

Smart Edu Hub / Smart Exam Resources

9700 / CAIE A level Biology / Paper-1/ Multiple Choice
Questions

1.2.24-Structural-Features-of-Prokaryotic- Cells-Bacterium-Set-3-qp

Total Questions: 11

Questions

Question 1:

Which processes occur in eukaryotes and prokaryotes?

- 1 hydrolysis
- 2 mitosis
- 3 transcription
- 4 translation

A 1, 2 and 3 B 1, 2 and 4 C 1, 3 and 4 D 2, 3 and 4

Question 2:

In general, eukaryotic cells undergo division much slower than prokaryotic cells.

What is the reason for this?

- A Eukaryotes break down the nuclear membrane during mitosis.
- B Eukaryotes have many more mitochondria than prokaryotes.
- C Prokaryotes do not contain any centrioles.
- D Prokaryotic cells are a lot smaller than eukaryotic cells.

Question 3:

In 1985, a giant bacterium, *Epulopiscium fishelsoni*, was discovered.

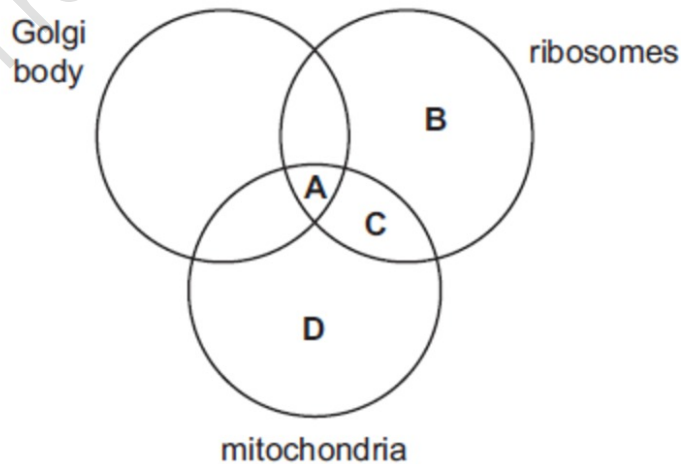
Which cell structure(s) would be present in *Epulopiscium* enabling biologists to classify this organism as prokaryotic?

- A a cellulose cell wall outside the plasma membrane
- B a pair of centrioles close to the nuclear area
- C circular DNA lying free in the cytoplasm
- D smooth endoplasmic reticulum throughout the cytoplasm

Questions (Continued)

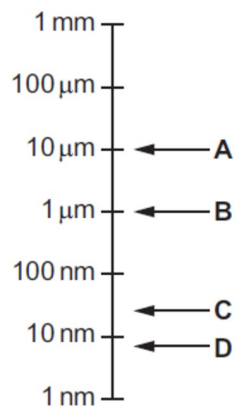
Question 4:

Which of these cell structures are present in *Plasmodium*?



Question 5:

Which letter on the logarithmic scale corresponds to the size of a typical prokaryote?



Questions (Continued)

Question 6:

Which statement is correct?

- A Prokaryotes and chloroplasts have circular DNA where genes carrying the code for cell walls are located.
- B Prokaryotes and chloroplasts have 70S ribosomes that are the sites for translation and polypeptide synthesis.
- C Prokaryotes and mitochondria have an outer membrane and a separate inner, folded membrane where ATP synthesis occurs.
- D Prokaryotes and mitochondria have double-stranded linear DNA where genes carrying coded information are located.

Question 7:

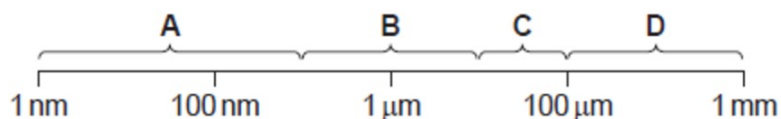
Which statements about a typical prokaryotic cell are correct?

- 1 It is smaller than $2\text{ }\mu\text{m}$.
- 2 It has a nucleus.
- 3 Its has circular DNA.
- 4 It has small (70S) ribosomes.

A 1 and 2 only B 1 and 3 only C 1, 3 and 4 only D 2, 3 and 4 only

Question 8:

Which size range would include most prokaryotic cells?



Questions (Continued)

Question 9:

What are the characteristics of a prokaryotic cell?

	endoplasmic reticulum	genetic material
A	absent	DNA
B	absent	RNA
C	present	DNA
D	present	RNA

Question 10:

What is the diameter of a typical prokaryote, such as *Streptococcus*?

- A $7.5 \times 10^1 \text{ nm}$
- B $7.5 \times 10^2 \text{ nm}$
- C $7.5 \times 10^0 \mu\text{m}$
- D $7.5 \times 10^1 \mu\text{m}$

Questions (Continued)

Question 11:

Which cell components are present in all prokaryotic cells?

	cell surface membrane	cell wall	endoplasmic reticulum	flagellum
A	✓	✓	x	✓
B	✓	x	✓	x
C	✓	✓	x	x
D	x	✓	✓	✓

key

✓ = present

x = not present