20.1 Types of Organic Reactions

Question Paper

Course	DP IB Chemistry
Section	20. Organic Chemistry (HL only)
Topic	20.1 Types of Organic Reactions
Difficulty	Easy

Time allowed: 10

Score: /5

Percentage: /100

Question 1

Which factors affect the rate of nucleophilic substitution in halogenoalkanes?

I. The nature of the attacking nucleophile
II. The structure of the halogenoalkane
III. The identity of the halogen

A. I and II only

B. I and III only

C. II and III only

D. I, II and III

[1 mark]

Question 2

Which halogenoalkane reacts fastest with sodium hydroxide?

A. 1-iodobutane

B. 1-chlorobutane

C. 1-bromobutane

D. 1-fluorobutane

[1 mark]

Question 3

Which reagents are needed to convert nitrobenzene to phenylamine in 2 steps?

	Step 1	Step 2
A.	tin and concentrated hydrochloric acid	sodium hydroxide
B.	tin and sodium hydroxide	concentrated hydrochloric acid
C.	concentrated hydrochloric acid	tin and sodium hydroxide
D.	sodium hydroxide	tin and concentrated hydrochloric acid

[1 mark]

Question 4

What is the product of the reaction between propanone and sodium borohydride, $NaBH_4$?

A. propan-1-ol

B. propan-2-ol

C. propanoic acid

D. pentanal

[1 mark]

Question 5

Which of the following is true about the structure of benzene?

I. Benzene has a delocalised structure of π bonds around its ring
II. Each carbon to carbon bond has a bond order of 1.5
III. Benzene is susceptible to attack by nucleophiles

A. I and II only

B. I and III only

C. II and III only

D. I, II and III

[1 mark]