

Science Quiz June 2021

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- Who gave the equations of motion for the first time?
(A) Bernhard Nobel (B) Isaac Newton (C) C. V. Raman (D) Einstein
- Displacement of the object in a unit time is called ----
(A) speed (B) velocity (C) acceleration (D) average speed
- The rate of change of velocity per second is known as -----
(A) acceleration (B) speed (C) average velocity (D) linear motion
- A particle is moving in a circular path of radius (r). The displacement after half a circle would be -----
(A) zero (B) πr (C) $2r$ (D) $2\pi r$
- Negative acceleration is known as -----
(A) retardation (B) linear motion (C) uniform acceleration (D) increasing acceleration.
- and ----- laid down the scientific foundation of concept of motion.
(A) Einstein and CV Raman (B) Galileo and Newton
(C) Bernhard Nobel and Newton (D) none of these
- Light year is a unit of -----
(A) distance between two sources of light
(B) distance between two celestial bodies
(C) distance and it is defined as the distance covered by a light in year
(D) intensity of light
- Which of the following can be zero for a moving body?
(A) distance (B) displacement (C) speed (D) average speed
- In a circular motion, when do distance and displacement have the same value?
(A) never (B) twice (C) once a circle (D) cannot think
- Boron, Silicon, Germanium etc. are -----
(A) metals (B) non-metals (C) metalloids (D) none of them
- The major component of a solution is called -----
(A) solute (B) insoluble (C) solvent (D) solution
- To separate a mixture of two or more miscible liquids for which the difference in boiling points is less than -----, a fractional distillation method is used.
(A) 25K (B) 15K (C) 273K (D) 0°C

13. ----- effect originates due to optical properties of a colloidal solution.
(A) Tindall affect (B) evaporation (C) sublimation (D) chromatography
14. Which of the following statement is true?
(A) a mixture has a fixed melting point
(B) the characteristics features of a particular substance obtained from different sources will be different
(C) solution is a homogeneous mixture
(D) colloids are homogeneous mixture.
15. What is a substance composed of two or more elements, chemically combined with one another in a fixed proportion known as -----
(A) mixture (B) compound (C) colloids (D) suspension
16. How would you separate common salt and iodine from their mixture?
(A) filtration (B) sublimation (C) fractional distillation (D) evaporation
17. Milk, face cream are examples of -----
(A) aerosol (B) emulsion (C) sol (D) solid sol
18. What is known as 'tincture of iodine'?
(A) a solution of iodine and water (B) a solution of iodine and acetone
(C) a solution of iodine and alcohol (D) solution of iodine in potassium iodine
19. A mixture of sulphur and carbon disulphide is -----
(A) heterogenous and shows Tyndall effect
(B) homogeneous and shows Tyndall effect
(C) heterogeneous and does not show Tyndall effect
(D) homogeneous and does not show Tyndall effect
20. Sol and gel are example of -----
(A) solid-solid colloids
(B) sol is a solid-liquid colloid and gel is liquid-solid colloid
(C) sol is solid-solid colloid and gel is solid-liquid
(D) sol is a liquid- solid colloid and gel is a solid-liquid colloid
21. Mercury and bromine are both -----
(A) liquid at room temperature (B) solid at room temperature
(C) gases at room temperature (D) both (A) and (B)
22. What is the reason for the difference in properties of solution, colloids and suspension?
(A) due to different particle size (B) due to similar particle size
(C) due to different intermolecular forces (D) none of these
23. A collid is a mixture ----- and its components can be separated by the technique known as -----
(A) homogeneous, filtration (B) heterogeneous, centrifugation
(C) heterogenous, filtration (D) homogeneous, fractional distillation

24. Iron filing and sulphur were mixed together and divided into two parts 'A' and 'B'. Part A was heated strongly while part 'B' was not heated. Dilute hydrochloric acid was added to both the parts and evolution of gas was seen in both the cases. What are the gases evolved?
 (A) hydrogen and hydrogen sulphide (B) hydrogen sulphide and hydrogen
 (C) only hydrogen gas evolved in both the parts (D) only hydrogen sulphide gas was evolved
25. Air is a mixture and not a compound because -----
 (A) the component of air can be separated by fractional distillation of liquid air
 (B) the composition of air is variable
 (C) when air is obtained by mixing its constituent gases, on heat is either evolved or absorbed
 (D) all the above

Answers

1(B) 2(B) 3(A) 4(C) 5(A) 6(B) 7(B) 8(B) 9(C) 10(C) 11(C) 12(A)
 13(A) 14(C) 15(B) 16(B) 17(B) 18(C) 19(D) 20(B) 21(A) 22(A) 23(B) 24(B) 25(D)