**1.** A cell has cytoplasm, a cell wall, naked DNA and ribosomes. Based on this information, what type of cell could this be?

A. A cell from a pine tree

B. A grasshopper cell

C. A human red blood cell

D. A bacterium

(Total 1 mark)

**2.** Which functions of life are found in all unicellular organisms?

A. growth, response and nutrition

B. differentiation, response and nutrition

C. metabolism, meiosis and homeostasis

D. growth, metabolism and differentiation

(Total 1 mark)

**3.** Which of the following structures does *Escherichia coli* have?

I. 70S Ribosomes

II. Pili

III. Nucleus

A. I only

B. I and II only

C. II and III only

D. I, II and III

(Total 1 mark)

**4.** In viewing an electron micrograph of a cell, ribosomes, pili and a single circular chromosome are observed. What other structure is likely to be present?

A. The rough endoplasmic reticulum (rER)

B. Mitochondria

C. A nuclear membrane

D. A plasmid

(Total 1 mark)

**5.** Below is a micrograph of an *E. coli* bacterium undergoing reproduction.

 

 In the diagram what does label X identify?

A. Nucleoid region

B. Chromatin

C. Histones

D. Endoplasmic reticulum

(Total 1 mark)

**6.** By what process do most bacteria divide?

A. Mitosis

B. Meiosis

C. Conjugation

D. Binary fission

(Total 1 mark)

**7** Draw a labelled diagram of the ultrastructure of *Escherichia coli* as an example of a prokaryote.

(4)