Oxford Cambridge and RSA

AS Level Chemistry B

H033/01 Foundations of chemistry

Question Set 6

Multiple Choice Questions

1 CH_3Cl can be converted to CH_3NH_2 in one step.What is correct about this process?

A The reaction is substitution of Cl by NH_3.

B The product is an amide.

C The reagent is NH_4^+.

D The reagent is a nucleophile.

Your answer ☐

[1]

2 What will react with a phenol?

A sodium carbonate

B sodium hydroxide

C ethanoic acid

D acidified potassium dichromate

Your answer ☐

[1]

3 Which of these is classified as an elimination reaction?

A $CH_3COOH + C_2H_5OH \rightarrow CH_3COOC_2H_5 + H_2O$

B $CuSO_4 \cdot 5H_2O \rightarrow CuSO_4 + 5H_2O$

C $C_2H_5OH \rightarrow C_2H_4 + H_2O$

D $C_{17}H_{36} \rightarrow C_{10}H_{22} + C_7H_{14}$

Your answer ☐

[1]

4 Which statement about carboxylic acids is correct?

A They can be made by oxidising secondary alcohols.

B They react with phenols.

C They do **not** fizz with sodium carbonate solution.

D They form esters when reacted with tertiary alcohols.

Your answer ☐

[1]

5 Which reaction will give $CH_3CH_2CH(OH)CH_2CH_3$ as a product?

A Reduction of $CH_3CH_2CH_2CH_2CHO$

B Treatment of $CH_2{=}CHCH_2CH_2CH_3$ with conc sulfuric acid followed by water

C Heating $CH_3CH_2CH_2CH{=}CH_2$ with steam and phosphoric acid under pressure

D Treatment of $CH_3CH{=}CHCH_2CH_3$ with conc sulfuric acid followed by water

Your answer ☐

[1]

6 Which statement about the reaction $RCl + NH_3 \rightarrow RNH_2 + HCl$ is correct?

A An amine is formed.

B RCl is acting as an acid.

C The reaction is electrophilic substitution.

D An amide is formed.

Your answer ☐

[1]

7 Which substance **cannot** be made in a single step from C_2H_4?

A C_2H_5OH

B C_2H_5Br

C C_2H_6

D $C_2H_5NH_2$

Your answer ☐

[1]

8 Which substance will **not** give 3-methylpentane when reduced with hydrogen?

A 2-ethylbut-1-ene

B 3-methylpent-2-ene

C 2-methylpent-1-ene

D 3-methylpent-1-ene

Your answer ☐

[1]

9 What is **not** a reaction of 2-methylpropan-2-ol?

A Reaction with an acid anhydride to form an ester

B Oxidation to a ketone

C Dehydration to an alkene

D Reaction with HCl to form a haloalkane

Your answer ☐

[1]

Total Marks for Question Set 6: 9