

Mother merry senior secondary school

Jagatpura

ADMISSION TEST

Class 09 - Science

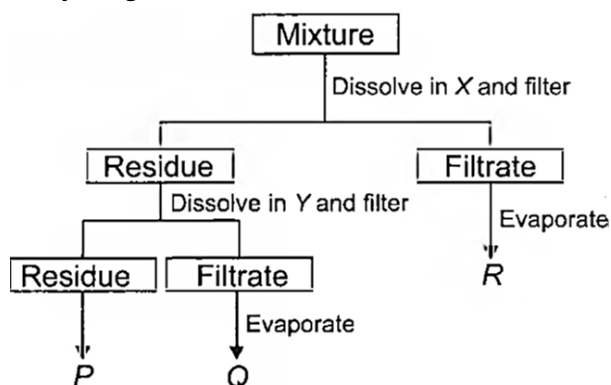
Time Allowed: 40 minutes

Maximum Marks: 30

1. The evaporation of a liquid occurs only at

- a) all temperatures
- b) temperature less than 100°C
- c) fixed temperature
- d) temperature more than 100°C

2. Study the given flow chart and select the correct statements.



If X is water and Y is carbon disulphide then P, Q and R could be respectively

- a) Sand, sugar and common salt
- b) Sugar, sulphur and coal
- c) Coal, sulphur and common salt
- d) Coal, sugar and sulphur.

3. Calculate the number of moles in 17 g of hydrogen peroxide (H_2O_2).

- a) 2 mole
- b) 1 mole
- c) $\frac{1}{2}$ mole
- d) 3 mole

4. What is the name given to 6.022×10^{23} ?

- a) Atomic mass
- b) Mass number
- c) Periodic number
- d) Avogadro constant

5. ${}_{88}^{226}\text{A}$, ${}_{87}^{228}\text{B}$, ${}_{88}^{228}\text{C}$, ${}_{90}^{228}\text{D}$

Which of the following nuclei are isotopes?

- a) ${}_{88}^{226}\text{A}$, ${}_{88}^{228}\text{C}$
- b) ${}_{87}^{228}\text{B}$, ${}_{88}^{228}\text{C}$
- c) Both ${}_{87}^{228}\text{B}$, ${}_{88}^{228}\text{C}$ and ${}_{88}^{228}\text{C}$, ${}_{90}^{228}\text{D}$
- d) ${}_{88}^{228}\text{C}$, ${}_{90}^{228}\text{D}$

6. The conclusion of Rutherford's scattering experiment does not include

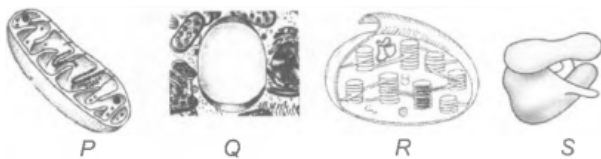
- a) The radius of nucleus is less than 10^{-14} m.
- b) The positively charged particles of atom move with very high velocity.
- c) Scattering follows coulomb's law, i.e., same charges repel each other.
- d) α -particles can come within the distance of

order of 10^{-14} m of the nucleus.

7. Amoeba acquires its food through a process, termed

- a) plasmolysis
- b) endocytosis
- c) both exocytosis and endocytosis
- d) exocytosis

8. Among the following cell organelles P, Q, R and S, which is the odd one out?



- a) S, because the others are membrane bound cell organelles.
- b) R, because the others are involved in protein storage.
- c) P, because the others are involved in cell secretion.
- d) Q, because the others are involved in energy production.

9. Which of the following tissues has dead cells?

- a) Collenchyma
- b) Epithelial tissue
- c) Parenchyma
- d) Sclerenchyma

10. The mineral elements found in our bone making it hard, are

- a) calcium and phosphorus
- b) sodium and potassium
- c) phosphorus and sodium
- d) sodium and calcium

11. Fats are stored in human body as

- a) cartilage
- b) bones
- c) adipose tissue
- d) cuboidal epithelium

12. In which group of animals, coelom is filled with blood?

- a) Arthropoda
- b) Nematoda
- c) Echinodermata
- d) Annelida

13. Five kingdom classification was given by

- a) R. Whittaker
- b) Morgan
- c) Linnaeus
- d) Haeckel

14. What does the slope of the velocity-time graph give?

- a) acceleration
- b) force
- c) displacement
- d) distance

15. The displacement of a body is proportional to the cube of the time lapsed. The magnitude of the acceleration is:

- a) decreasing with time
- b) increasing with time
- c) constant
- d) zero

16. If a body starts from rest, what can be said about the acceleration of the body?

- a) Uniform accelerated
- b) Positively accelerated

c) Negative accelerated

d) Non-Uniform accelerated

17. Two bodies of 5 kg and 3 kg moving with velocities 3 m/s and 10 m/s in a straight line with 3 kg behind 5 kg collide. After the collision, 3 kg has a velocity of 5 m/s. The velocity of 5 kg mass is

a) 10 m/s

b) 6 m/s

c) 9 m/s

d) 3 m/s

18. Match column I with column II and select the correct option.

Column I	Column II
(a) Flight of rockets	(i) Inertia of direction
(b) Function of mudguards over the wheels of a motorbike	(ii) Inertia of rest
(c) Firing a bullet from gun	(iii) Newton's third law of motion
(d) Dust particles fall when a durree is beaten with a stick	(iv) Law of conservation of linear momentum

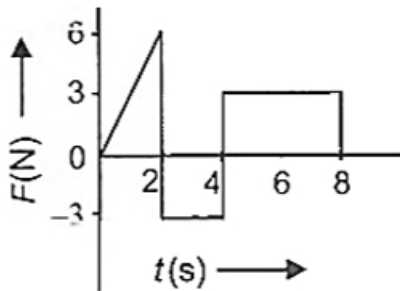
a) (a) - (iii), (b) - (i, ii), (c) - (ii), (d) - (iv)

b) (a) - (iii, iv), (b) - (i), (c) - (iii, iv), (d) - (ii)

c) (a) - (ii), (b) - (iii), (c) - (i, ii), (d) - (iv)

d) (a) - (i), (b) - (ii), (c) - (iv), (d) - (iii, iv)

19. The force F acting on a particle of mass m is indicated by the force-time graph shown here. The change in momentum of the particle over the time interval from zero to 8 s is



a) 20 N s

b) 6 N s

c) 12 N s

d) 24 N s

20. The weight of an object has S.I. unit of:

a) Newton

b) N/kg

c) kg/N

d) kg

21. Acceleration due to gravity on the surface of the moon is $\frac{1}{6}$ th of its value on the surface of the earth as they have different

a) radius

b) All of these

c) density

d) mass

22. While determining the density of a copper piece using a spring balance and a measuring cylinder, Seema carried out the following procedure.

A. Noted the water level in the measuring cylinder without the copper piece.

B. Immersed copper piece in water

C. Noted the water level in the measuring cylinder

D. Removed the copper piece from the water and immediately weighted it using a spring balance.

The wrong step in the procedure is :

- a) D
c) C
- b) B
d) A

23. The gravitational force between two objects is F . If masses of both objects are halved without changing distance between them, then the gravitational force would become

- a) $F/2$
c) $2F$
- b) F
d) $F/4$

24. A car is accelerated on a leveled road and attains a velocity 4 times of its initial velocity. In this process the potential energy of the car

- a) does not change
c) becomes twice to that of initial
- b) becomes 16 times that of initial
d) becomes 4 times that of initial

25. One unit of electricity is consumed by A : $P = 40\text{ W}$ bulb used for $t = 25$ hours

B : $P = 20\text{ W}$ bulb used for $t = 50$ hours

Both A and B are true as energy E in kWh is best related as

- a) $E = Pt$
c) $E = \frac{pt}{1000}$
- b) $E = \frac{t}{1000}$
d) $E = \frac{p}{100}$

26. The frequency of a visible light of wavelength 600 nm is (speed of light = $3 \times 10^8\text{ m/s}$), ($1\text{ nm} = 10^{-9}\text{ m}$)

- a) 50 Hz
c) $0.5 \times 10^{16}\text{ Hz}$
- b) $5 \times 10^{14}\text{ Hz}$
d) 500 Hz

27. In a wave motion in string, every particle:

- a) displaces from one end to the other end
c) oscillates
- b) does not displace at all
d) does not oscillate

28. Which one of the following is not a viral disease?

- a) AIDS
c) Influenza
- b) Typhoid
d) Dengue

29. Growth of Lichens on barren rocks is followed by the growth of

- a) gymnosperms
c) ferns
- b) moss
d) algae

30. Milk does not provide _____

- a) Iron
c) Vitamin A and D
- b) Carbohydrates, protein and fats.
d) Minerals like phosphorus and calcium