

இயற்பியல் அறிவுறுத்தல் தேர்வு - 2024

VIII

Science
Key WordsI 1 mark : choose :

1. a protective device for breaking an electric circuit
2. 1
3. 1:8
4. leg
5. Lightning

II fill up :

6. negative
7. longitudinal waves
8. atom
9. Joint
10. Heart musk.

III match :

11. repel each other
12. attract each other
13. Frequency below 20Hz
14. Frequency more than 20,000Hz
15. 330 m s^{-1}

IV 2 marks :

16. *The process of transferring the discharge of electrical energy directly to the Earth with the help of low resistance wire.

17. *The process of depositing a layer of one

metal over the surface of another metal by passing electric circuit.

18. * Umbrella contains metal rods which are good conductor of electricity. Lightning electrically charged, so the lightning get attract to the metal rod.

19. * Noise may cause irritation, stress, nervousness and headache.

* Long term exposure to noise may change the sleeping pattern of a person.

20. * You see the lightning before you hear the thunder.

* You see the light coming from the lighthouse before you hear the foghorn.

21.

$$n = 50 \text{ Hz}$$

$$\lambda = 10 \text{ m}$$

$$V = n \lambda$$

$$V = 50 \times 10$$

$$V = 50 \times 10$$

$$V = 500 \text{ ms}^{-1}$$

22.

During any chemical change, the total mass of the products is equal to the total mass of the reactants.

23.

A chemical equation is a short hand

representation of a chemical reaction with the help of chemical symbols and formulae.

24. * $Al_2(SO_4)_3$

* MgO

25. * True

* False

26. * The portion of skull, which protects the brain.

* It includes frontal, parietal, occipital, temporal, sphenoid and ethmoid bones.

27.

5 marks :

28. (a) * It is a scientific instrument used to detect the presence of electric charge on a body.

* An electroscope is made up of conducting metal.

* It works on the principle of like charges repel each other.

* There are two metal sheets hung in contact with each other.

* They are connected to a metal rod upwards and ends with knob.

(b)

* Strict guidelines should be set for the use of loudspeakers on social, religious and political occasions.

Silencers.

* people should be encouraged to refrain from excessive honking while driving.

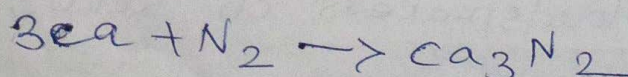
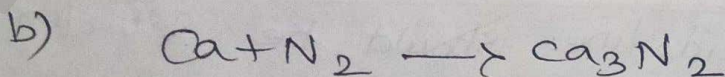
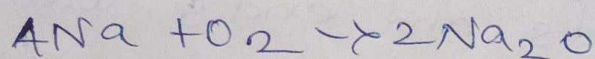
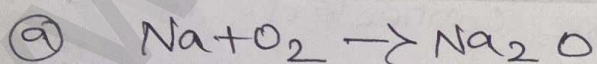
* Industrial machines and home appliances should be properly maintained.

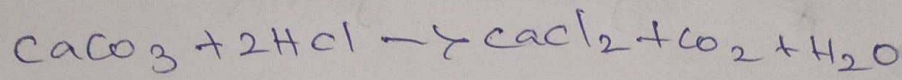
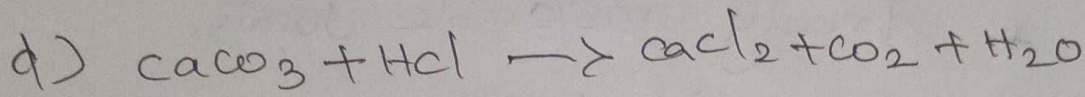
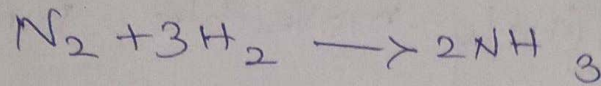
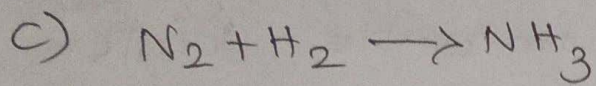
* people working in noisy factories should wear ear plugs.

29. (a)

S. No	Step - 1 word equation	Step - 1 skelton	Step - 3 Balanced
a.	Carbon + Oxygen → carbon dioxide	$C + O_2 \rightarrow CO_2$	$C + O_2 \rightarrow CO_2$
b.	Phosphorus + Chlorine → Phosphorus pentachloride	$P + Cl_2 \rightarrow PCl_5$	(i) $P + 5Cl_2 \rightarrow 2PCl_5$ (ii) $2P + 5Cl_2 \rightarrow 2PCl_5$
c.	Sulphur + oxygen → Sulphur dioxide	$S + O_2 \rightarrow SO_2$	$S + O_2 \rightarrow SO_2$
d.	magnesium + hydrogen chloride → magnesium	$Mg + HCl \rightarrow MgCl_2$ $+ H_2$	$Mg + 2HCl \rightarrow MgCl_2$ $+ H_2$

(b)





30. (a)
- * It provides structure & shape to the body.
 - * Red blood cells are produced in the bone marrow.
 - * The bones of the skeletal system act as levers for muscular action.
 - * It supports and surrounds the internal organs of the body.
 - * Calcium and phosphorus the two minerals that the body needs for important regulatory functions, are stored inside the bones.
 - * The bones of the skeletal system act as levers for muscular action.

(b)

The point at which two separate bones meet is called a joint. The following are the various types of joints.

- * Fixed or Immoveable joints
- * Slightly moveable joints
- * Freely moveable joints
- * Synovial joints