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

Level: IGCSE Oxford AQA Biology (9201)
Subject: Biology
Topic: IGCSE AQA Biology
Type: Mark Schemes

To be used by all students preparing for IGCSE Oxford AQA Biology (9201)
Students of other Boards may also find this useful

Biology **IGCSE AQA**

Key skills

Mark schemes

1. (a) nucleus

1

(b) gene(s)

allow allele(s)

1

(c) copying of chromosomes

1

(d) mitochondria

1

(e) 60 − 45
or
120 − 105

1

15 (minutes)

1

*an answer of 15 (minutes) scores **2** marks*

(f) C

1

(g) 8

1

(h) to repair tissues

1

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2. (a) **C**

1

(b) cytoplasm **and** cell membrane dividing

*accept cytokinesis for **1** mark*

1

to form two identical daughter cells

1

(c) stage 4

1

only one cell seen in this stage

1

(d) (4 / 36) × 16 × 60

1

107 / 106.7

1

110 (minutes)

allow 110 (minutes) with no working shown for 3 marks 1

(e) binary fission

do not accept mitosis

1

(f) shortage of nutrients / oxygen

1

so cells die

or

death rate = rate of cell division

1

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3. (a) *comparisons are **not** required but should be credited*
accept a clear indication of the statement even if incomplete

can develop into most other types of cell

1

each cell divides every 30 minutes

1

low chance of rejection by the patient's immune system

1

(b) any **three** from:

- cheaper / only costs £1000
  *this **must** be comparative*
  ignore costs £1000
- can collect many (stem) cells
- adults give permission for their own bone marrow to be collected
  comparisons are not required but should be credited
- safe

3

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4. (a) 23

1

(b)

chromosome	nucleus	gene	cell
2	3	1	4

1

(c) (i) any one from

(cells which are bigger) take up more space

(cells) have to get bigger or mature to divide

1

(ii) chromosomes duplicate or

make exact copies of self

accept forms pairs of chromatids

1

nuclei divide

accept chromatids or

chromosomes separate

1

identical (daughter) cells formed

accept for example, skin cells make

more skin cells or cells are clones

1

(d) any **two** from

Differentiation mark

babies need **or** are made of different types of cells **or** cells that have different functions

accept different cells are needed for different organs

Division or specialisation mark

as fertilised egg starts to divide each cell specialises to form a part of the body

accept specialised cells make different parts of the body

Growth mark

specialised cells undergo mitosis to grow further cells

*accept cells divide **or** reproduce to form identical cells*

2

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5. (a) nucleus labelled correctly **1**

cell membrane labelled correctly **1**

(b) mitosis **1**

(c) electron (microscope) **1**

(d) higher magnification 1

(e) 45 (mm) **1**

45 / 250 or 0.18 (mm) **1**

allow ecf

180 (µm) **1**

allow 180 (µm) with no working shown for 3 marks

(f) 0.2 µm **1**

[9]