18.1 Classification

Question Paper

Course	CIE A Level Biology
Section	18. Classification, Biodiversity & Conservation
Topic	18.1 Classification
Difficulty	Easy

Time allowed: 30

Score: /25

Percentage: /100

Question 1a

Domestic dogs, *Canis familiaris*, and wolves belong to the family Canidae.

Complete **Table 1** below to show the classification of the domestic dog.

Table 1

Kingdom	Animalia
	Chordata
Class	
	Carnivora
Family	Canidae
	Canis

[2 marks]

Question 1b

It is still debated as to whether dogs and wolves are entirely different species or subspecies. It has been suggested that some wolves have bred with domestic dogs to produce fertile offspring, which would make them the same species according to the biological species concept.

Name and briefly describe another species concept that biologists may use to help determine if two animals are different species.

[2 marks]

Question 1c

The classification seen in Table 1 is described as a hierarchical system.

Explain what is meant by this.

[2 marks]

Question 1d

Explain the term *taxonomic rank* and give an example of one.

[2 marks]

Question 2a

The Archaea represent one of the domains of life on Earth.

Identify the other two domains.

[2 marks]

Question 2b

Describe the features of *Archaea* that mean they are classified as a distinct domain in the three domains system of classification.

[4 marks]

Question 2c

Fig. 2 below shows a bacterial cell and an animal cell as seen in a student's Biology textbook.
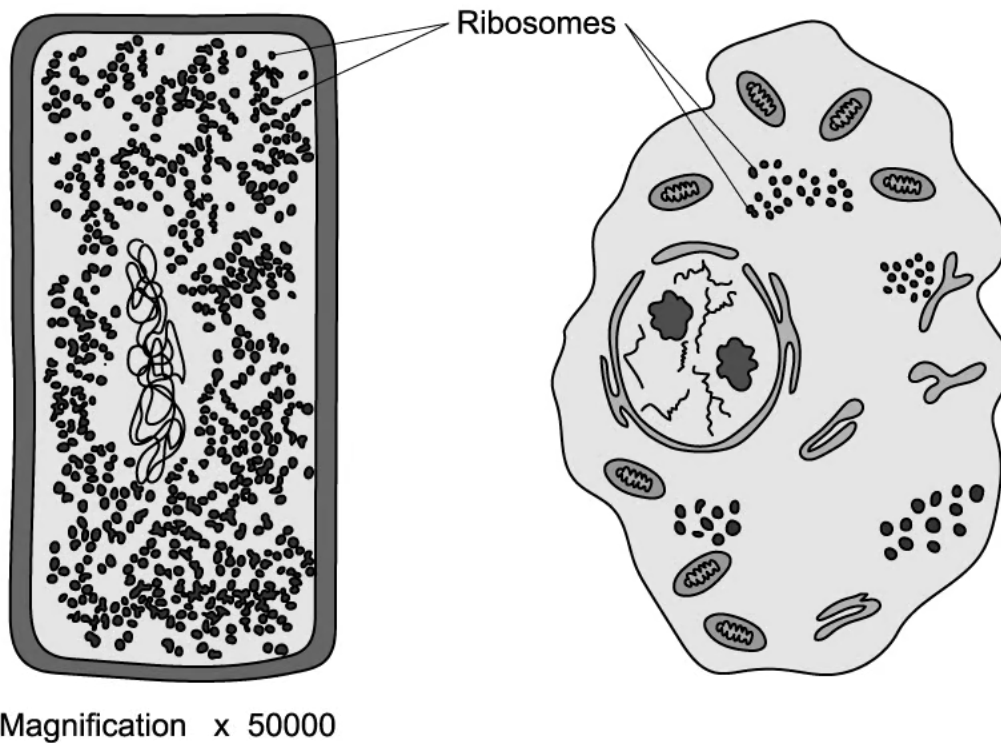

Fig. 2

Animal cells store their genetic material in a nucleus, whereas bacterial cells do not.

Give **three** other contrasts between bacterial cells and animal cells.

[3 marks]

Question 3

Outline the characteristic features of organisms in the domain *Bacteria*.

[8 marks]