

“UTSAAH” Test Series

उत्साह है तो जूनून है, जूनून है तो जीत पक्की है

9th TOPIC – Maths Chapter 1- Number System

- In which form, do the water molecules have less kinetic energy?
 - Ice
 - Water
 - Steam
 - All of them have equal kinetic energy
- Which of the following describes the liquid phase?
 - It has a definite shape and a definite volume.
 - It has a definite shape but not definite volume.
 - It has a definite volume but not a definite shape.
 - It has neither a definite shape nor a definite volume.
- Which of these choices is defined “Standard Pressure”?
 - 14.7 psi
 - 1 atm
 - 760 torr
 - All of these
- The process of evaporation causes:
 - heating
 - cooling
 - increase in temperature
 - none of these
- Kinetic energy of molecules is directly proportional to
 - temperature
 - pressure
 - both (a) and (b)
 - atmospheric pressure
- The inter-particle force are the strongest in
 - hydrogen
 - methyl alcohol
 - water
 - sodium chloride
- The electric bulb on long use forms a black coating on its inner surface. The process associated with this is
 - melting of tungsten
 - sublimation of tungsten
 - oxidation of tungsten
 - reduction of tungsten
- Sugar syrup, usually used to coat sweets with sugar, becomes hard when cooled. From this we can conclude that sugar syrup is:
 - a saturated solution
 - an unsaturated solution
 - not a solution
 - none of these
- To separate the solids which are insoluble in liquids such that solid is heavier than liquid:
 - sedimentation and decantation
 - evaporation and condensation
 - filtration
 - condensation and crystallization
- Which changes of state occur during distillation?
 - Boiling followed by filtration
 - Boiling followed by condensation
 - Condensation followed by boiling

- (d) Filtration followed by boiling
11. The evaporation of a liquid can be best carried out in a
- beaker
 - China dish
 - test tube
 - flask
12. The state of matter which consists of super energetic particles in the form of ionized gases is called
- gaseous state
 - liquid state
 - Bose-Einstein condensate
 - plasma state
13. A saturated salt water solution was heated and allowed to cool without adding any more salt. What will happen?
- Some salt appears to settle at the bottom.
 - Some more salt can be dissolved now.
 - No change takes place.
 - Both (a) and (b)
14. When liquid starts boiling, further heat energy which is supplied
- is lost to the surroundings as much
 - Increases the temperature of the liquid
 - Increases the kinetic energy of the particles in the liquid
 - Is absorbed as latent heat of vaporization by the liquid.
15. The forces of attraction between the particles of matter is maximum in
- iron rod
 - kerosene oil
 - glycerine
 - dry air
16. You can separate a mixture of sand, salt and water by:
- filtration and distillation
 - decantation and evaporation
 - filtration and decantation
 - decantation and crystallization
17. The substance with least inter-particle space is
- methanol
 - acetic acid
 - copper
 - oxygen
18. Large volume of Compressed Natural Gas (CNG) is available in small cylinders to us due to its property of
- high inflammability
 - easy availability
 - high compressibility
 - low density
19. Which of the following statements about evaporation is incorrect?
- It is bulk phenomena.
 - It is a fast process.
 - It takes place at all temperatures.
- 2 and 3
 - 1 and 2
 - 1 and 3
 - 1, 2 and 3
20. Which of the following is an example of a solid-in-gas mixture?
- Soil
 - Smoke
 - Moisture
 - Dew
- 21.
- | Column I | Column II |
|-------------------------------|--|
| P) Sublimation | (1) Separation of sand and sawdust |
| Q) Magnetic separation | (2) Separation of NaCl from KNO ₃ |
| R) Gravity method | (3) Separation of sand and wax |
| S) Solvent extraction | (4) Separation of iron and sand |
| T) Fractional crystallization | (5) Separation of iodine and sand |
- Which of the following is correct?

- (a) P - 5, Q - 4, R - 1, S - 3, T - 2
 (b) P - 3, Q - 5, R - 4, S - 1, T - 2
 (c) P - 2, Q - 1, R - 4, S - 3, T - 5
 (d) P - 2, Q - 4, R - 3, S - 1, T - 5

DIRECTION for Questions No. 22 to 25 : In the following questions, a statement of assertion (A) is followed by a statement of reason (R). Mark the correct choice as:

- (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).
 (b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).
 (c) Assertion (A) is true but reason (R) is false.
 (d) Assertion (A) is false but reason (R) is true

22. **Assertion :** The term vapour is used to represent the gaseous state of a substance which is otherwise liquid at room temperature.

Reason : It is proper to regard the gaseous state of ammonia as vapours.

23. **Assertion :** Camphor disappears without leaving any residue.

Reason : Camphor undergoes sublimation

24. **Assertion :** There is no change in the temperature of a substance when it undergoes a change of state though it is still being heated.

Reason : The heat supplied is absorbed either as latent heat of fusion or as latent heat of vaporization

25. **Assertion :** The rate of evaporation increases with increase in temperature.

Reason : Increase in temperature increases the kinetic energy of the particles.



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