Finite vs Renewable Resources

Q1. (2018)

5 Crude oil is found in the Earth's crust.

(a) Which of the statements about crude oil is correct?

(1)

- ☒ **A** crude oil is a finite resource
- ☒ **B** crude oil is a mixture of the elements hydrogen and carbon
- ☒ **C** all of the molecules in crude oil contain rings of carbon atoms
- ☒ **D** crude oil is used in cars as a fuel

Q2. (2018) – 5e

(e) In January 2015 the United Kingdom produced 850 000 barrels of crude oil per day. 45% of this crude oil was fuel oil.

Calculate the number of barrels of fuel oil present in the 850 000 barrels of crude oil.

Give your answer to two significant figures.

(3)

.....

.....

..... barrels

Q3. (2018) – 7c (ii)

(c) (i) The structure of a molecule of a polymer is shown in Figure 12.

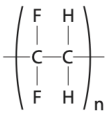

Figure 12

Question:

*(ii) Poly(ethene) has many uses in everyday life.
Large amounts of poly(ethene) are manufactured from ethene produced by cracking fractions obtained from crude oil.

Poly(ethene) is used to make many objects.
After use it is necessary to dispose of the large amounts of poly(ethene) in these objects.

Explain some of the problems associated with the manufacture and disposal of poly(ethene).

(6)

Q4. (2019) – 3b

3 Polymer molecules can be made by joining together large numbers of small molecules called monomers.

(b) Plastics are polymers.

State **two** problems caused by the disposal of polymers.

(2)

Q5. (2020) – 7d

*(d) Polymers have many uses.
However, the disposal of polymers after use can be a problem.
The uses of polymers are related to their properties.

Some uses of three common polymers are given in Figure 13.

polymer	uses
poly(ethene)	plastic bags, plastic bottles
poly(chloroethene) (PVC)	window frames, water pipes, insulation for electrical wires
poly(tetrafluoroethene) (PTFE, Teflon™)	coating for frying pans, stain-proofing for clothing

Figure 13

Discuss the reasons for using these polymers in the ways shown in Figure 13 and the problems in disposing of these polymers.

(6)

Q6. (2021)

A)

10 This question is about polymers.

(a) (i) State a problem with **recycling** polymers.

(1)

B)

(ii) Describe a problem associated with the **disposal** of polymers.

(2)

Q7. (2022) – 1a (ii)

1 Figure 1 shows toothbrushes in a container.

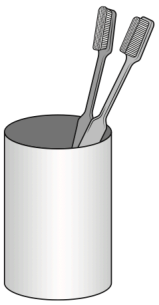

Figure 1

(a) The toothbrush handles are made of plastic (polymer).

(ii) Some toothbrush handles are made of wood, not plastic.

Explain a disadvantage of using plastics.

(2)

Q8. (2024) – 1a (ii)

1 (a) Figure 1 shows a metal spoon.

Figure 1

This spoon is made of silver.

(ii) Some spoons are made of wood or plastic, not metal.

The raw material for wooden spoons is trees and the raw material for plastic spoons is crude oil.

Explain an advantage, other than cost, of using wood rather than plastic.

(2)