

SCIENCE REVISION TEST

ANSWER KEY

(PHYSICAL SCIENCE)

I. Answer the following:

1. The force acting on a body is directly proportional to the rate of change of linear momentum of the body and the change in momentum takes place in the direction of the force.

2.

- Red light is scattered the least by air molecules.
- Red colour has highest wavelength can be seen from large distances.
- As a result whether it is fog or smoke, red light passes easily through them.
- So it will be convenient for the vehicles.

3.

REAL GAS	IDEAL GAS
Molecule or atom of gases interact with each other with definite amount of inter atomic or molecular	Molecules or atoms of gases do not interact with each other.
At very high temperature or low pressure real gas behaves ideal gas Force of attraction is very strong.	At very high temperature or low pressure real gas behaves ideal gas
iii Force of attraction is very strong.	Force of attraction is very weak.

4. i) Tungsten has a very high melting point.

ii) If it is used in the fuse wire, it will not melt when large current passes through it.

iii) The appliances will get damaged.

5.

- When source (S) and Listener (L) both are at rest.
- When Source (S) and Listener (L) moving in mutually perpendicular directions.

II Answer in brief

6. Refer pg no. 77 in your text book.

7. i) Molar mass= Sum of the atomic masses of all the elements in the compound.

$$\text{Molar mass of CaCO}_3 = 40 + 12 + (3 \times 16) = 100.$$

$$\% \text{ of an element} = \frac{\text{Total mass of the element in a compound}}{\text{Molar mass of the compound}} \times 100$$

$$\text{Therefore, \% of carbon} = \frac{12}{100} \times 100 = 12 \%$$

$$\% \text{ of calcium} = \frac{40}{100} \times 100 = 40\%$$

$$\% \text{ of oxygen} = \frac{48}{100} \times 100 = 48\%.$$

ii) Molar mass = Sum of atomic masses of all the elements in the compound.

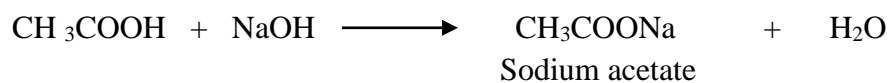
$$\begin{aligned} \text{Molar mass of Al}_2(\text{SO}_4)_3 &= (2 \times 27) + (3 \times 32) + (12 \times 16) \\ &= 54 + 96 + 192 \\ &= 342 \end{aligned}$$

$$\begin{aligned} \% \text{ of an element} &= \frac{\text{Total mass of the element in a compound}}{\text{Molar mass of the compound}} \times 100 \\ &= \frac{192}{342} \times 100 \\ &= 56.14\%. \end{aligned}$$

III. Answer in detail:

$$\begin{aligned} 8. \text{ i) Mass \% of solute} &= \frac{\text{Mass of the solute}}{\text{Mass of the solute} + \text{mass of the solvent}} \times 100 \\ &= \frac{45 \times 100}{45 + 180} \\ &= \frac{4500}{225} \\ &= 20\% \end{aligned}$$

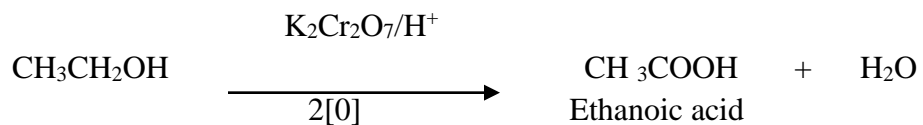
ii) a) Neutralization of NaOH with ethanoic acid



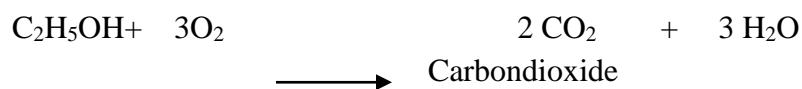
b) Evolution of carbon di oxide by the action of ethenoic acid with NaHCO_3



c) Oxidation of ethanol by acidified potassium dichromate



d) Combustion of ethanol



Biological science-

Answer script

| Answer in short :

1 Rh factor was discovered by Land steiner and Wiener in 1940.
It is named as Rh so because it was first discovered in Rhesus monkeys.

2 Stimulus refers to the changes in the environmental condition, that are detected by receptors present in the body , Relevant changes in the activities of organism to a particular stimuli are called their reactions or responses.

3 Artificially synthesised Auxins that have properties like Auxins are called as synthetic Auxins.Eg:2,4 (2,4 Dichlorophenoxy Acetic acid).

4 During the replication of DNA molecule , the new strand is synthesised in short segments which are called okazaki fragments. There are joined together by the enzyme DNA ligases.

5 Genetic engineering is the manipulation and transfer of genes from one organism into another to create a new DNA called as recombinant DNA (rDNA).

|| Answer in paragraph:

6 Refer pg no: 265 (book)

7 Refer pg no: 280 (book)

||| Long answer question:

8 Refer pg no:219 (book)