

## Core Worksheet – Option F

1 Distinguish between a **food** and a **nutrient**. [2]

2 The formulas of some fatty acids are shown in the table:

lauric acid	$C_{11}H_{23}COOH$
palmitic acid	$C_{15}H_{31}COOH$
oleic acid	$C_{17}H_{33}COOH$
linolenic acid	$C_{17}H_{29}COOH$

a Determine which of the fatty acids are saturated and which are unsaturated. [2]

b State and explain whether palmitic acid has a higher or lower melting point than lauric acid. [2]

c State and explain whether oleic acid has a higher or lower melting point than linolenic acid. [3]

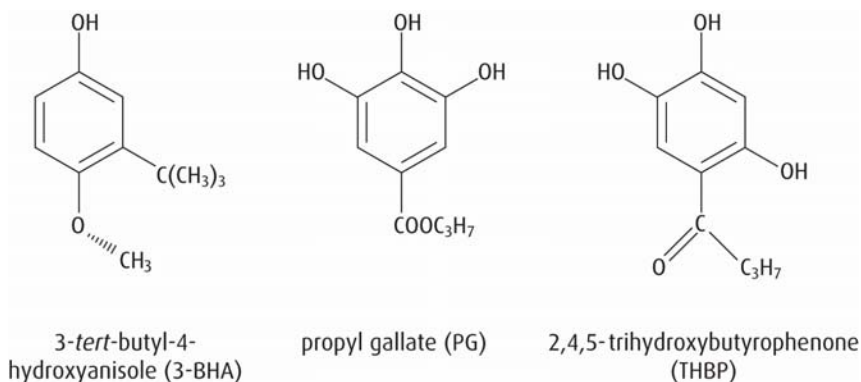
d Draw a structural formula for the fat formed from lauric acid. [2]

3 a State what is meant by the **shelf life** of a food. [1]

b State **five** factors that affect the shelf life of food. [5]

c Distinguish between hydrolytic and oxidative rancidity of lipids. [2]

4 The structures of some synthetic antioxidants are shown below:



a State what is meant by the term **antioxidant**. [1]

b Give the name of a functional group that is common to all three molecules. [1]

c State the name of a functional group only present in PG. [1]

d State the name of a functional group only present in THBP. [1]

e State the name of a functional group only present in 3-BHA. [1]

5 Whipped cream is a dispersed system.

a State what is meant by **dispersed system**. [1]

b State what type of dispersed system whipped cream is. [1]

c State what is the continuous phase and what is the dispersed phase in whipped cream. [2]