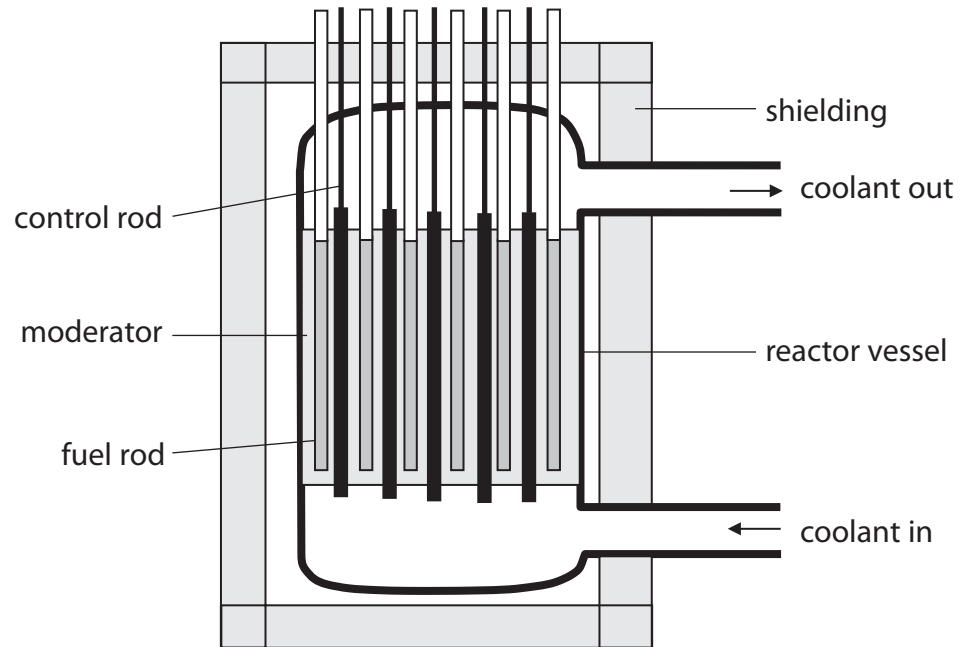


1 The diagram shows the main parts of a nuclear reactor.



(a) Draw a line linking each part of the reactor with its main function.

The first one has been done for you.

(2)

part of reactor		main function
control rod	● ————— ●	controls the rate of fission
coolant	●	absorbs dangerous radiation
fuel rod	●	contains uranium for fission
shielding	●	removes energy from the reactor

(b) State the type of energy released in a fission reaction.

(1)

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(c) Explain the role of the moderator in a fission reaction.

(2)

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(d) Explain, in terms of neutrons, what is meant by controlled nuclear fission.

(3)

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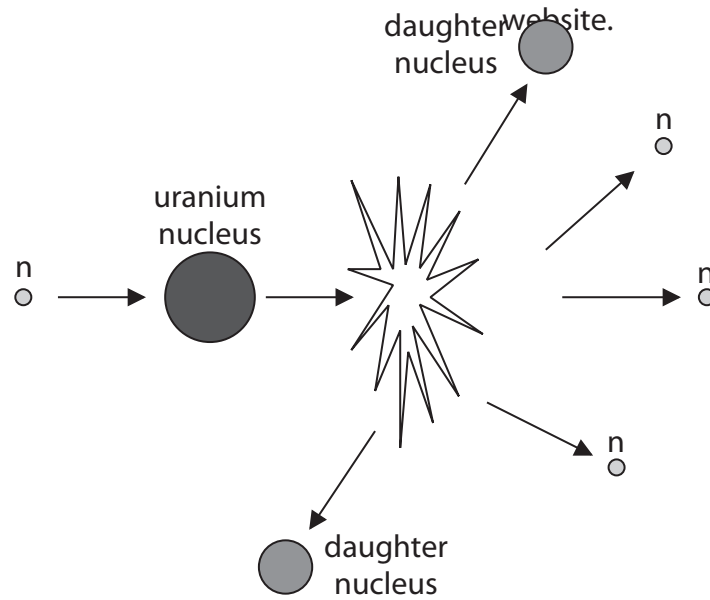
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(Total for Question 1 = 8 marks)

2 A student finds this representation of nuclear fission on a



(a) Describe what happens when nuclear fission of uranium occurs.

(3)

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(b) The daughter nuclei move off with high speed.

Name the type of energy that this gives them.

(1)

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(Total for Question 2 = 4 Marks)

(b) State the form of energy that is released during fission.

(1)

.....

(c) How does the shielding improve safety?

(1)

.....

(Total for Question 3 = 7 marks)