

# Smart Edu Hub / Smart Exam Resources

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

## 1.2.1-Eukaryotic-Cells-Set-1-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.

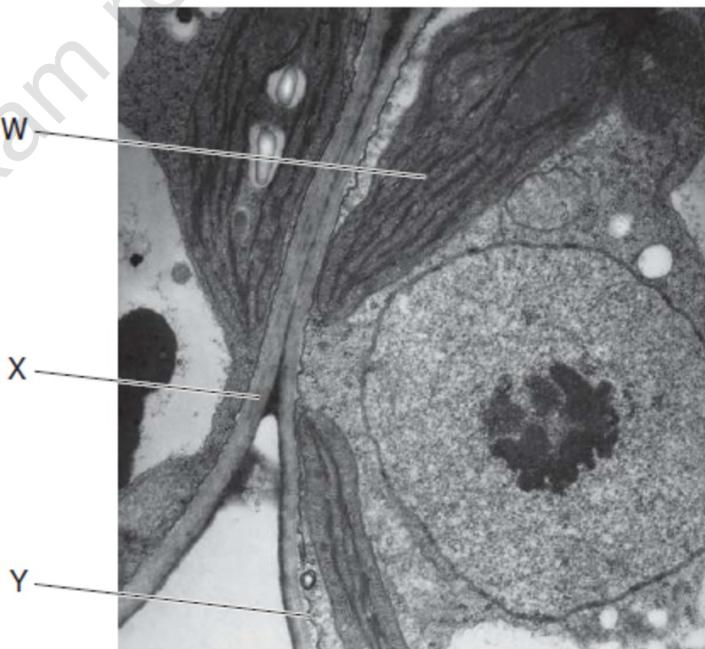
What is the reason for this?

- 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.

## Questions (Continued)

### Question 3:

The electronmicrograph shows part of two cells.



Which of the labelled features enable these cells to be identified as eukaryotic?

A W only      B X only      C W and X only      D W, X and Y

### Question 4:

Which range of sizes would include most eukaryotic cells?

A  $1 \times 10^2$  nm to  $1 \mu\text{m}$   
B  $1 \mu\text{m}$  to  $1 \times 10^1 \mu\text{m}$   
C  $1 \times 10^1 \mu\text{m}$  to  $1 \times 10^2 \mu\text{m}$   
D  $1 \times 10^2 \mu\text{m}$  to  $1 \times 10^3 \mu\text{m}$

## Questions (Continued)

### Question 5:

The following are all features of eukaryotic cells.

- 1 chloroplast
- 2 endoplasmic reticulum
- 3 lysosome
- 4 mitochondrion
- 5 nucleus

Which of these have a double membrane?

- A 1, 2 and 4
- B 1, 3 and 5
- C 1, 4 and 5
- D 2, 3 and 5

## Questions (Continued)

### Question 6:

Which structures are found in typical eukaryotic cells?

- 1 70S ribosomes
- 2 80S ribosomes
- 3 linear DNA (chromosomes)
- 4 circular DNA

A 1, 2, 3 and 4

B 1, 2 and 3 only

C 1 and 4 only

D 2 and 3 only

### Question 7:

Which observations suggest that a cell is eukaryotic?

	cytoplasm includes endoplasmic reticulum	protein molecules are associated with the DNA	ribosomes distributed through the cytoplasm	
A	✓	✗	✓	key
B	✗	✓	✗	✓ = found in eukaryotes
C	✗	✗	✗	✗ = not found in eukaryotes
D	✓	✓	✓	

# Questions (Continued)

## Question 8:

Which structure is **only** found in typical eukaryotic animal cells?

- A cell surface membrane
- B centriole
- C Golgi body
- D ribosome

## Question 9:

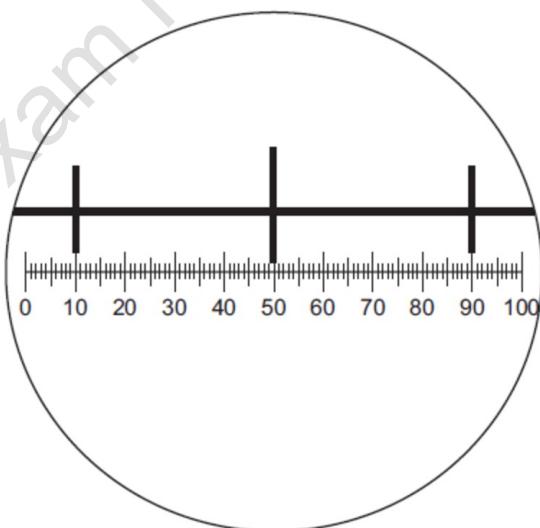
Which row shows features of a typical eukaryotic cell?

	cell size	nucleus	DNA	ribosome size
A	< 2 $\mu$ m	absent	linear	large 80S
B	< 2 $\mu$ m	present	circular	small 70S
C	> 2 $\mu$ m	present	circular	small 70S
D	> 2 $\mu$ m	present	linear	large 80S

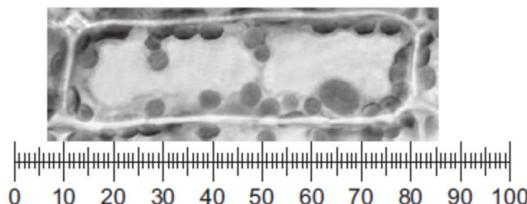
# Questions (Continued)

## Question 10:

The diagram shows a stage micrometer on which the small divisions are 0.1 mm. It is viewed through an eyepiece containing a graticule.



The stage micrometer is replaced by a slide of a plant cell.



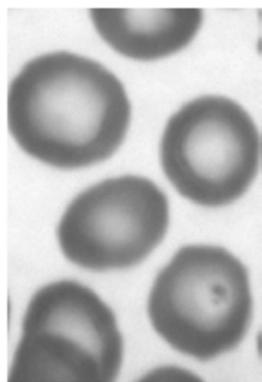
What is the length of the nucleus?

A 0.8 mm      B 8  $\mu$ m      C 25  $\mu$ m      D 200  $\mu$ m

## Questions (Continued)

### Question 11:

The photograph shows a type of blood cell.



Which statements about these cells are correct?

- 1 Oxygen diffuses through the phospholipid bilayer.
- 2 Sodium ions diffuse through the phospholipid bilayer.
- 3 Water passes in and out of these cells by osmosis.

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