

Keeping healthy – 2022 GCSE 21st Biology Combined Science B**1. June/2022/Paper_J260/01/No.4**

This question is about influenza (flu).

(a) What kind of pathogen causes flu?

Put a ring around the correct answer.

Bacteria

Fungus

Protist

Virus

[1]

(b) The flu vaccine contains a dead or inactive flu pathogen.

Explain why it is important that the flu pathogen in the vaccine is dead or inactive.

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 [1]

(c) The statements explain how vaccination can help to protect against flu.

The statements are **not** in the correct order.

A Antibodies stick to the flu antigens, labelling them for attack by white blood cells.

B Some white blood cells develop into memory cells.

C The immune system makes antibodies against the flu antigens.

D White blood cells recognise the flu antigens.

E The vaccine is injected.

Write the letters in the boxes to show the correct order of the statements.

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[4]