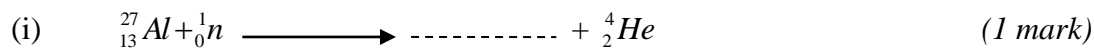


B.O.T TERM II 2019
S.5 CHEMISTRY PAPER 1
TIME: 1 HOUR

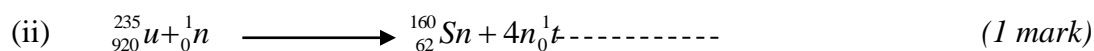
INSTRUCTIONS

- Answer all questions

1. (a) Complete the following equations



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(b) An element Y has three naturally occurring isotopes with isotopic masses and relative abundances as shown below:

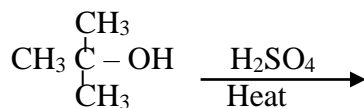
Isotopic mass	Relative abundance %
23.98	78.60
24.98	10.11
25.98	11.29

Calculate the average atomic mass of Y. (4 marks)

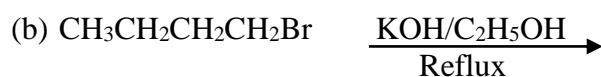
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2. Complete the following equations and outline the mechanism in each case.

(a)



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.....



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(c) Using a suitable reagent state how the following can be differentiated. Include the observation and a suitable equation for the reaction.

C_3H_6 and C_2H_4

.....

3. (a) Define the following;

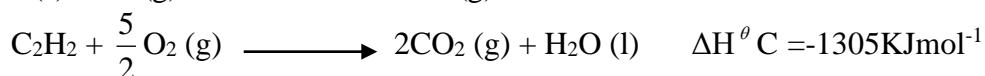
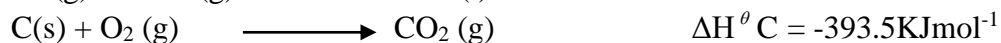
(i) Enthalpy of combustion

.....

(ii) Enthalpy of reaction

.....

(b) Given the following thermo chemical data



Determine the standard enthalpy of formation of ethyne.

.....

END