

Mother merry senior secondary school

Jagatpura

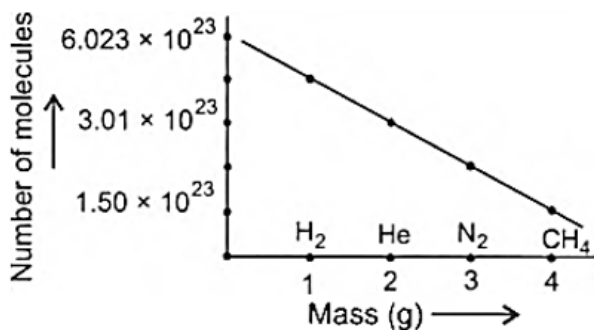
ADMISSION TEST

Class 09 - Science

Time Allowed: 40 minutes

Maximum Marks: 30

- When we observe the melting of ice, the melting point of ice is a constant temperature at which
 - only ice is present
 - both ice and water are present
 - first water and then only ice
 - only water is present
- Which of the following statements are correct?
 - Temperature changes during the change of a state.
 - Dry ice gets converted directly into gaseous state under normal atmospheric conditions.
 - Higher boiling point of liquid indicates weaker intermolecular forces.
 - Latent heat of vaporisation is generally higher than the latent heat of fusion for a substance.
 - II and III only
 - I and IV only
 - II and IV only
 - III and IV only
- Which of the following correctly represents the given substances in increasing order of kinetic energy of their particles?
 - Brick, honey, water, air
 - Air, water, honey, brick
 - Brick, water, air, honey
 - Brick, water, air, honey
- A student mixed the white of an egg with water and stirred it well. After sometimes he observe that:
 - egg white settles down at the bottom
 - a transparent solution is formed
 - a translucent mixture is formed
 - egg white floats on the surface of the water
- To prepare a colloidal solution of starch, we should:
 - add the thin paste of starch to hot water with stirring
 - add starch powder to cold water and boil
 - add the starch powder to boiling water and cool
 - heat starch, add it to cold water and then bring it to boil
- The process of evaporation is fast when the mixture is:
 - heated but covered
 - heated but not covered
 - covered but not heated
 - neither heated nor covered
- Number of aluminium ions in 0.055 g of aluminium oxide is
 - 6.48×10^{20}
 - 3.24×10^{20}
 - 3.24×10^{23}
 - 6.48×10^{24}
- The graphical representation of number of molecules of different gases is given. Which gases are placed at correct position?



a) H₂, CH₄

b) H₂, He

c) N₂, CH₄

d) He, CH₄

9. Sodium sulphate and barium chloride solutions are mixed in a test tube. The observation made is:

a) a colourless gas is evolved

b) a yellow precipitate is formed

c) a white precipitate is formed

d) greenish yellow gas is evolved

10. A has 9 protons, 9 electrons and 10 neutrons. B has 12 protons, 12 electrons and 12 neutrons. Formula between A and B is:

a) BA₂

b) B₂A₃

c) AB₂

d) AB₄

11. The highest value of e/m of anode rays has been observed when the discharge tube is filled with

a) N₂

b) O₂

c) He

d) H₂

12. Dalton's atomic theory successfully explained

i. Law of conservation of mass

ii. Law of constant composition

iii. Law of radioactivity

iv. Law of multiple proportions

a) (ii), (iii) and (iv)

b) (i), (ii) and (iii)

c) (i), (iii) and (iv)

d) (i), (ii) and (iv)

13. Cell theory was given by

a) Haeckel

b) Virchow

c) Hooke

d) Schleiden and Schwann

14. The membrane of the Golgi apparatus has connections with those of:

a) nuclear membrane

b) endoplasmic reticulum

c) cell membrane

d) mitochondria

15. Ribosomes are the centre for:

a) Respiration

b) Fat synthesis

c) Photosynthesis

d) Proteins synthesis

16. Why do cells of apical meristem lack vacuoles?

- a) They store food materials
b) They contain dense cytoplasm.
c) They have thin cell walls.
d) They are actively dividing cells.
17. In the stratified epithelium, the basement membrane is in contact with
a) the second layer of cells from base
b) the second layer of cells from the top
c) the basal most layer of cells
d) the uppermost layer of cells
18. Roshini is making a temporary mount of onion peel. What precautions should be taken to avoid the entry of air bubbles in the slide?
a) Coverslip should be gently dropped over the peel
b) Peel should be immersed in stain for over an hour
c) Peel should be allowed to fold over itself once or twice
d) Coverslip should be dropped on to the peel from a certain height
19. A plant is diploid and well adapted to extreme conditions. They grow bearing sporophylls in compact structures called cones. Identify the group to which it belongs:
a) Pteridophyte
b) Bryophyta
c) Angiosperms
d) Gymnosperms
20. A signal from a space ship reaches the ground in 5 minutes. What was the distance of the space ship from the ground station? The speed of the signal is 3×10^8 m/s.
a) 9×10^7 m
b) 9×10^{10} m
c) 9×10^6 m
d) 3×10^6 m
21. A jet engine works on the principle of Newton's:
a) second law of motion
b) first law of motion
c) Fourth law of motion
d) third law of motion
22. Which of the following is the evidence to show that there must be a force acting on the earth and directed towards the sun
a) deviation of falling bodies towards the east
b) apparent motion of sun around the earth
c) revolution of the earth around the sun
d) phenomenon of day and night
23. A body is falling from a height h . After it has fallen a height $\frac{h}{2}$, it will possess
a) only potential energy
b) more kinetic and less potential energy
c) only kinetic energy
d) half potential and half kinetic energy
24. In the explosion of a cracker/bomb:
a) momentum is conserved
b) energy is produced
c) momentum remains unconserved
d) internal energy is absorbed
25. Two masses m and $2m$ are dropped from a certain height 'h'. Then on reaching the ground,
a) K.E. of the lighter is 4 times the K.E. of the heavier
b) K.E. of the heavier is 4 times the K.E. of the lighter

- c) K.E. of the heavier is more than that of the lighter.
d) K.E. of them will be equal

26. Curved soundboard may be placed behind the stage because:

- a) it reflects the sound to a particular point in the hall
b) it makes the stage look beautiful
c) sound waves may be absorbed
d) after reflection, sound waves spread evenly across the width of the hall.

27. Sonic booms are caused due to the variation of

- a) pressure
b) humidity
c) loudness
d) speed

28. Which one of the following disease is not transmitted by mosquito ?

- a) Dengue
b) Malaria
c) Typhoid
d) Brain fever

29. 'BCG' vaccine is given to infants for protection against:

- a) Pneumonia
b) Cholera
c) Tuberculosis
d) Diarrhoea

30. Biotic components of the biosphere are not constituted by _____.

- a) Consumers
b) Air
c) Decomposer
d) Producers