

6th Science Lesson 3 Questions in English**3] Matter Around Us**

1. Which of the following statement is correct?

- 1) Matter is defined as anything that has mass and takes up space.
- 2) Atoms are the smallest particle of matter
 - a) 1 alone
 - b) 2 alone
 - c) 1, 2
 - d) None

Explanation

Matter is all around us. The air you are breathing is also a matter. Matter is defined as anything that has mass and takes up space. Matter is found in three major states; solid, liquid and gas. All matter is made of atoms. Atoms are the smallest particle of matter.

2. What is the full form of TEM?

- a) Tuned Electron Microscope
- b) **Tunnelling Electron Microscope**
- c) Turbent Electron Microscope
- d) Transverse Electron Microscope

Explanation

Science has come up with a technology to identify structure of atoms Scanning Electron Microscope (SEM) and Tunnelling Electron Microscope (TEM) which uses electricity to map atoms.

3. Silicon atoms on a surface can be viewed through_____

- a) **Scanning Tunnelling Microscopy**
- b) Scanned Tunnelling Microscopy
- c) Tunnelling Electron Microscope
- d) Transverse Electron Microscope

Explanation

Silicon atoms on a surface can be viewed through the Scanning Tunnelling Microscopy, (STM).

4. Which of the following is not a common state of matter on Earth?

- a) Solids
- b) Liquid
- c) Bose – Einstein condensates

d) Plasma**Explanation**

Plasma is not a common state of matter on Earth, but may be the most common state of matter in the universe. For example, stars including sun are covered in plasma.

5. How many more states are available Besides solids, Liquid and gases?

- a) 4
- b) 5
- c) 2
- d) 3

Explanation

Besides solids, Liquid and gases there are two more states plasma and Bose – Einstein condensates.

6. In which year Bose – Einstein condensate was predicted?

- a) 1925
- b) 1995
- c) 1935
- d) 1915

Explanation

Bose – Einstein condensate was predicted around 1925 and confirmed in 1995, This is used in the field of cryogenics.

7. Bose – Einstein condensate is_____ like matter

- a) Solid
- b) Gas
- c) Liquid
- d) Plasma

Explanation

Bose – Einstein condensate is a gas – like state of matter that exists at extremely cold temperatures.

8. Who is the Indian philosopher came with idea of matter?

- a) Chanakya
- b) Kautaliya

- c) Kanada
- d) Aryabataha

Explanation

Matter occupies space and has mass. Ancient philosophers pondered over such questions. In India a philosopher named Kanada and in Greece a philosopher named Democritus came to somewhat similar idea.

9. Which of the following statement is correct?

- 1) Particles of matter have a lot of space in between them.
 - 2) In different forms of matter this spacing will be same
- a) 1 alone
 - b) 2 alone
 - c) 1, 2
 - d) None

Explanation

Particles of matter have a lot of space in between them. In different forms of matter this spacing will be different.

10. The movement of gas and liquid particles is called as_____

- a) Dispersion
- b) Diffusion
- c) Dilution
- d) None

Explanation

We may conclude that the particles of gases and liquids can move and that among gases more easily. We call this movement as diffusion. Diffusion is the tendency of particles to spread out in order to occupy the available space.

11. Which of the following statement is correct?

- 1) In solid, the particles are tightly packed with very little space between them.
 - 2) Particles in liquids are arranged in a random or irregular way and the space between the particles is greater than that in solids
- a) 1 alone
 - b) 2 alone
 - c) 1, 2
 - d) None

Explanation

In solid, the particles are tightly packed with very little space between them. Eg. Stone. Particles in liquids are arranged in a random or irregular way and the space between the particles is greater than that in solids Eg. Water

12. Which of the following statement is incorrect?

- 1) Liquid is not effected by gravity
- 2) Liquid atoms are packed more loosely which allows things to be able to pass through it
 - a) 1, 2
 - b) 1 alone
 - c) 2 alone
 - d) None

Explanation

Liquid atoms are packed more loosely which allows things to be able to pass through it. Liquid is effected by gravity more than anything. Liquids are always moving due to gravity around it.

13. Which of the following is not affected gravity?

- a) Solid
- b) Air
- c) Gas
- d) None

Explanation

Gas atoms are spread out so far, you can walk through it without any restriction. Gas is not affected by gravity. The gas's atoms never stop moving and it never stays in place.

14. Movement of particles is restricted in_____

- a) Solid
- b) Gas
- c) Liquid
- d) None

Explanation

Movement of particles is restricted in solids and they do not diffuse like liquids or gases. In fluids the particles are under motion and hence can push ink or smoke particles here and there.

15. Which of the following statement is incorrect?

- 1) "Liquefaction of gases" is the process by which substances in their Liquid state are converted to the gas state
- 2) When pressure on a gas is increased, its molecules comes closer together

- a) 1 alone
- b) 2 alone
- c) 1, 2
- d) None

Explanation

“Liquefaction of gases” is the process by which substances in their gaseous state are converted to the liquid state. When pressure on a gas is increased, its molecules come closer together, and its temperature is reduced, which removes enough energy to make it change from the gaseous to the liquid state.

16. Which of the following statement is correct?

- 1) A pure substance is made up of only one kind of particles
 - 2) Pure substances may be elements or compounds
- a) 1 alone
 - b) 2 alone
 - c) 1, 2
 - d) None

Explanation

A pure substance is made up of only one kind of particles. Pure substances may be elements or compounds.

17. Which of the following is considered as Purity of gold?

- a) 24 carat
- b) 22 carat
- c) 23 carat
- d) 20 carat

Explanation

Purity of gold is expressed in terms of ‘carat’. 24 carat gold is considered to be gold in its purest form.

18. Milk Contains_____

- 1) Water
 - 2) Fat
 - 3) Protein
- a) 1, 3
 - b) 1, 2
 - c) 2, 3

d) 1, 2, 3

Explanation

Air is a mixture because it contains Oxygen, Nitrogen, Carbon dioxide, water vapour, noble gases etc. Milk is also a mixture of water, fat, protein etc.

19. 22 carat gold composed of_____

- a) gold and cadmium
- b) gold and Silver
- c) gold and copper
- d) both a and c

Explanation

When elements chemically combine they form compounds; whereas a mixture can be a physical combination of two or more elements. Example: 22 carat gold which is composed of gold and copper / gold and cadmium.

20. Which of the following is an example of Sieving?

- a) Separation bran from flour
- b) sand from gravel
- c) both a and b
- d) none

Explanation

A sieve is similar to a strainer. Sieving is used when we have to separate solid particles of different sizes. Eg: bran from flour, sand from gravel etc.

21. Which of the following is used to separate butter from curd?

- a) Churning
- b) Sieving
- c) Filtering
- d) None

Explanation

When very fine insoluble solids have to be separated from a liquid as in butter from curds, Churning is performed. The mixture is churned vigorously when solid butter will be collected on the sides of the vessel. Both butter and buttermilk are obtained after churning are useful and can be consumed.

22. Which of the following method is used in washing machine?

- a) Filtering
- b) Sieving
- c) **Churning**
- d) None

Explanation

In washing machines Churning principle is used to squeeze out dirt from clothes and the method is called centrifugation.

23. Farmers separate grains from their stalks using_____

- a) Churning
- b) **Threshing**
- c) Sewing
- d) None

Explanation

Farmers separate grains from their stalks by beating them so hard that the grains are separated from their stalks. This is called Threshing.

24. What is the feature of husk?

- a) **very light and gets easily blown**
- b) very heavy and gets easily blown
- c) very light and cannot be blown
- d) very heavy and cannot be blown

Explanation

Rice, wheat and other food grains are covered in husk which cannot be eaten by us. Husk is very light and gets easily blown away by a breeze or wind.

25. Which method is used to remove husk from rice?

- a) Churning
- b) Sewing
- c) **Winnowing**
- d) Threshing

Explanation

Rice, wheat and other food grains are covered in husk which cannot be eaten by us. Husk is very light and gets easily blown away by a breeze or wind. This property is made use of in winnowing. This is done by dropping the mixture slowly from a height in the presence of wind. Lighter solids

i.e. husks will be carried by wind and will be collected in a separate heap while heavier solids i.e. grains will fall closer and form a separate heap.

26. Which of the following is correct?

- 1) Rice husks are the hard - protecting coverings of grains of rice.
 - 2) During the growing season, husks can be used as building material, fertilizer, insulation material and fuel
- a) 1 alone
 - b) 2 alone
 - c) 1, 2
 - d) None

Explanation

Rice husks are the hard protecting coverings of grains of rice. In addition to protecting rice during the growing season, husks can be used as building material, fertilizer, insulation material and fuel.

27. Iron in a mixture can be separated using_____

- a) Winnowing
- b) Churning
- c) **magnetic separation**
- d) Sedimentation

Explanation

In a mixture containing iron, the magnetic property of iron can be used to separate it from non-magnetic substances by using a magnet. Substances that are attracted to a magnet are called magnetic. Separating solids using a magnet is called magnetic separation.

28. Which of the following statement is correct?

- 1) While washing rice in water, lighter impurities float while heavier rice grains sink to the bottom
 - 2) The water with the impurities is carefully poured away leaving clean rice at the bottom. This is called decantation.
- a) 1 alone
 - b) 2 alone
 - c) 1, 2
 - d) None

Explanation

The rice or pulses are washed in water. The lighter impurities float while heavier rice grains sink to the bottom. This is called sedimentation. The water with the impurities is carefully poured away leaving clean rice at the bottom. This is called decantation.

29. Decantation process is done after_____

- a) **Sedimentation**
- b) Filtration
- c) Churning
- d) None

Explanation

Decantation process is done after sedimentation. The supernatant liquid is slowly poured out from the container without disturbing the sediment.

30. The process of removal of water above the sediment is called_____

- a) Filtration
- b) **Decantation**
- c) Churning
- d) Sedimentation

Explanation

The process of removal of water above the sediment is called decantation. But even after decantation the water is not completely free from fine soil particles.

31. Which of the following statement is correct?

- 1) A filter paper has very fine pores much smaller than soil particles.
 - 2) The liquid which passes through the filter and comes down is called filtrate
- a) 1 alone
 - b) 2 alone
 - c) **1, 2**
 - d) None

Explanation

A filter paper has very fine pores much smaller than soil particles. The liquid which passes through the filter and comes down is called filtrate.

32. The insoluble component left behind on the filter is called_____

- a) Filtrate
- b) **Residue**
- c) Sediment

d) None

Explanation

The liquid which passes through the filter and comes down is called filtrate and the insoluble component left behind on the filter is called residue.

33. The germs in water can be killed using_____

- a) UV rays
- b) X rays
- c) IR rays
- d) None

Explanation

In most houses people use commercial water filter to remove not only the impurities but also to kill the harmful germs in water using UV rays.

34. Which of the following statement is correct?

- 1) An adulterated substance will not indicate the true properties of the original substance.
 - 2) Turmeric powder is adulterated with a bright yellow chemical which is poisonous to our health
- a) 1 alone
 - b) 2 alone
 - c) 1, 2
 - d) None

Explanation

An adulterated substance will not indicate the true properties of the original substance. For example: Used tea leaves are sometimes used as adulterants in tea. Turmeric powder is adulterated with a bright yellow chemical which is poisonous to our health.