

Name of the Student: _____

Max. Marks : 14 Marks

Time : 14 Minutes

Q1.

Compound **Y** has the structural formula $\text{CH}_3\text{COOCH}_2\text{CH}(\text{CH}_3)_2$

Which compound is a position isomer of **Y**?

A 5-hydroxyhexan-3-one

☐

B butyl ethanoate

☐

C hexanoic acid

☐

D propyl propanoate

☐

(Total 1 mark)

Q2.

Which compound is formed by the acid hydrolysis of phenyl benzenecarboxylate?

A $\text{C}_6\text{H}_5\text{CH}_2\text{OH}$

☐

B $\text{C}_6\text{H}_5\text{CHO}$

☐

C $\text{C}_6\text{H}_5\text{COCH}_3$

☐

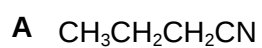
D $\text{C}_6\text{H}_5\text{COOH}$

☐

(Total 1 mark)

Q3.

Which compound is an amide?

☐☐☐☐

(Total 1 mark)

Q4.

Which statement about $(\text{CH}_3)_2\text{CHCH}_2\text{COOH}$ is correct?

- A** In aqueous solution it reacts with magnesium to form carbon dioxide.
- B** It can form hydrogen bonds.
- C** It has optical isomers.
- D** It has the IUPAC name 2-methylbutanoic acid.

☐☐☐☐

(Total 1 mark)

Q5.

Which compound reacts with warm dilute aqueous sodium hydroxide?

A C_6H_6

☐

B $\text{CH}_3\text{CH}=\text{CH}_2$

☐

C $\text{CH}_3\text{CH}_2\text{CH}_2\text{NH}_2$

☐

D $(\text{CH}_3\text{CO})_2\text{O}$

☐

(Total 1 mark)

Q6.

Which compound forms a white precipitate when added to aqueous silver nitrate?

A bromoethane

☐

B ethanal

☐

C ethanoic anhydride

☐

D ethanoyl chloride

☐

(Total 1 mark)

Q7.

Which compound is formed by acid hydrolysis of phenylmethyl ethanoate?

A $\text{C}_6\text{H}_5\text{CH}_2\text{OH}$

☐

B $\text{C}_6\text{H}_5\text{CHO}$

☐

C $\text{C}_6\text{H}_5\text{COCH}_3$

☐

D $\text{C}_6\text{H}_5\text{COOH}$

☐

(Total 1 mark)

Q8.

Which compound is formed when phenyl benzenecarboxylate is hydrolysed under acidic conditions?

A $\text{C}_6\text{H}_5\text{CH}_2\text{OH}$

☐

B $\text{C}_6\text{H}_5\text{CHO}$

☐

C $\text{C}_6\text{H}_5\text{COCH}_3$

☐

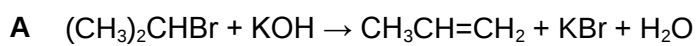
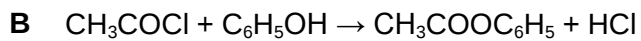
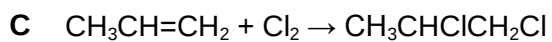
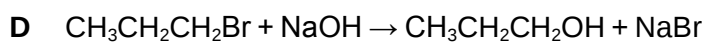
D $\text{C}_6\text{H}_5\text{COOH}$

☐

(Total 1 mark)

Q9.

Which reaction involves addition-elimination?

☐☐☐☐

(Total 1 mark)

Q10.

Which compound can be purified by forming a hot aqueous solution that recrystallises on cooling?

- A** Cyclohexene ☐
- B** Ethanoic acid ☐
- C** Phenylamine ☐
- D** Benzoic acid ☐

(Total 1 mark)

Q11.

A student is required to dry a liquid sample of pentanoic acid.

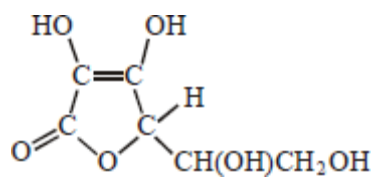
Which drying agent is suitable?

- A** Calcium oxide ☐
- B** Calcium sulfate ☐
- C** Potassium hydroxide ☐
- D** Potassium carbonate ☐

(Total 1 mark)

Q12.

Which one of the following is **not** a correct statement about vitamin C, shown below?



- A It is a cyclic ester.
- B It can form a carboxylic acid on oxidation.
- C It decolourises a solution of bromine in water.
- D It is a planar molecule.

(Total 1 mark)

Q13.

Which one of the following is **not** a correct general formula for the non-cyclic compounds listed?

- A alcohols $C_nH_{2n+2}O$
- B aldehydes $C_nH_{2n+1}O$
- C esters $C_nH_{2n}O_2$
- D primary amines $C_nH_{2n+3}N$

(Total 1 mark)

Q14.

Propanoic acid reacts with methanol in the presence of a small amount of concentrated sulphuric acid. The empirical formula of the ester formed is

- A CH_2O
- B $\text{C}_2\text{H}_6\text{O}_2$
- C $\text{C}_2\text{H}_4\text{O}_2$
- D $\text{C}_2\text{H}_4\text{O}$

(Total 1 mark)