



**EXAM PAPERS PRACTICE**

Boost your performance and confidence  
with these topic-based exam questions

Practice questions created by actual  
examiners and assessment experts

Detailed mark scheme

Suitable for all boards

Designed to test your ability and  
thoroughly prepare you

## **1.4 Cells: Division**

Easy



# **BIOLOGY**

## **IB HL**



EXAM PAPERS PRACTICE

# 1.4 Cells: Division

## Question Paper

Course	DP IB Biology
Section	1. Cell Biology
Topic	1.4 Cells: Division
Difficulty	Easy

EXAM PAPERS PRACTICE

Time allowed: 10  
Score: /5  
Percentage: /100

### Question 1

The micrograph below show cells that are in various stages of the cell cycle.

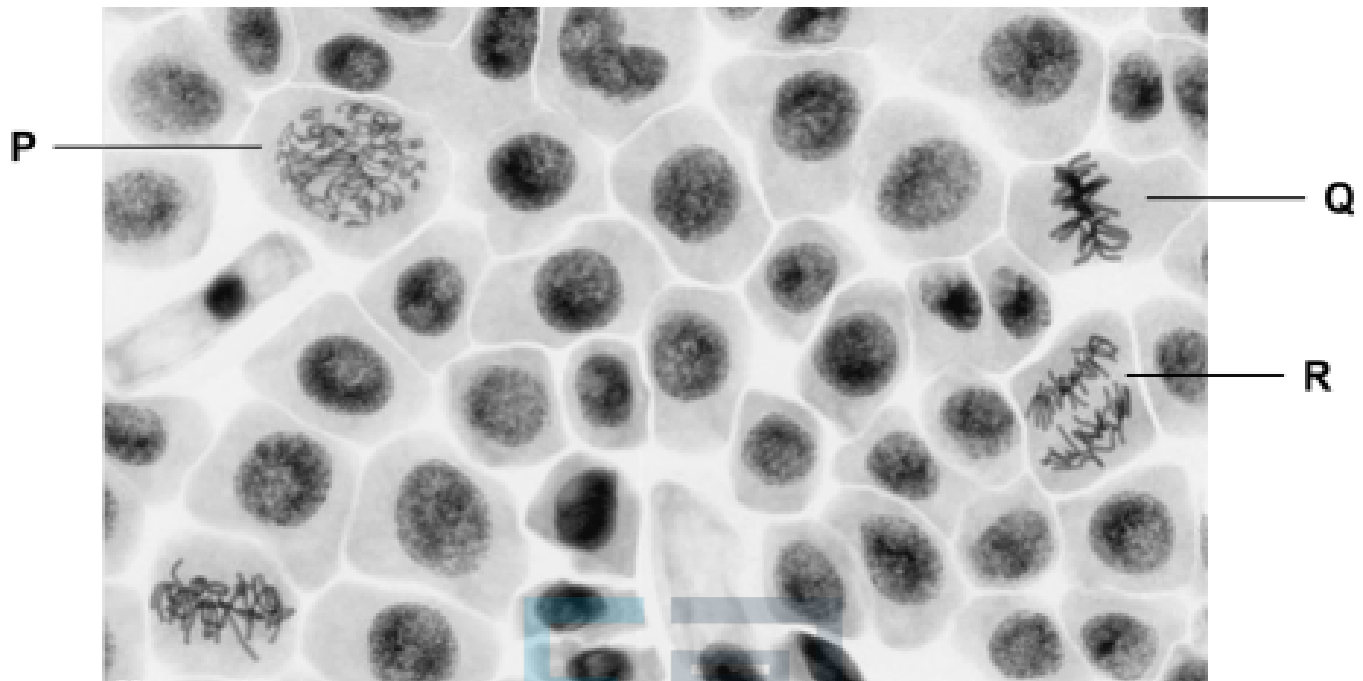


Image courtesy of Doc. RNDr. Josef Reischig. Licensed under Creative Commons Attribution-Share Alike 3.0 Unported license. Reused and distributed under conditions found at: <https://creativecommons.org/licenses/by-sa/3.0/deed.en>

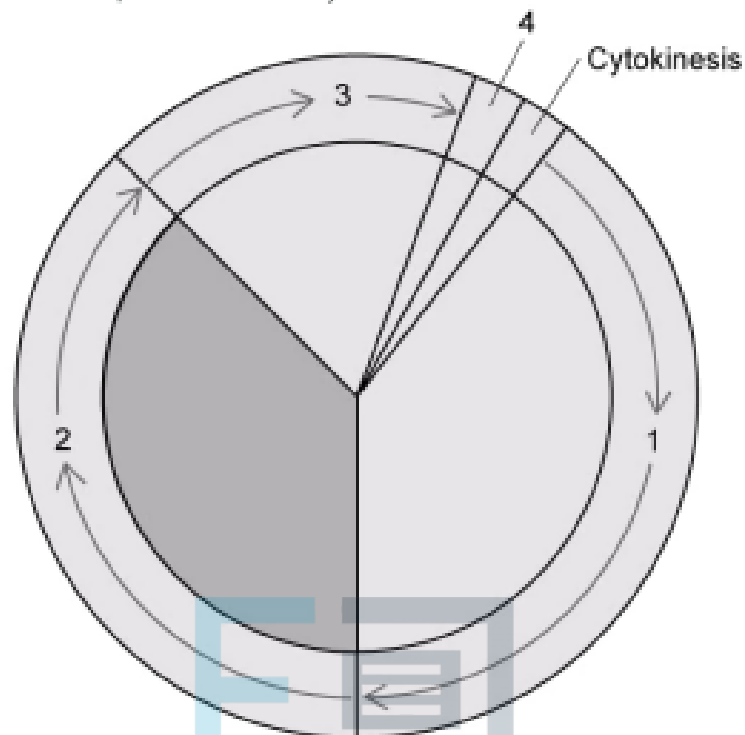
Which of the following correctly identifies the different stages of mitosis that each of the labelled cells are in?

	P	Q	R
A.	Prophase	Metaphase	Anaphase
B.	Metaphase	Telophase	Anaphase
C.	Telophase	Metaphase	Anaphase
D.	Prophase	Anaphase	Metaphase

[1 mark]

### Question 2

The diagram below shows the different phases of the cell cycle.



Which of the following rows correctly identifies the phases of the cell cycle?

	1	2	3	4
A.	Interphase: $G_1$	Interphase: $G_2$	Interphase: S	Nuclear division
B.	Mitosis	Interphase: $G_1$	Interphase: S	Interphase: $G_2$
C.	Interphase: $G_1$	Interphase: S	Interphase: $G_2$	Nuclear division
D.	Interphase: S	Interphase: $G_1$	Interphase: $G_2$	Mitosis

[1 mark]

### Question 3

Which of the following processes involve mitosis?

- A. growth, repair, semi-conservative replication
- B. repair, growth, asexual reproduction
- C. reduction division, asexual reproduction, growth
- D. repair, reduction division, asexual reproduction



#### Question 4

Which of the following provides the best explanation of how cyclins were discovered?

- A. It was discovered when Robert Hooke researched how proteins drive the progress of the different phases of the cell cycle
- B. It was discovered accidentally when a group of German scientists studied the chromosomes of horse threadworms
- C. It was discovered when Matthias Schleiden and Theodor Schwann studied animal and plant cells under a microscope
- D. It was discovered by chance when Tim Hunt researched protein synthesis in sea urchin eggs

[1 mark]

#### Question 5

The following steps are involved in the formation of malignant tumours.

1. Tumour cells spread in blood and lymph
2. Rapid mitosis occur
3. Oncogenes arise due to exposure to carcinogens
4. The tumour increases in size
5. Tumour cells form secondary tumours throughout the body

Which would represent the correct order of the steps?

- A. 2 → 4 → 3 → 1 → 5
- B. 3 → 2 → 4 → 1 → 5
- C. 4 → 2 → 3 → 1 → 5
- D. 3 → 2 → 1 → 4 → 5

[1 mark]