

# 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.

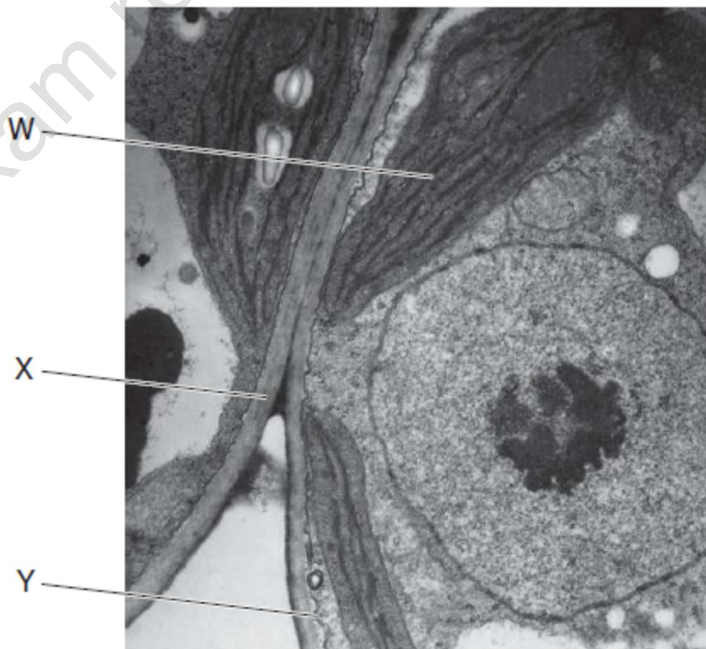
What is the reason for this?

- 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 | ✓  | x   | ✓   |
| B | x  | ✓   | x   |
| C | x  | x   | x   |
| D | ✓  | ✓   | ✓   |

key

✓ = found in eukaryotes

x = not found in eukaryotes

## 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:

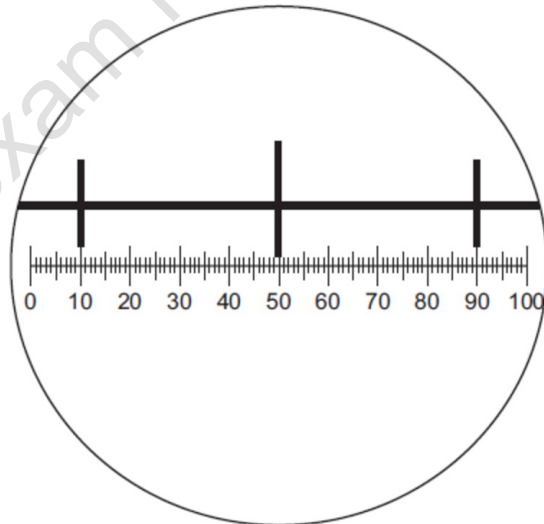
Which row shows features of a typical eukaryotic cell?

|   | 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     |

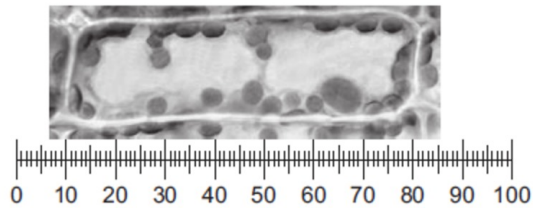
## Questions (Continued)

### 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.



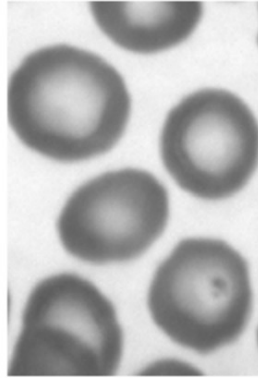
What is the length of the nucleus?

- A 0.8 mm      B 8  $\mu\text{m}$       C 25  $\mu\text{m}$       D 200  $\mu\text{m}$

## 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