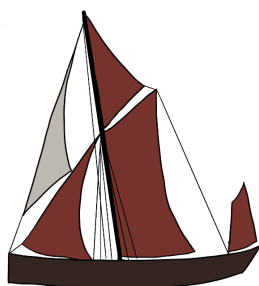

CELL DIVISION PAST PAPER QUESTIONS

Science Exams Sorted



Name:		
Mark: (25)	%	Grade:

2021

Cell Division Past Paper Questions

1. In 2012, two scientists were awarded the Nobel prize for their research on stem cells.
- They showed that adult cells could be reprogrammed to become cells with the properties of embryonic stem cells.

a. Describe the possible benefits of this research.

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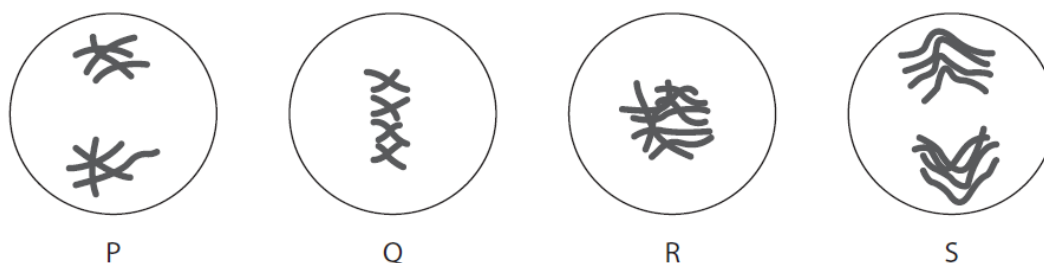
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(3)

The figure below shows four stages of mitosis, labelled P, Q, R and S.



b. Which is the correct order for these stages?

- ☐ **A** $Q \rightarrow R \rightarrow S \rightarrow P$
- ☐ **B** $R \rightarrow Q \rightarrow S \rightarrow P$
- ☐ **C** $R \rightarrow S \rightarrow Q \rightarrow P$
- ☐ **D** $Q \rightarrow S \rightarrow R \rightarrow P$

(1)

c. The stage of mitosis labelled S in the figure above is?

- ☐ **A** anaphase
- ☐ **B** prophase
- ☐ **C** telophase
- ☐ **D** metaphase

(1)

d. Interphase is part of the cell cycle.

Describe what happens during interphase.

.....

.....

.....

(2)

Edexcel 2018 Higher Paper 1 Q6 a & b

Cell Division Past Paper Questions

2. A fertilised ovum (egg cell) divides by mitosis to form an embryo.

Describe how some cells in an embryo become specialised cells.

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.....

(2)

Edexcel 2016 Higher Paper 2 Q4 d

3. Mitosis occurs in plant cells during growth.

Describe the division of a cell by mitosis.

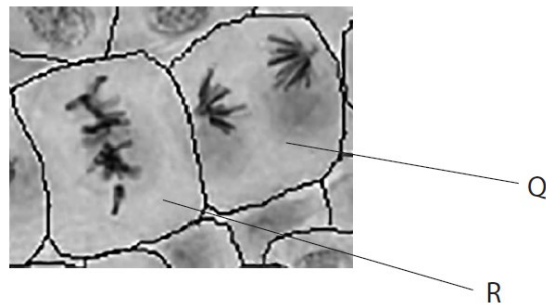
[illegible]

(6)

Edexcel 2014 Higher Paper 2 Q5 b

Cell Division Past Paper Questions

4. The figure below shows mitosis occurring in some plant cells.



- a. The cells in the figure above were taken from a rapidly growing part of a plant. Which part of a plant has rapidly dividing cells?

- ☐ **A** chloroplast
- ☐ **B** epithelium
- ☐ **C** meristem
- ☐ **D** vacuole

(1)

- b. Which stage of mitosis is shown in cell R?

- ☐ **A** prophase
- ☐ **B** metaphase
- ☐ **C** anaphase
- ☐ **D** telophase

(1)

- c. Describe two genetic similarities of the new cells that would be produced by cell Q in the figure above.

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.....

.....

(2)

Edexcel 2018 Foundation Paper 1 Q6 b i, ii & iii

Cell Division Past Paper Questions

5. A fertilised egg cell divides many times to form an embryo.

a. Name this type of cell division.

.....
(1)

After a baby is born, stem cells may be collected from the umbilical cord. These can be frozen and stored for possible use in the future.

b. What are stem cells?

.....
.....
.....
(2)

c. Suggest why it is ethically more acceptable to take stem cells from an umbilical cord instead of using stem cells from a 4-day-old embryo produced by In Vitro Fertilisation (IVF).

.....
.....
(1)

d. Stem cells taken from a child's umbilical cord could be used to treat a condition later in that child's life.

Give one advantage of using the child's own umbilical cord stem cells instead of using stem cells donated from another person.

.....
.....
(1)

AQA 2016 Higher Paper 2 Q5 b iii & c

6. When a cell divides by mitosis the new cells are genetically identical.

What causes the cells to be genetically identical?

.....
.....
(1)

AQA 2015 Higher Paper 2 Q3 a ii