

APOLLO

Viruses

HL

Biology

First assessment 2025

8 questions | questions

- 13.** What is a difference between the lytic and the lysogenic cycle of the bacteriophage lambda?
- A. Only in the lytic cycle is lambda DNA inserted into the host DNA.
 - B. Only in the lysogenic cycle is the host metabolism used to replicate.
 - C. Only in the lytic cycle is the host metabolism used to replicate.
 - D. Only in the lysogenic cycle is lambda DNA inserted into the host DNA.

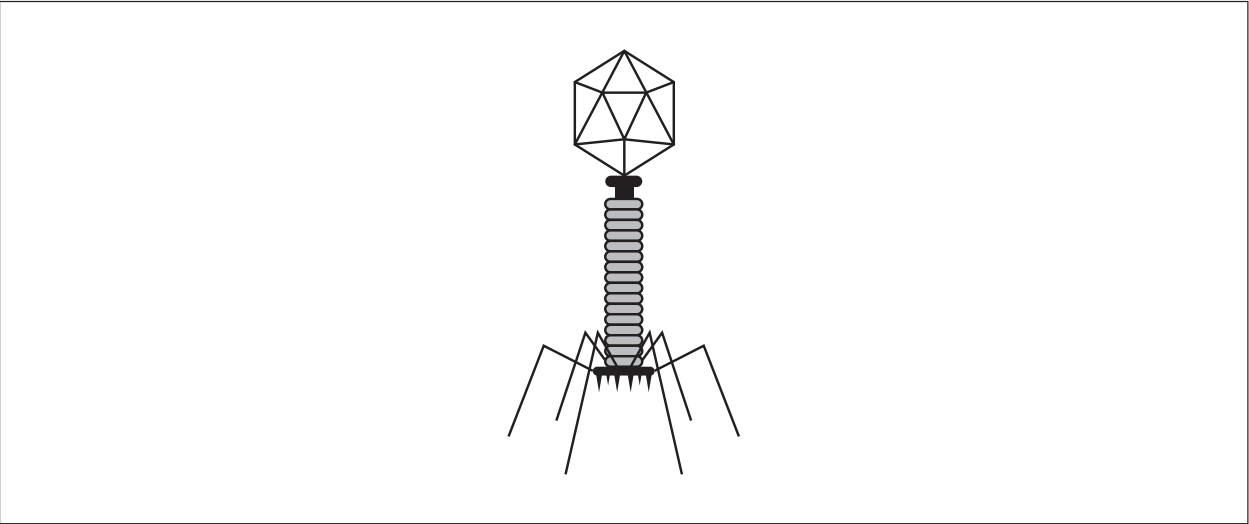
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 - C. Only in the lytic cycle is the host metabolism used to replicate.
 - D. Only in the lysogenic cycle is lambda DNA inserted into the host DNA.

- 28.** What is a reason for the ineffectiveness of antibiotics against viruses?
- A. Viruses have genes for antibiotic resistance.
 - B. Viruses do not have cell membranes.
 - C. Antibiotics are only effective against archaea.
 - D. Antibiotics target metabolic processes.

Section A

Answer **all** questions. Answers must be written within the answer boxes provided.

4. The diagram shows the structure of a bacteriophage lambda virus.



- (a) On the image, label the capsid. [1]
- (b) Describe **one** reason that viruses are not considered to be living. [1]

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- (c) Explain how the bacteriophage lambda reproduces in the lysogenic cycle. [3]

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12. What mode of existence do viruses exhibit?

- A. Obligate parasite
- B. Facultative parasite
- C. Obligate heterotroph
- D. Predator

Turn over

13. Which feature is common to all viruses?

- A. Has a capsid
- B. Contains RNA
- C. Contains cytoplasm
- D. Enveloped in host cell membrane

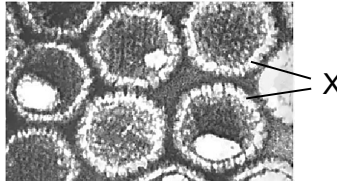
Section B

Answer **two** questions. One additional mark is available for the construction of your answers for each question. Answers must be written within the answer boxes provided.

7. At all levels of biological organization there is diversity.

- (a) Explain the diversity of possible base sequences in nucleic acids. [4]
- (b) Describe, with examples, the diversity of structure in viruses. [7]
- (c) Suggest how the diversity of chromosome number in animals and plants has evolved. [4]

14. The image shows a group of enveloped viral particles.



What is the most likely composition of the structure labelled X?

- A. Membrane derived from the host cell
- B. Viral DNA
- C. Viral cell walls
- D. Viral enzymes