



Questions

Write the scientific term:-

- 1- The amount of matter in an object. (.....)
- 2- The force with which the body is attracted to the earth.
(.....)
- 3- The measurement unit of mass which is almost equal to a mass of liter of water. (.....)
- 4- The measurement unit of weight which is almost equal to a mass 100 grams. (.....)
- 5- A device that is used to measure the mass of chemicals in lab.
(.....)
- 6- A device that is used to measure the weight of an object.
(.....)
- 7- Materials that allow heat to flow through. (.....)
- 8- Materials that don't allow heat to flow through. (.....)
- 9- A device is used to measure the temperature of human body.
(.....)
- 10- A device is used to measure the temperature of liquids.
(.....)
- 11- The liquid which is used in manufacturing of thermometers.
(.....)
- 12- A device is used to measure the temperature. (.....)
- 13- The degree of hotness or coldness of a body. (.....)
- 14- A window which is made by bonding 2 glass sheets & maintaining air between them. (.....)
- 15- The fastest metal in conducting heat. (.....)
- 16- Increasing the size or getting bigger of metals by heating.
(.....)





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- 17- The thermometer which contains constriction. (.....)
- 18-A gas molecule's consist of three atoms of oxygen. (.....)
- 19-A flame is used in cutting and welding metals. (.....)
- 20-A gas in which is prepared by using hydrogen peroxide.
(.....)
- 21-An indicator that helps us to express the state of the body from the point of hotness and coldness. (.....)
- 22- The substance that remains without a change in its quantity and properties. (.....)
- 23- The scientist who re – discovered O_2 gas. (.....)
- 24- The scientist who gave the Oxygen its name. (.....)
- 25- The rapid union between O_2 and element which produces heat and light. (.....)
- 26- The slow union between O_2 and element in the presence of moisture.
(.....)
- 27- The layer that consists of 3 Oxygen atoms (O_3) and protects the Earth from harmful radiation. (.....)
- 28- A flame whose temperature reaches to $3500^{\circ}C$. (.....)
- 29- A gas that is used for diving and climbing. (.....)
- 30- It consists of two hydrogen atoms and one Oxygen atom.
(.....)





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- 31- A gas that combines with O_2 to produce a flame with high temperature reaches to $3500^\circ C$. (.....)
- 32- The gas that represents 0.03% of atmospheric volume. (.....)
- 33- A gas that is produced during burning and respiration of living organisms. (.....)
- 34- The chemical substance that is used to detect (test) the presence of CO_2 gas. (.....)
- 35- The chemical substance that is added to calcium carbonate during the preparation of CO_2 gas. (.....)
- 36- The gas that doesn't burn and doesn't help in burning and is used in making fire extinguishers. (.....)
- 37- A gas that is used in making soft drinks and bread. (.....)
- 38- A gas that contributes in the composition of proteins and the tissues of living organisms. (.....)
- 39- The scientist who discovered N_2 gas. (.....)
- 40- A gas is used in filling car tires and some lamps. (.....)
- 41- A gas is called silent killer. (.....)
- 42- A system that consists of the brain, the spinal cord and nerves. (.....)
- 43- It contains a nucleus, cytoplasm and plasma membrane. (.....)





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- 44- They are branches extending from the neuron's body. (.....)
- 45- The connection between the dendrites (.....)
- 46- It is a cylindrical axis covered with a fatty layer and is called myelin sheath. (.....)
- 47- They are nerve endings connect to muscles or form a synapse with other neurons. (.....)
- 48- It consists of the brain and spinal cord. (.....)
- 49- The main control center in your body that directs and coordinates all the processes, ideas, behaviors and emotions. (.....)
- 50- It is a bony box in which the brain is located. (.....)
- 51- It is a nerve block containing millions of nerve cells. (.....)
- 52- It consists of cerebrum, cerebellum and medulla oblongata. (.....)
- 53- It is the outer surface of cerebral hemispheres that has a grey color. (.....)
- 54- It contains the centers of thinking and memory and controlling the voluntary movement of the body. (.....)
- 55- It lies at the back area of the brain below two hemispheres. (.....)
- 56- It is maintaining the balance of the body during movement. (.....)
- 57- Linked to the brain through the spinal cord and is responsible for involuntary actions. (.....)
- 58- Consists of a grey matter in the form of H letter surrounded by the white matter. (.....)





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- 59- Part of the nervous system is responsible for reflex actions.
(.....)
- 60- It is the nerves which emerge from the central nervous system.
(.....)
- 61- They are 12 pairs of nerves which emerge from the brain.
(.....)
- 62- They are 31 pairs of nerves emerge from the spinal cord.
(.....)
- 63- Automatic response of the body to different stimuli.
(.....)
- 64- The basic structure unit of the nervous system. (.....)
- 65- It is the ability of the organism to change its position.
(.....)
- 66- It consists of skeletal and muscular systems. (.....)
- 67- It consists of the skull, Backbone and rib cage. (.....)
- 68- It is a part of the axial skeleton that consists of 33 vertebrae with cartilages between them. (.....)
- 69- It consists of 12 pairs of ribs. (.....)
- 70- It consists of the bones of upper and lower limbs.
(.....)
- 71- The joints that are between the bones of the skull that don't allow any movement.
(.....)
- 72- The joints that allow the movement in one direction.
(.....)
- 73- The joints that allow movement in all directions. (.....)





Problem (1):-

If an object's mass on earth = 30 kg

Calculate:-

- 1- It's mass on Moon.
- 2- It's weight on earth.
- 3- It's weight on Moon.

Problem (2):-

If your weight on earth = 600 Newton. Calculate your weight on the moon.

Problem (3):-

If an object's weight = 20 Newton. Calculate it's mass.

Problem (4):-

If an object's mass = 200 gm. Calculate it's weight on both earth and moon surfaces.

Complete the following sentences:-

- 1- Mass is measured by using , where as weight is measured by using
- 2- If the weight of iron ball is 200 Newton, so it's mass equals ...
- 3- The measuring unit of mass is or where as the measuring unit of weight is
- 4- Thedecreases when the distance between an object & the center of the earth increases.
- 5-is the force by which a body is attracted to the earth.
- 6- The object's weight depends on , &





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- 7- Mass is a constant value & not affected by
- 8- is the amount of matter in an object.
- 9- is the measuring unit of mass & equals to the mass of one paper clip.
- 10- is the measuring unit of mass & equals to the mass of one liter of water.
- 11- Newton is the measuring unit of weight which equalsgrams.
- 12- & are examples of good conductors of heat.
- 13- , & are bad conductors of heat.
- 14- We use to sterilize the medical thermometer before using.
- 15- Celsius thermometer is used in measuring, whereas the medical thermometer is used in measuring
- 16- & are used in making handles of cooking pans.
- 17- & are some usages of good conductors of heat.
- 18- The scale of thermometer starts at 35°C and ends at 42°C, while the scale of Celsius thermometer starts at & ends at
- 19- The thermometer is used to measure the water temperature.
- 20- conducts heat faster than Aluminum.
- 21- Each degree in the medical thermometer is divided into parts so each part equals degree.
- 22- Air is conductor of heat.
- 23- Materials that let heat flow through are called
- 24- Heat is a form of , that transfers from the body of temperature to the body of temperature.





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- 25- The devices that are used to measure temperature are called
- 26- Materials that don't let heat flow through are called
- 27- The scientific principle that is used in making thermometer is that liquidsby heating &by cooling.
- 28- Freezing point of water is , while its boiling point is
- 29- There is a constriction inthermometer.
- 30- The temperature of a healthy human body is
- 31-Heat is used in industry and preparing of.....
- 32-Oxygen gas is produced plentifully from
during.....process
- 33-From uses of oxygen gas are.....and.....
- 34- Oxygen gas of the atmosphere is consumed during.....
and.....processes.
- 35- Respiration and combustion processes consumegas and
producegas.
- 36- By adding hydrochloric acid to calcium carbonategas is
obtained which can be used in
- 37- Medulla oblongata is responsible for,
Whileis responsible for keeping the body balance.
38. When a glowing magnesium ribbon is placed in a jar contains
.....gas then adding drops of water ammonia gas is evolved.
39. The human skeletal system consists ofand
- 40- The axial skeleton in the man consists of , and
.....
- 41- The number of nerves in human body is





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42. The thoracic cage in the man consists ofof ribs, while the back bone consists ofvertebrae.
- 43-The gas which is used to fill some types of lamps is, whileis mainly used in photosynthesis process.
- 44- The number of cranial nerves is and the number of spinal nerves ispair.
- 45- Nitrogen is used in the manufacture ofand
- 46- from immovable joints, while from freely movable joints.
- 47- The upper limbs consists of, and
- 48- The lower limbs consists of, and
- 49- Locomotary system consists of &
- 50- Skeletal system consists of &
- 51- Types of joints are, &
- 52- & are from voluntary muscles.
- 53- & are from involuntary muscles.
- 54- exist between 2 bones, whileconnect muscles with bones.

Give reason for:-

- 1- The weight of an object is affected by its mass.
- 2- There is a relation between mass & motion.
- 3- The weight of a person on the earth is larger than its weight on moon.
- 4- An object's weight is affected by the distance being away from the center of the earth.
- 5- The moon's gravity is less than earth's gravity.
- 6-Double glassed windows are used in cold countries.
- 7- Cooking pots are made of aluminium.





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- 8- We wear wool clothes in winter.
- 9- Spaces are left between railways.
- 10-Mercury is preferred in manufacturing of thermometers.
- 11-The balance scale must be on horizontal stable surface.
- 12-The wire of spring balance expands when a body is hanged to it
- 13-The weight of the body on earth differs from its weight on another planet.
- 14-The copper conducts heat faster than aluminum.
- 15-In clinical thermometer, there is a constriction above mercury reservoir (bulb).
- 16- The ratio of oxygen is constant in air.
- 17-Ozone gas is very important in nature.
- 18-Oxygen gas does not change the color of red and blue litmus paper.
- 19-Manganese dioxide still without change in quantity and properties during preparation of oxygen.
- 20-Oxygen cylinders are used during mountain climbing.
- 21-Oxygen is collected by down displacement of water.
- 22- The medical thermometer must be put in ethyl alcohol before using.
- 23- We must shake the medical thermometer well before using.
- 24- We can't measure the temperature of objects by touching.
- 25- Mercury gives a wide range to measure the temperature.
- 26-The atmosphere has a great importance for the continuity of life.
- 27- The color of litmus paper doesn't change with O₂ gas.
- 28- Bridges which are made of iron are painted.
- 29- The mass of a piece of cleansing wire increases after burning.
- 30- Mountain climbers carry Oxygen Cylinders.
- 31- Using acetylene flame in cutting metals.





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- 32- Ozone layer has a great importance.
- 33- The atmosphere has a great importance for the continuity of life.
- 34- Clear lime water is used to detect the presence of CO_2 gas.
- 35- CO_2 gas is used in extinguishing fires.
- 36- Yeast is added to the dough in making bread.
- 37- The environment suffers from the increase of CO_2 gas.
- 38- CO_2 gas has a great importance for continuity of life.
- 39- The increase of CO_2 gas amount is harmful.
- 40- Drinking too much of soda water is unhealthy.
- 41- CO_2 gas is called silent killer.
- 42- Nitrogen is used in filling car tires.
- 43- The main source of N_2 gas is the air.
- 44- We prepare N_2 gas by passing air across the sodium hydroxide or potassium hydroxide.
- 45- We prepare N_2 gas by passing air across hot copper wire.
- 46- Nitrogen contributes in the composition of all living tissues.
- 47- Nitrogen is used to store petroleum.
- 48- Damage of the medulla oblongata causes death.
- 49- The brain is located inside the skull & the spinal cord extends through the inside of back bone.
- 50- Withdrawal of the hand quickly when it touches a hot surface.
- 51- Muscles play an important role in human movement.
- 52- Backbone consists of 33 vertebrae with cartilages between them.
- 53- The presence of brain inside the skull.
- 54- The presence of spinal cord inside the backbone.
- 55- Ribcage is very important for human body.
- 56- The upper limbs are very important.





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- 57- Lower limbs are very important.
- 58- Skull joints are from immovable joints.
- 59- Knee joints are from slightly (limited) movable joints.
- 60- Wrist & thigh joints are from freely (wide) movable joints.
- 61- Muscular system is considered the engine of our body.
- 62- Eating healthy food rich in calcium, phosphorus & vitamin.
- 63- Avoid doing violent movement.
- 64- Avoid carrying heavy things.
- 65- Sitting & standing correctly during studying.
- 66- Exposing the body to sunlight for suitable periods.

Correct the underline words:-

- 1- Weight is the amount of matter in an object.
- 2- All matters have weight whatever their shapes, their place or their physical states.
- 3- The mass of a piece of stone on the earth's surface is smaller than its mass on the moon's surface.
- 4- Gram is the only unit for measuring mass.
- 5- Kilogram equals the mass of one paper clip.
- 6- Gram is used to measure very big masses.
- 7- Ton is suitable for measuring mass of jewellery, while gram is suitable for measuring mass of vegetables.
- 8- Sensitive two arm scale is used to measure big masses as vegetables.
- 9- The reason of object's falling downward earth is mass.
- 10- Mass is the gravitational force by which a body is attracted to the earth.
- 11- The effect of weight is directed towards the upper of the earth.





Science 6 th - prim

- 12- On the earth, there is weightlessness, but in space objects have weight.
- 13- Newton is the measuring unit of mass.
- 14- Gram equals the weight of an object whose mass is 100 grams.
- 15- When the mass of two big oranges equals 500 grams, so their weight equals 6Newton.
- 16- The weight of any object can be measured by the balance scale.
- 17- The extension of the wire of the spring scale equals the mass of the hanged object on it.
- 18- By increasing the mass of the piece of stone, its weight decreases.
- 19- Weight is inversely proportional to mass.
- 20- Mass = weight $\times 10$
- 21- When the mass of a toy car equals 1 kilogram, so its weight equals 300 Newton.
- 22- When the weight of a chair on earth's surface is 12 Newton, so its weight on the moon's surface is 6 Newton.
- 23- When the distance between an object and the center of its planet increases, its weight increases, as the gravitational force increases.
- 24- Heat is a form of energy that transfers from the object of lower temperature to the higher one.
- 25- People wear heavy clothes in winter to decrease their feeling with heat.
- 26- All materials are good conductors of heat.
- 27- Touching a cup of hot water causes the transfer of heat from your hand to the cup.
- 28- The measuring devices of temperature are scales.
- 29- The degree of hotness or coldness is heat.





Science 6th - prim

- 30- Copper, iron and air allow heat to transfer through.
- 31- Air is a good heat of conductor.
- 32- Plastic, paper and wood are good conductors of heat.
- 33- Copper is bad conductor of heat.
- 34- Aluminium is a poor conductor of heat.
- 35- Water is used in the manufacturing of insulating glass windows as it's an insulator.
- 36- Materials that conduct heat are called heat insulators.
- 37- All materials have the same ability to conduct heat.
- 38- Aluminium conducts heat faster than copper.
- 39- Cooking pots are made of wood.
- 40- Handles of cooking pots are made of copper.
- 41- Wood is a good conductor of heat.
- 42- Good conductors of heat are used in making heavy blankets and woolen clothes.
- 43- We can measure the temperature accurately by touching.
- 44- The idea of making thermometer depends on the expansion and contraction of solids by changing the temperature.
- 45- The medical thermometer has a capillary tube to prevent mercury from going back to the mercury bulb.
- 46- The scale of medical thermometer starts from 0°C to 100°C.
- 47- Each degree in the medical thermometer is divided into 3 parts.
- 48- you shouldn't sterilize the medical thermometer before using.





Science 6th - prim

- 49- The Celsius thermometer is used for measuring the temperature of human being.
- 50- You must not touch a broken thermometer because mercury is hot.
- 51- The normal temperature of the healthy person is 35°C.
- 52- The melting point of ice is 100°C
- 53- The molecule of ozone gas consists of four oxygen atoms.
- 54- Nitrogen peroxide gas is decomposed to water and nitrogen in the presence of manganese dioxide.
- 55- The joints of the skull are from limited movement.
- 56- Carbon dioxide is from the component of explosives.
- 57- Nitrogen gas is used in putting off fires.
- 58- A black precipitate is formed when CO₂ gas is passed in lime water.
- 59- The nodular bacteria fix air Oxygen in the roots of legumes plants.
- 60- Nitrogen is characterized by easily dissolving in water.
- 61- Oxygen is called azote which means lifeless gas.



Comparison between Celsius and medical thermometers:

Point of comparison	Celsius thermometer	Medical thermometer
1- Structure
2- Range of scale	From to	From to
3- The used liquid
4- Constriction
5- Usage

Join from column (A) what is suitable from column (B)

(A)	(B)
1. Gram	a-is measuring unit of weight.
2. Kilo gram	b-is measuring unit of temperature
3. Newton	c- is measuring unit of heavy mass.
4. Celsius	d-is measuring unit of light mass.
	e-measuring unit of volume.

Choose the correct answer:

- The device of measuring weight is.....
a) one arm scale b) two arm scale c) digital scale d) spring scale
- An object whose weight is 20 Newton on earth, its mass is equal to.....
a) 2kg b) 10kg c) 20kg d) 200





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3. The weight of a body its mass 200 gm on earth surface nearly equals
a) 2 Newton b) 20 Newton c) 200 Newton d) 2000 Newton
4. The mass of a body on the moon surface is 10 kg, so its mass on earth surface equals....
a) 10 kg b) 10 Newton c) 60kg d) 60 Newton
5. From the tools of measuring weight is
a) kilogram b) double pans balance c) Newton d) spring scale
6. The Newton is nearly equals weight of a body its mass is.....
a) 1 gm b) 10gms c) 100gms d) 1000gms
7. The mass of half liter of water equals
a) 5gms b) 50gms c) 500gms d) 500 gms
8. Which of the following is faster in conducting heat?.....
a) aluminium b) copper c) iron d) glass
9. The weight of a person in a balloon in a certain height from the earth surface equals 70 Newton, what is the weight of the person on earth surface.....
a) 68 Newton b) 69 Newton c) 70 Newton d) 71 Newton
10. From the substances which are bad conductors of heat are.....
a) iron & aluminium b) copper & glass
c) glass & wood d) aluminium & copper
11. The operation of thermometer depends on the idea of.....
a) the change of gases volume with the change in temperature.
b) the change of liquids volume with the change in temperature.
c) the change of gases mass with the change in temperature.
d) the change of liquids mass with the change in temperature.





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12. The clinical thermometer is different from the Celsius thermometer in.....

- a) The type of matter presents in the reservoir.
- b) The presence of constriction in the capillary tube.
- c) The type of matter used in manufacturing .
- d) The effect of change temperature on the present liquid volume.

13. All the following from the properties of mercury as thermometric substance except....

- a) good conductor of heat.
- b) the expansion is regular
- c) give limited extent to measure the temperature.
- d) not adhere to the walls of capillary tube.

14. Which of the following gases have great percentage in the atmospheric air?

.....

- a) oxygen
- b) nitrogen
- c) carbon dioxide
- d) water vapor

15. Oxygen presents in the atmosphere in gaseous state in form of molecules structure.....

- a) O
- b) O₂
- c) O₃
- d) O₄

16. Respiration & combustion processes consume..... gas.

- a) oxygen
- b) nitrogen
- c) carbon dioxide
- d) argon

17. Hydrogen peroxide decomposes in presence of manganese dioxide to.....

- a) oxygen & hydrogen
- b) oxygen & water
- c) hydrogen & water
- d) hydrogen & manganese

18. A gas which is used with acetylene in welding metals is.....

- a) oxygen
- b) nitrogen
- c) carbon dioxide
- d) hydrogen

19. The maximum and minimum graduation of the clinical thermometer is between:.....

- a) 35: 42 °C
- b) 35: 45 °C
- c) 32: 42 °C
- d) 32: 45 °C

20. The planet on which the body weight equals 6 times as its weight on the moon is.....

- a) mars
- b) earth
- c) Jupiter





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21. The weight (Newton) = The mass (kilogram) x

- a) 10 b) 100 c) 1000

22. If the body weight on earth surface equals 6 Newton, its weight on moon surface equals.

- a) 1/2 b) 1 c) 6 d) 1/6

Put (✓) or (x) and correct the false one

1-All materials are good conductor of heat ()

.....

2-Copper is a good conductor of heat ()

.....

3-Cooking pots are made of wood. ()

.....

4-Handles of cooking pots are made of copper. ()

.....

5-Aluminium is a poor conductor of heat ()

.....

6-The Celsius thermometer is used for measuring temperature of human.

()

.....

7-The scale of medical thermometer starts from zero until 100 Celsius degree.

()

.....

8-The medical thermometer is used for measuring temperature of liquids

()

9- There is a constriction above the bulb in Celsius thermometer

.....

()





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10-The used liquid in the medical thermometer is mercury ()

.....

11- The scale of Celsius thermometer starts from 35 until 42 Celsius degree

()

.....

12- Wood is a good conductor of heat

()

.....

13-Heat transfers from a cold object to a hot object

()

.....

14-The mass of a body changes as its location changes

()

.....

15-The digital balance is used in measuring weight

()

.....

16- Aluminium conducts heat faster than copper.

()

.....

17-one liter of water is equivalent to 1 kg.

()

.....

18-Nitrogen gas represents 21% of the volume of the atmosphere.

()

.....





Model Answer

Write the scientific term:-

- | | |
|----------------------------|--------------------------------|
| 1- Mass | 2- weight |
| 3) 1Kg | 4) 1 Newton |
| 5- Sensitive two-arm scale | 6- spring scale |
| 7- Heat conductors | 8- heat insulators |
| 9- Medical thermometer | 10- Celsius thermometer |
| 11- Mercury | 12- thermometer |
| 13- temperature | 14- double glazed window |
| 15- Copper | 16- Expansion |
| 17- Medical thermometer | |
| 18- Ozone gas | 19- oxyacetylene |
| 20- oxygen | 21- thermometer |
| 22-[catalyst] | 23-[Joseph Priestley] |
| 24-[Antoine Lavoisier] | 25-[combustion] |
| 26-[Oxidation] | 27-[Ozone layer] |
| 28-[Oxy – acetylene] | 29-[O ₂ gas] |
| 30-[water] | 31-[Acetylene gas] |
| 32-[Carbon dioxide gas] | 33-[CO ₂ gas] |
| 34-[lime water] | 35-[diluted hydrochloric acid] |
| 36-[CO ₂ gas] | 37-[CO ₂ gas] |
| 38-[N ₂ gas] | 39-[Daniel Rutherford] |
| 40-[N ₂ gas] | |
| 41-[CO ₂ gas] | 42-[Nervous system] |
| 43-[Cell body] | 44-[Dendrites] |
| 45-[synapses] | 46-[The axon] |





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- 47-[Axon terminals]
- 48-[Central nervous system]
- 49-[The brain]
- 50-[The skull]
- 51-[The brain]
- 52-[the brain]
- 53-[cerebral cortex]
- 54-[cerebral hemispheres]
- 55-[Cerebellum]
- 56- [Cerebellum]
- 57-[The medulla oblongata]
- 58-[spinal cord]
- 59-[spinal cord]
- 60-[The peripheral nervous system]
- 61-[Cranial nerves]
- 62-[spinal nerves]
- 63-reflex action
- 64- [neuron]
- 65-[Movement]
- 66-[Locomotory system]
- 67-[the axial skeleton]
- 68-[Backbone]
- 69-[The rib cage]
- 70-[Appendicular skeleton]
- 71-[Immovable joints]
- 72-[Slightly movable joints]
- 73-[Freely movable joints]

Solution(1):-

1- The mass on moon = the mass on earth = 30 kg

2- The weight on earth = mass (kg) \times 10
 $= 30 \times 10 = 300$ newton

3- The weight on moon = the weight on earth $\times \frac{1}{6}$
 $= 300 \times \frac{1}{6} = 50$ newton





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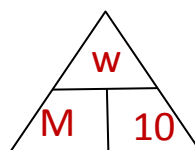
Solution(2):-

$$\begin{aligned}\text{Weight on moon} &= \frac{1}{6} \text{ weight on earth} \\ &= \frac{1}{6} \times 600 = 100 \text{ Newton}\end{aligned}$$

Solution(3):-

$$\text{Weight} = \text{mass (kg)} \times 10$$

$$\text{Mass} = \frac{\text{weight}}{10} = \frac{20}{10} = 2 \text{ kg}$$



Solution(4):-

$$\text{Mass (gm)} = 200 \text{ gm}$$

$$\text{Mass (kg)} = \frac{200}{1000} = 0.2 \text{ kg}$$

$$\begin{aligned}\text{Weight on earth} &= \text{mass (kg)} \times 10 \\ &= 0.2 \times 10 = 2 \text{ newton}\end{aligned}$$

$$\begin{aligned}\text{Weight on moon} &= \text{weight on earth} \times \frac{1}{6} \\ &= 2 \times \frac{1}{6} = 0.33 \text{ newton}\end{aligned}$$

Complete:-

- | | |
|--|------------------------|
| 1- balance scale ‘ spring scale | 2- 20 kg |
| 3- Kilogram ‘ gram ‘ newton | 4- weight |
| 5- weight | |
| 6- Mass ‘ planet where the object exist ‘ distance from the center of the earth. | |
| 7- place | 8- mass |
| 9- gram | 10) 1 kilogram |
| 11- 100 | 12- copper ‘ Aluminium |
| 13- wood ‘ plastic ‘ rubber | 14- alcohol |





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15- temperature of liquids ‘ the body temperature

16- wood ‘ plastic

17- making cooking pans ‘ tea boilers

18- Medical ‘ 0°C ‘ 100°C

19- Celsius

20- copper

21- 10 - 1

22- bad

23- good conductors of heat

24- energy ‘ higher ‘ lower

25- thermometers

26- bad conductors of heat

27- expand ‘ contract

28- 0°C ‘ 100°C

29- Medical (clinical)

30- 37°C

31- food

32- Plants – photosynthesis

33- respiration – diving

34- respiration combustion

35- O₂ - CO₂

36- CO₂ - extinguishing fires

37- involuntary process controlling - cerebellum

38- N₂

39- axial skeleton - appendicular

40- skull , backbone -ribcage

41- (43 pairs)

42 – (12 pairs – 33)

43- N₂ - Co₂

44- (12 pairs – 31)

45- gunpowder - fertilizers





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46-Skull - wrist

47- Humerus- fore arm-hand bones

48- femur- shaft-foot bones

49-skeletal- muscular systems

50-axial- appendicular skeleton

51-immovable, slightly movable- freely movable joints

52- Face- abdominal wall muscles

53- Blood vessels- bladder muscles

54- Joints- tendons

Give reason for:-

1- Because as mass increases the weight increases.

2- Because the more object's mass increases, the more difficult to change it's speed.

3- Because earth has greater mass & gravitational force than moon.

4- Because the gravity force decreases as the body moves away from the earth so it's weight decreases.

5- Because the mass of moon is less than that of earth & as mass of the planet increases it's gravitational force increases.

6- Because the air that between the two sheets of glass is a bad conductor of heat, which prevents leakage of heat.

7- Because aluminium is good conductor of heat.

8- To keep the body warm as they are bad conductor of heat.

9- Because by heat the railways expand & twist causing train accidents.





Science 6th - prim

- 10- Because a- mercury doesn't stick with the capillary tube.
b- mercury is a good conductor of heat.
C – mercury expands by heating and contracts by cooling
d- mercury is a liquid metal and can be seen easily.
- 11- To avoid vibration of the balance and get the reading of mass more accurate.
- 12- Because the gravitational force of the earth attracts the hanged body downward, that causes the expansion of the wire of spring scale.
- 13- because, as the mass of planet changes, the gravity changes, so the weight of the object on it changes.
- 14- because the copper allows heat to flow through it faster than the aluminum.
- 15- To prevent falling down the mercury to the mercury bulb and record the temperature.
- 16-Because the amount of oxygen which is consumed during respiration process equals to its amount which is produced by plants during photosynthesis process.
- 17- Because it forms the ozone layer that protects the earth from harmful rays of the sun.
- 18- Because the oxygen gas has a neutral effect on red or blue litmus paper.
- 19-Because the manganese dioxide is a catalyst, so its amount and properties don't change during the reaction.
- 20- Because oxygen is heavier than the air, so it allows us to breathe on mountains.
- 21-Because oxygen scarcely dissolves in water.
- 22- To sterilize it from the microbes before use it.
- 23- To force mercury goes down to the mercury bulb and measure the temperature.
- 24- Because by touching, we know only is this body hot or cold, but we didn't measure the temperature of this body.
- 25- Because mercury is still liquid from (-39 until 357 °C).
- 26- Because the atmosphere
a- adjusts the temperature of the earth.
b- protects earth from harmful rays of the sun.





Science 6th - prim

- 27- Because it has neutral effect on litmus paper.
- 28- To prevent them from rusting that causes damage.
- 29- Because it reacts (combines) with O_2 gas forming iron oxide.
- 30- Because O_2 gas becomes lighter by rising above the earth's surface.
- 31- Because it's temperature reaches $3500^\circ C$ that is enough to melt metals.
- 32- Because it protects the earth's surface from harmful radiation.
- 33- Because :
1. It protects the earth by absorbing ultraviolet radiation comes from space.
 2. It adjusts the temperature of the earth.
 3. Solid materials in it help in condensing water vapour into rains or snow.
- 34- Because CO_2 gas turbid clear lime water by forming calcium carbonate (white precipitate) that doesn't dissolve in water.
- 35- Because CO_2 gas doesn't burn & doesn't help in burning.
- 36- Because yeast produce CO_2 gas by fermentation that expands by heat making the bread spongy & tasty.
- 37- Due to the removal of forests.
- The burning of massive amount of fuel in industry & means of transportation engines.
- 38- Because green plants take CO_2 gas to make photosynthesis process to make their food & nutrients for all living organisms.
- 39- Because the increase of CO_2 gas leads to: rising the earth's temperature (global warming).
- Suffocation of living organisms.
- 40- Because it doesn't contain any nutrients except sugar & it contains large amount of CO_2 gas.
- 41- Because man gets suffocated if he breathes CO_2 gas which is colorless , tasteless & odorless.





Science 6th - prim

- 42- Because its volume doesn't change by changing temperature.
- 43- Because the air contains 78 % of N_2 gas from its volume
- 44- To absorb CO_2 gas from the air.
- 45- To make copper combines with Oxygen in the air.
- 46- Because nitrogen is the main component of proteins that build up tissues of living organisms.
- 47- Because nitrogen is inactive element that doesn't help in burning.
- 48- Because it regulates heart beats
- it regulate the movement of respiratory system parts.
 - it regulate the movement & functions of the digestive system.
- 49- To protect the brain & the spinal cord.
- 50- Because the hot surface affects the nerve ending in the fingers resulting in nerve impulses.
- Nerve impulses are transmitted to the spinal cord.
 - Nerve impulses are transmitted from spinal cord to arm muscles that contracts & the arm withdraws a way from the hot surface.
- 51- Because muscles generate mechanical energy & movement to the body.
- 52- To prevent their friction during movement.
- 53-To protect the brain.
- 54-To protect the spinal cord.
- 55-Because it protects the lungs & heart and help in inhalation & exhalation process.
- 56-To allow eating, drinking, writing & holding things.
- 57-To allow walking, running, standing, sitting & carrying the rest of the body.





Science 6th - prim

58-Because they don't allow any movement.

59-Because they allow movement in one direction only.

60-Because they allow movement in all directions.

61-Because muscles generate mechanical energy & movement to the body.

62-To prevent bone diseases such as steomalacia & rickets.

63-To avoid bone fractures.

64-To protect the skeleton & back bone.

65-To avoid straining the neck or back bone vertebrae.

66-To provide the body with vitamin (D).

Correct the underline words:-

1- Mass

2- Mass

3- equal

4- Gram, kg and ton

5- Gram

6- Ton

7- Gram, kg

8- Balance scale

9- Weight

10- Weight

11- center

12- on space, on earth

13- Gram

14- Newton

15- 5 newton

16- spring scale

17- Weight

18- increases

19- directly

20- Weight, Mass

21- 10 Newton

22- 2 Newton

23- decreases, decreases

24- Higher, lower

25- cold

26- metals



- | | |
|--------------------------|--------------------------------|
| 27- The cup to your hand | 28- thermometers |
| 29- Temperature | 30- Aluminium |
| 31- bad | 32- bad |
| 33- good | 34- wood |
| 35- Air | 36- Heat conductors |
| 37- different | 38- slower |
| 39- Aluminium | 40- wood |
| 41- Copper | 42- bad conductors of heat |
| 43- thermometer | 44- liquids |
| 45- constriction | 46- 35°C to 42°C |
| 47- 10 parts | 48- should sterilize |
| 49- medical | 50- toxic |
| 51- 37°C | 52- 0°C |
| 53- three | 54- hydrogen peroxide – oxygen |
| 55- [immovable] | 56- [soft drinks] |
| 57- [CO ₂] | 58- [white] |
| 59- [nitrogen] | 60- [rarely] |
| 61- [nitrogen] | |

Comparison:

Point of comparison	Celsius thermometer	Medical thermometer
1- Structure	(a) transparent thick glass tube. (b) Capillary tube closed from one of its ends. (c) Mercury bulb filled with mercury and connected to the other end of the Capillary tube	
2- Range of scale	From 0°C to 100°C	From 35°C to 42°C
3- Constriction	absent	present
4- The used liquid	Mercury	Mercury
5- Usage	Measuring temp of liquid	Measuring temp of human body



Join from column (a) what is suitable from column(b)

(a)	(b)
1. Gram (d)	a-measuring unit of weight
2. kilo gram (c)	b-measuring unit of temperature
3. Newton (a)	c- measuring unit of heavy mass
4. Celsius (b)	d- measuring unit of light mass
	e-measuring unit of volume





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Choose

1. spring scale
2. 2kg
3. 2 newton
4. 10kg
5. spring scale
6. 100 gms
7. 500 gms
8. copper
9. 71 newton
10. glass & wood
11. the change of liquids volume with the change in the temperature
12. the presence of constriction in the capillary tube
13. give limited extend to measure the temperature
14. nitrogen
15. O_2
16. oxygen
17. oxygen & water
18. oxygen
19. 35:42 celsius degree
20. earth
21. 10
22. 1





Science 6 th - prim

Put (✓) or (x)

1. (x) metals
2. (✓)
3. (x) aluminium
4. (x) wood
5. (x) good
6. (x) medical
7. (x) Celsius
8. (x) Celsius
9. (x) medical
- 10-(✓)
- 11-(x) medical
- 12-(x) bad
- 13-(x) hot to cold
- 14-(x) weight
- 15-(x) mass
- 16-(x) copper-aluminium
- 17-(✓)
- 18-(x) oxygen



Points of comparison	Mass	Weight
Definition :	The amount of matter in an object.	The gravitational force by which the body is attracted to the Earth.
Measuring unit :	Kilogram or gram or ton.	Newton.
Measuring device :	Two-arms scale and one-arm scale.	Spring scale.
The direction of its effect :	It has no effect.	Its effect is always directed towards the center of the Earth (downwards).
The effect of changing the place :	Constant. (It does not change with changing the place).	Variable (It changes with changing the place).

The two-arms scale and the spring scale.

Point of comparison	Two-arms scale	Spring scale
Use :	It is a device that is used to measure the mass of any object.	It is a device that is used to measure the weight of any object.



(1) Between oxidation and burning (combustion) :

Points of comparison	Oxidation	Burning (combustion)
1. Definition :	It is a slow combination (union) between oxygen and element in the presence of moisture (water).	It is a rapid combination (union) between oxygen and element producing heat and light.
2. Example :	Iron rusting.	Burning a piece of cleansing wire.

(2) Between oxygen, carbon dioxide and nitrogen :

Points of comparison	Oxygen	Carbon dioxide	Nitrogen
1. Its ratio in air :	21%	0.03%	78%
2. Structure :	Its molecule is composed of two oxygen atoms linked together.	Its molecule is composed of one carbon atom linked with two oxygen atoms.	Its molecule is composed of two nitrogen atoms linked together.
3. Symbol :	O ₂	CO ₂	N ₂
4. Properties :	<ul style="list-style-type: none"> a. It is a colorless, tasteless and odorless gas. b. It scarcely dissolves in water. c. It doesn't burn, but helps in burning. d. It has a neutral effect on litmus paper. e. It is heavier than air, so it replaces air. 	<ul style="list-style-type: none"> a. It is a colorless, odorless and tasteless gas. b. It easily dissolves in water, so it is not collected by displacement of water. c. It doesn't burn and doesn't help in burning so, it is used in extinguishing fires. d. It reacts with magnesium forming magnesium oxide (white powder) and carbon or coal (black substance) that deposits on the wall of the cylinder. e. It is heavier than air so, it is collected by upward displacement of air. 	<ul style="list-style-type: none"> a. It is colorless, tasteless and odorless gas. b. It scarcely dissolves in water. c. It doesn't help in burning. d. It combines with lighted magnesium ribbon forming a white substance that reacts with water forming ammonia gas which has a pungent smell. e. It doesn't easily react with a lot of elements as it is inactive element. f. It can be condensed into a liquified state.

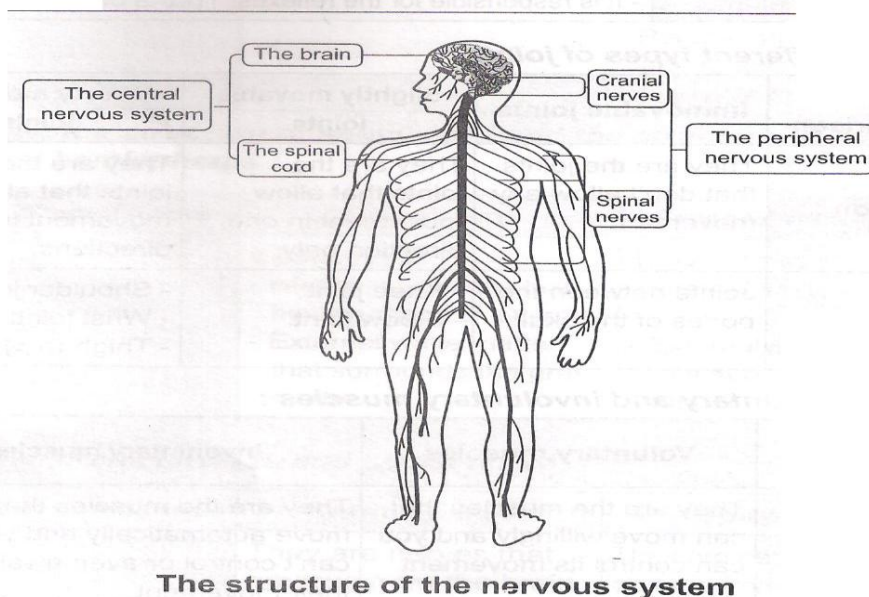
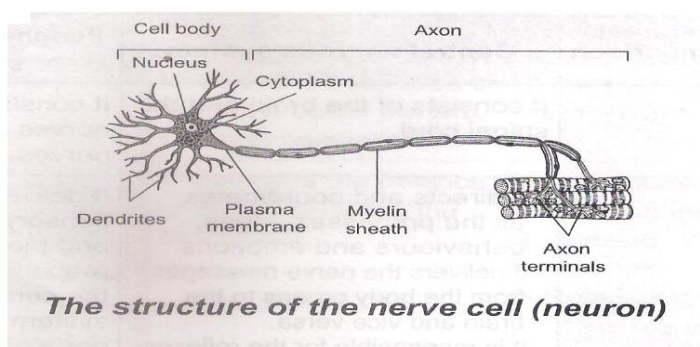


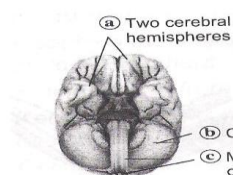
The joint / muscle	Its type
1. Skull joints.	Immovable joints.
2. Knee joint.	Slightly movable joints.
3. Elbow joint.	Slightly movable joints.
4. Shoulder joint.	Freely movable joints.
5. Thigh (hip) joint.	Freely movable joints.
6. Wrist joint.	Freely movable joints.
7. The limbs muscles.	Voluntary muscles.
8. Face muscles.	Voluntary muscles.
9. Trunk muscles.	Voluntary muscles.
10. Abdominal wall muscles.	Voluntary muscles.
11. The bladder muscles.	Involuntary muscles.
12. The blood vessels.	Involuntary muscles.
13. The gastrointestinal tract.	Involuntary muscles.

Between the brain and the spinal cord :

Points of comparison	The brain	The spinal cord
1. Definition :	It is a nerve block containing millions of nerve cells and it is the main control center in your body.	It is a cylindrical cord from which the spinal nerves extend.
2. Location :	It is located in a bony box called skull.	It extends in a channel within a series of vertebrae in the backbone.
3. Function :	It directs and coordinates all the processes, ideas, behaviours and emotions.	<ul style="list-style-type: none"> - It delivers the nerve messages from the body organs to the brain and vice versa. - It is responsible for the reflex action.



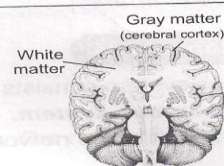




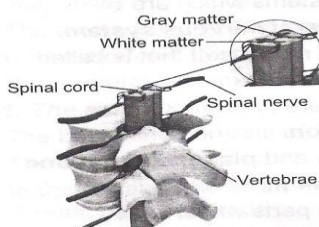
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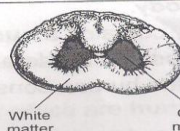
Brain



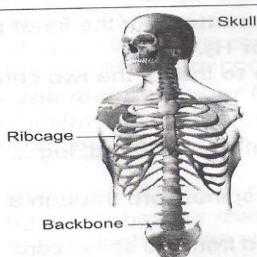
"Longitudinal section of brain"



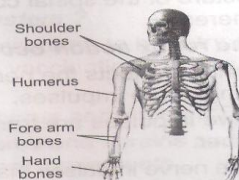
"Spinal cord"



"T.S. in the spinal cord"



"Axial skeleton"



"Bones of upper limbs"



