

Sample Paper → 3rd

1 Ans These type of culture in which plants are single quality are called monoculture.

2 Ans In any chemical reaction the sum of the masses of reactant is always equal to the sum of the masses of products.

3 Ans (i) Solid state

(ii) Gas. state.

4 Ans Two factors are -

(i) Abiotic factors -

ex: - insects, fungi.

(ii) Biotic factors.

ex: - Air, water.

5 Ans Two differences b/w speed and velocity.

	Speed	velocity.
(i)	It has only magnitude.	It has magnitude and direction.
(ii)	It is a scalar quantity	It is a vector quantity.

6 Ans Aluminium → 13 → 2, 8, 3.
Its valency is 3.

(b) Ans Neutrons.

(c) Ans Protium (Isotopes of Hydrogen ¹H)

7 Ans (i) Most of the α-particles pass through a gold foil.

(ii) Out of 12000 particles appeared to be rebound.

(iii) Some of α-particles make small angles by the foil.

8 Ans Sound is produced by vibration of vibrating object. sound is reach in our ear through sound wave and this create regular compression and rarefaction.

9 Ans When 1N force act on unit area it is said to be 1 pascal.

$$P = \frac{N}{A} = \frac{500 \times 10^3}{250} = 2000 \text{ N/m}^2$$

Thrust = 500N

Formula relates that thrust and pressure.

$$P = \frac{\text{Thrust}}{\text{Area}} = \frac{N}{A(\text{m}^2)}$$

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10 Ans The process in which gaseous state directly change into solid state without going into the liquid state. Is called sublimation

11 Ans	Homogeneous	Heterogeneous.
*	A homogeneous mixture has a uniform composition throughout	A Heterogeneous mixture does not have uniform composition.
*	It has no visible boundaries of separation b/w the various constituents	It has visible boundaries of separation b/w the various components.

(i) Brass - Homogeneous

(ii) Smoke - Heterogeneous.

12 (a) Ans	Evaporation	Boiling
(i)	The process in which a liquid change into its vapour below its boiling point	The process in which a subst. changes its state from liquid to gaseous state
(ii)	Evaporation is surface phenomenon.	Boiling is a bulk phenomenon.

12 (b) Ans The four factors that affect the rate of evaporation! -

(i) Temperature.

(ii) Surface area.

(iii) Humidity.

(iv) Wind speed.

13 (a) Ans The value shown by Ramesh is he thinks that fertilizers are used to increase the profit. Sameer told that manure is used instead of fertilizer for benefit of crops.

(b) Ans The effect on the soil in long run. If fertilizer is used then the fertility of soil decreases. If manure the fertility of soil increase.

14 (a) Ans

14 (a) Ans	Structure	Function	Location.
striated	cells are long, unbranched	It helps in movement	It is found in arms, legs
in striated	cells are long with pointed ends, unbranched	It helps in movement of food in alimentary canal.	Blood vessel, iris of eye, skin.
ardiac	cells are cylindrical, branched.	It helps in contraction and relaxation of heart	found only in heart.

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15(a) Ans Isotopes of an element are chemically similar because they have same no. of Electron.

(b) Ans An atom is electrically neutral because it has same no. of protons and electrons.

(c) Ans Ions are more stable than atoms because ions have lost or gained electrons to complete their octet.

(d) Ans Noble gases show ~~not~~ reactive because they complete their octet.

(e) Ans Na has completely filled K and L shells because $Na - 11$, $K - 2$, $L - 8$. Total shell is 10.

16(a) (i) Cancer \rightarrow Non-communicable (ii) High blood pressure \rightarrow Non-com.

(c) SARS \rightarrow communicable (d) Night blindness \rightarrow Non-com.

(e) Common cold \rightarrow communicable (f) Typhoid \rightarrow Non-com.

(g) Diabetes \rightarrow Non-com. (h) Cholera \rightarrow Non-com.

(i) TB \rightarrow communicable (j) Dengue \rightarrow Non-com.

17(b) Ans mass = 60 kg, $h = 30 \times 21 = 630 \text{ cm} = \frac{630}{100} = 6.3 \text{ m}$

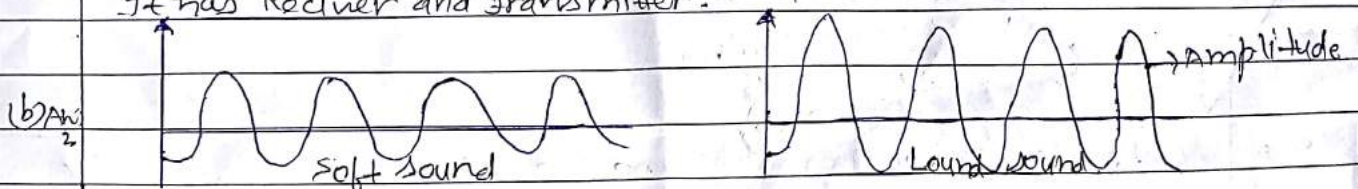
$$PE = mgh$$

$$= 60 \times 10 \times 6.3 = 3780 \text{ J}$$

$$P = \frac{E}{t} = \frac{3780}{15} = 252 \text{ watt}$$

17 Ans The work done by force \rightarrow satellite moves with constant velocity around the earth $= KE = \frac{1}{2}mv^2 = \text{work} = 0$ ($v = \text{const}$)

18(a) Ans SONAR stands for sound navigation and ranging. It is a device that uses underwater ultrasonic waves to measure distance. It has a receiver and transmitter.



19(a) Ans Management of Dairy farming:

- (i) High production of milk
- (ii) Increased lactation period.
- (iii) Given Roughage food system.

Poultry farming:-

- (i) Quality of chicks
- (ii) Clean shelter.
- (iii) Low maintenance requirements.

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16) Boilers :- (i) It give meat - (ii) It is highly rich-vitamin.

Layers :- (i) It give egg (ii) It is highly nutritious.

2(a) odometer. (c) Yes, displacement of moving object be zero because when obj. ~~rotates in circular orbit~~ travel the final position coincides the initial. So, displacement will be zero.

21(a) The movement of particles through higher concentration towards lower concentration through semi-permeable membrane is called osmosis.

22(a) (i) Burning of magnesium ribbon \rightarrow Chemical change.

(ii) Melting of butter \rightarrow Physical change.

(b) Physical \rightarrow A change in which no new sub. are formed.

chemical \rightarrow A change in which new sub. are formed.

23) (i) The thermometer should not touch the wall of beaker.

(ii) ~~The bulb of thermometer should be completely inside the~~
The bulb of thermometer should be completely inside the ~~beaker~~ ~~beaker~~

Maintain a uniform temp. by continuous stirring.

24(a) opposite direction. (b) law of Gravitation.

25) The factors on which buoyant force depend :-

(i) V = volume of object. (ii) d = density of water.

(iii) g = accⁿ due to gravity.

or (i) Take 5% solution of 'x' in a flask and 5% solutions of 'y' in an ignition tube and hang it in the flask.

(ii) weigh the flask with its content carefully.

(iii) tilt and swirl the flask so that the solutions x and y get mixed.

(iv) weigh again. (v) compare the mass of flask before and after the reaction.

26) Mass = 200g, volume = 60ml.

$$D = \frac{m}{V} = \frac{200}{60} = 3.3 \text{ g/ml}^3$$

27) A spherical ball of iron have more density than the cube of copper. So, spherical ball of iron will sink in water.

or No, it is so because the buoyancy force is not depend on shape.