



Rewarding Learning
ADVANCED SUBSIDIARY (AS)
General Certificate of Education
2022

Centre Number

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Candidate Number

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Environmental Technology

Assessment Unit AS 1
assessing
The Earth's Capacity to Support
Human Activity



SET11

[SET11]

WEDNESDAY 18 MAY, AFTERNOON

TIME

1 hour 30 minutes.

INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.

Write your answers in the spaces provided in this question paper.

Complete in black ink only. **Do not write with a gel pen.**

Answer **all** questions.

INFORMATION FOR CANDIDATES

The total mark for this paper is 75.

Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.

Quality of written communication will be assessed in Question 7.

For Examiner's use only	
Question Number	Marks
1	
2	
3	
4	
5	
6	
7	

Total Marks	
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(Questions continue overleaf)

3 Fossil fuel use in emerging economies such as Brazil, Russia, India and China has been rising steadily. This is the opposite of the trend in more developed countries, such as France and the UK, where fossil fuel use is in decline.

(a) Describe **two** different reasons why fossil fuel use in emerging economies, such as Brazil, Russia, India and China, is rising.

1. _____

_____ [2]

2. _____

_____ [2]

(b) Explain how fossil fuel use has had a detrimental effect on the environment with reference to the following:

Habitat Degradation

_____ [2]

Air Quality Reduction

_____ [2]

Examiner Only	
Marks	Remark

BLANK PAGE

(Questions continue overleaf)

5 (a) BPE is an example of a recyclable plastic.

(i) State what the letters **BPE** stand for.

_____ [1]

(ii) Describe how BPE is manufactured.

_____ [2]

(b) If BPE is not recycled, it may be disposed of by incineration. Name **two** toxic gases that may be released during the incineration of plastics such as BPE.

1. _____ [1]

2. _____ [1]

Examiner Only	
Marks	Remark

(c) *“Manufacturers have long chosen plastic for their products on the basis of price and functionality. But creating a more sustainable relationship with plastics will require a new dexterity on our part. It will require us to think about the entire life cycle of the products we create and use.”*

Source: 'Plastic: A Toxic Love Story' by Susan Freinkel,

Discuss how we can move towards the more sustainable manufacture and use of plastic. Include **two** discussion points on sustainable manufacture and **one** point on sustainable use.

Sustainable manufacture:

1. _____

_____ [2]

2. _____

_____ [2]

Sustainable use:

_____ [2]

Examiner Only	
Marks	Remark

Sources:

Fig.1.....© Getty Images

Table 1.....Adapted from © Kofman, Pieter & Kent, Tom. (2019). Harvesting and Processing Forest Biomass for Energy Production in Ireland The Forest Energy 2006 Programme, p 54.

Q5c.....© Book title: 'Plastic: A Toxic Love Story' by Susan Freinkel, page 224, (2011) publisher The Text Publishing Company, (2011), ISBN-10: 1921758481 and ISBN-13: 978-1921758485

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