

**AS Level Biology A**  
**H020/01 Breadth in Biology**

**Question Set 8**

1. In 1990, Carl Woese suggested a new top level taxon to the current system of classification of living organisms, which he termed a domain. He used his results from studying RNA to organise organisms into three distinct groups.

(a) (i) Name the cell component that appears in organisms of all three domains that Woese suggested.

*Ribosomes*

[1]

(ii) One of the domains he suggested is called Eukarya.

Name the other **two** domains.

1 *Bacteria* .....

2 *Archaea* .....

[2]

(iii) State **two** defining features of all members of the domain Eukarya.

*True nucleus and membrane bound organelles*

[2]

(b) Woese carried out a detailed study of RNA molecules in order to draw his conclusions.

Suggest **two** ways in which the scientific community are likely to have validated Woese's research.

*Replication of his study by other scientists.*

*Peer review before publication in a scientific journal.*

[2]

**Total Marks for Question Set 8: 7**

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