead ovum comes out of the vagina in the form of bleeding called menstruation.

Adolescence:

adolescence is the period of reproductive maturity which lies usually between the ages of 11 to 19 years.

Hormones:

hormones are the secretions of endocrine glands without ducts which secrete them directly into the bloodstream.

I. Choose the best answer:

1. Adolescence is the period of life between _____ years of age.

(a) 10 to 16 (b) 11 to 17 **(c) 11 to 19** (d) 11 to 20

2. The period at which an organism attains sexual maturity is called _____

(a) puberty (b) adolescence (c) growth (d) maturity

3. During puberty, the region below the waist become wider in _____

(a) boys (b) girls **(c) both a and b** (d) none of these

4. Adam's apple is the growth of the _____

(a) pharynx (b) thyroid **(c) larynx** (d) parathyroid

5. Many adolescent boys and girls get pimples on face, due to the secretions of _____

(a) sweat **(b) sebaceous**(c) sweat and sebaceous (d) none of these

6. The sperm is produced by _____

(a) penis (b) ovary (c) uterus **(d) testes**

7. _____ are the chemical substances, secreted by endocrine glands.

(a) hormones (b) enzymes (c) proteins (d) fatty acids

8. Androgen production is regulated by _____

(a) gh hormone **(b) lh hormone**

(c) tsh hormone (d) acth hormone

9. During menstruation, the progesterone level is _____

(a) decreased (b) increased **(c) ceased** (d) normal

10. _____ intake needs to be increased to prevent osteoporosis in later life.

(a) potassium (b) phosphorus (c) iron **(d) calcium**

Additional questions:

11. _____ is not a source of iron.

(a) gooseberry (b) fish **(c) milk** (d) jaggery

12. Fsh is produced by _____

(a) pituitary gland (b) thyroid gland (c) uterus (d) testes

13. Icsh refers to _____

(a) fsh **(b) lh** (c) oxytocin (d) testosterone

14. Menstruation normally occurs once in _____

(a) 25 days (b) 35 days **(c) 28 days** (d) 19 days

15. Normally pregnancy lasts for _____ days.

(a) 300 **(b) 280** (c) 320 (d) 260

II. Fill in the blanks:

1. _____ is secreted by the ovaries of female.

ans: estrogen.

2. The hormones secreted by the gonads are controlled by _____

ans: anterior pituitary.

3. Milk secretion during lactation is controlled by _____ hormone.

ans: prolactin.

4. The male and the female gamete fuse together and form _____

ans: zygote.

5. The first menstrual flow begins at puberty and it is termed as _____

ans: menarche

6. _____ usually occurs 14 days after ovulation.

ans: menstruation

7. _____ includes protein, carbohydrates, fats and vitamins in requisite proportion.

ans: balanced diet.

8. _____ helps to prevent thyroid gland related diseases.

ans: iodine.

9. Iron deficiency leads to _____

ans: anaemia.

10. In women, fertilization takes place at _____

ans: fallopian tube.

Additional questions:

11. Oil glands are called _____ glands.

ans: sebaceous.

12. The primary sex organs of the male and female are called _____ and _____ respectively.

ans: testes, ovary.

13. _____ hormone stimulates the testes to produce androgens.

ans: leutinizing.

14. _____ is the male sex hormone.

ans: androgen.

15. The hormone _____ is involved in the contraction of uterine muscles during child birth.

ans: oxytocin.

16. The release of ovum from the ovary is called _____

ans: ovulation.

17. The wall of _____ becomes thick to receive the fertilized egg.

ans: uterus.

18. Fertilization takes places in the _____

ans: fallopian tube.

19. _____ is a temporary endocrine gland formed during pregnancy.

ans: corpus luteum.

20. Stoppage of menstruation is called _____

ans: menopause.

III. State true or false. If false, correct the statement:

1. There is a sudden increase in the height of both boys and girls during puberty.

ans: true.

2. The release of ovum from the uterus is called ovulation.

ans: true.

3. During pregnancy, the corpus luteum continues to grow and produces large amount of estrogen and progesterone.

ans: true.

4. Making use of disposable napkins or tampons may increase the chances of infection.

ans: false.

correct statement: making use of disposable napkins or tampons may **reduce** the chances of infection.

5. Using clean toilets for defection is a good practice.

ans: true.

Additional question:

6. The male sex hormone is called estrogen.

ans: false.

correct statement: the male sex hormone is called **androgen.**

7. Prolactin is also known as lactogenic hormone.

ans: true.

8. The fsh is required for spermatogenesis in males.

ans: true.

9. Milk is rich in calcium.

ans: true.

10. Intake of iodine is necessary to prevent anemia.

ans: false.

correct statement: intake of **iron** is necessary to prevent anemia.

11. Corpus luteum grows during menstruation.

ans: false.

correct statement: corpus luteum **degenerates** during menstruation.

12. Egg is released from fallopian tube.

ans: false.

correct statement: egg is released from **ovary.**

Iv. Match the following:

1.	Puberty	(a) testosterone
2.	Adam's apple	(b) muscle development
3.	Androgen	(c) at 45 to 50 years of age
4.	Icsh	(d) sexual maturity
5.	Menopause	(e) change in voice

ans: 1-d, 2-e, 3-b, 4-a, 5-c.

Additional questions:

6.	Calcium	(a) salt
7.	Iron	(b) fruits
8.	Iodine	(c) jaggery
9.	Minerals	(d) pulses
10.	Protein	(e) milk

ans: 6-e, 7-c, 8-a, 9-b, 10-d.

Computer science

Unit 7: Digital painting

I. Choose the correct answer:

1. Tux paint software is used to _____

(a) paint (b) program (c) scan (d) pdf

2. Which toolbar is used for drawing and editing controls in tux paint software?

(a) left side: toolbar (b) right side: toolbar

(c) middle: toolbar (d) bottom: toolbar

3. What is the shortcut key for undo option?

(a) ctrl + z (b) ctrl + r (c) ctrl + y (d) ctrl + n

4. Tux math software helps in learning the _____

(a) painting **(b) arithmetic** (c) drawing (d) graphics

5. In tux math, space cadet option is used for _____

(a) simple addition (b) division (c) drawing (d) multiplication

Additional questions:

6. Which tool is used to open an existing file?

(a) line **(b) open** (c) new (d) undo

7. What is the shortcut key for print option?

(a) ctrl + s (b) ctrl + o **(c) ctrl + p** (d) ctrl + y

8. In tux paint scout option is used for _____

(a) simple addition **(b) addition and subtraction to ten**

(c) division (d) multiplication

9. Which tool is used to cancel a command given earlier?

(a) quite (b) magic (c) eraser **(d) undo**

10. Which tool is like a rubber stamps or stickers?

(a) text **(b) stamp** (c) eraser (d) magic

II. Fill in the blanks:

1. When tux paint first loads, a _____ screen will appear.

ans: title / credits.

2. The _____ tool helps us to draw freehand drawings.

ans: paint brush.

3. The _____ tool is used to draw lines.

ans: line.

4. _____ tool has a set of special tools.

ans: magic.

5. Clicking the _____ button will start a new drawing.

ans: new.