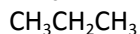


# CBT SCIENCE (OCTOBER) 2024

## CLASS – 10

Q1 Which of the following can show Addition Reaction .



Correct Answer : (a)

Feedback : Presence of double bond between 2 carbon atom is necessary for addition reaction. Since  $C_2H_4$  is  $CH_2=CH_2$ , hence it shows addition reaction.

Q2 The difference in the formula and molecular masses of  $CH_3OH$  and  $C_2H_5OH$  is

(a)  $CH_4$  and 18u

**(b)  $CH_2$  and 14u**

(c)  $CH_3$  and 16u

(d)  $CH_3$  and 16u

Correct Answer: (b)

Feedback : 2 consecutive members of homologous series differ by  $CH_2$  or 14 amu

Q3 Name the product obtained when Ethanol is heated in excess of concentrated Sulphuric acid at 443K

Ethane

Ethene

Ethyne

Ethanoic Acid

Correct Answer: (b)

Feedback : Dehydration of Ethanol takes place in presence of concentrated sulphuric acid at 443K to form ethene.

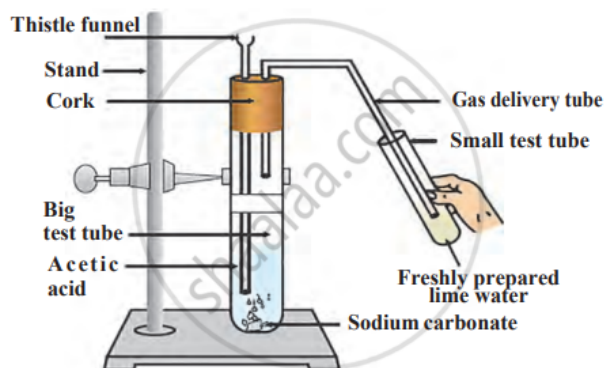
Q4 Name the gas evolved when Ethanoic Acid reacts with Sodium Carbonate

Carbon Dioxide

Sulphur Dioxide

Sodium Oxide

Oxygen



Correct Answer : (a)

Feedback :  $2CH_3COOH + Na_2CO_3 \rightarrow 2CH_3COONa + CO_2 + H_2O$

Q5 A plant with red flower (Rw) is cross bred with a plant with white flower (ww). There are 2 variations of the gene controlling the colour of the flower (R) is dominant over that for white flower (w).

**What percentage of the plants are likely to produce white flowers?**

- (a) 25%
- (b) 50%
- (c) 75%
- (d) 100%

Correct Answer: (B) 50%

Feedback: In a cross between plant with red flower (Rw) and plant with white flower (ww), 50% of plants are likely to produce red flower and 50% white flowers.

Q6 A red flower plant (RR) was crossed with a white flower plant (ww) . What will be the colour of the F1 generation plant .

- All red
- All white
- 50% red and 50% white
- 75% red and 25%white

Correct Answer: (a)

Feedback: All flowers will be red because red colour is dominant trait. Flowers will inherit Rw set of genes.

Q7 The soap molecule has a

- Hydrophilic head and a Hydrophobic tail
- Hydrophobic head and Hydrophilic tail
- Both head and tail are Hydrophobic
- Both head and tail are Hydrophilic

Correct Answer: (a)

Feedback : The long Hydrocarbon chain is Hydrophobic and Ionic portion is Hydrophilic

Q8 A zygote has an X chromosome inherited from the father will develop into a

- a boy
- a girl
- X chromosome does not determine the sex of a child

Either boy or girl.

Correct Answer : (b)

Feedback : A zygote with XX chromosome in the 23<sup>rd</sup> pair would develop into girl child.

Q9 Assertion(A) : Sex is determined by different factors in various species.

Reason (R): In human beings sex of child depends on whether the paternal chromose is X or Y.

Both (A) and (R) are true but (R ) is the correct explanation of (A)

Both (A) and (R) are true but (R ) is not the correct explanation of (A)

(A) is true but (R) is false.

(A) is false but (R) is true

Correct Answer: (b)

Q10 Which of the following is an inherited trait.

- Good handwriting
- Swimming
- Blood group
- Body building

Correct Answer : (c)

Feedback : Traits which are acquired from previous generation are Inherited traits. In the given options only Blood group is an inherited trait.

