
HL Paper 3

- a. The Hershey and Chase experiment supported DNA as the hereditary material. Describe the experiment. [3]
- b. Some regions of DNA act as telomeres or produce tRNA. State **one** other function of DNA sequences that do **not** code for protein. [1]

Markscheme

- a. a. radioactive isotopes used to label viruses/bacteriophages/phages
- b. proteins labelled with radioactive sulphur/³⁵S and DNA labelled with radioactive phosphorous/³²P
- c. phage infects bacterium
- d. only viral DNA enters bacterium «viral coat/capsid/shell do not»
- e. parts of phage remaining outside bacterial cell are removed
- OR**
- bacteria are separated from phage parts «by centrifuge»
- f. bacteria contain the labelled/radioactive DNA

[Max 3 Marks]

- b. a. regulate gene expression
- b. act as promoter
- c. role in chromosome pairing/crossing over/recombination
- d. introns

OWTTE

[Max 1 Mark]

Examiners report

- a. [N/A]
- b. [N/A]
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