2010 HIGHER SCHOOL CERTIFICATE EXAMINATION

Chemistry

Centre Number

Student Number

Section I – Part B (continued)

Question 23 (3 marks)

(a) Write a balanced chemical equation for the complete combustion of 1-butanol. **1**

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(b) A student measured the heat of combustion of three different fuels. The results   **2**
are shown in the table.

Fuel	Heat of combustion (kJ g^{-1})
A	−48
B	−38
C	−28

The published value for the heat of combustion of 1-butanol is 2676 kJ mol^{-1}.

Which fuel from the table is likely to be 1-butanol? Justify your answer.

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