

Name of the Student: _____

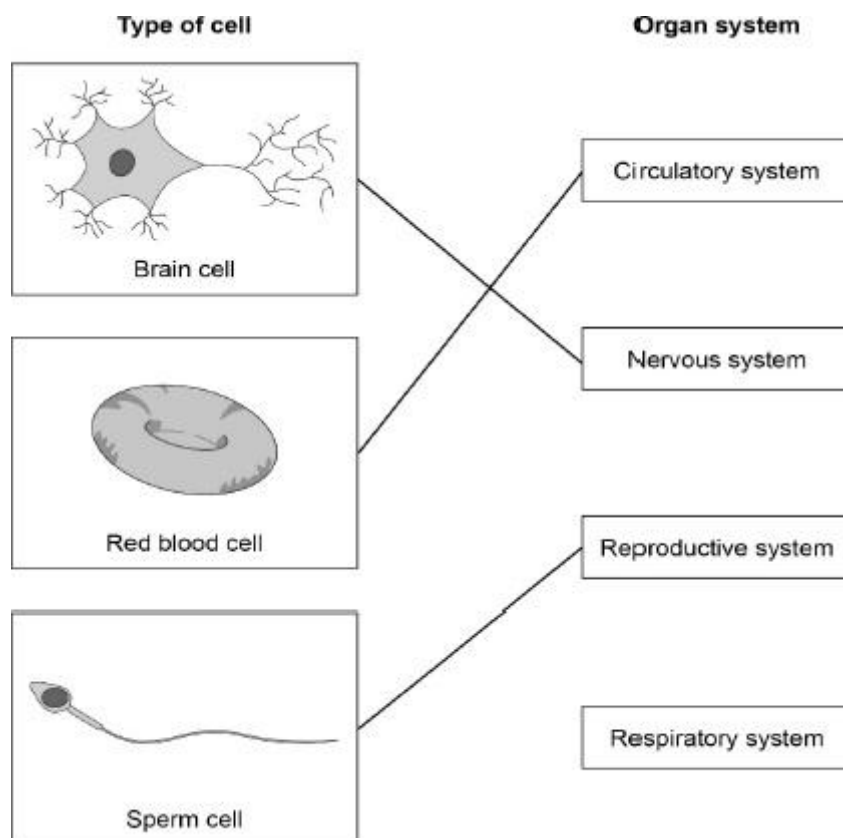
Max. Marks : 24 Marks

Time : 24 Minutes

Mark Schemes

Q1.

(a)



do **not** accept more than one line from a box on the left

3

(b) has a tail

allow has flagellum

1

(so) it can swim

allow so it can move / travel

OR

has (many) mitochondria (1)

to transfer / release / energy (for sperm to swim) (1)

allow for energy

do **not** accept energy is made / produced / created

OR

has enzyme(s) (1)

to penetrate into the egg (1)

OR

is streamlined (1)

to swim faster (1)

OR

has 23 chromosomes (1)

to produce 46 chromosomes in fertilised cell (1)

allow a correct adaptation (1)

and linked explanation (1)

1

(c) any **one** from:

(cell in the figure) does **not** have

- a (cell) wall
- a (large) vacuole
- chloroplasts

ignore chlorophyll

1

(d) cell membrane

1

(e) diffusion

1

Reason:

concentration (of oxygen) is greater outside the cell

or

concentration (of oxygen) is lower inside the cell

allow (oxygen moves) from a high concentration to a low concentration

allow there is more (oxygen) outside the cell (than inside the cell)

allow there is less (oxygen) inside the cell (than outside the cell)

ignore oxygen moves along a concentration gradient

1

(f) any **two** from:

ignore oxygen

- glucose / sugar
- water

allow H₂O

- amino acids
- fatty acids
- glycerol
- mineral ions

allow minerals / salts / vitamins / hormones

allow named ion / mineral / vitamin / hormone

ignore carbon dioxide

ignore urea

Q2.

- (a) **A** - (cell) membrane 1
- B** - nucleus 1
- C** - cytoplasm 1
- (b) to control the activities of the whole cell 1
- (c) to release energy in respiration 1
- (d) stage
must be in this order 1
- eyepiece lens
allow eyepiece
ignore lens unqualified 1
- mirror 1
- objective lens
allow objective
ignore lens unqualified 1
- (e) *measurement*
36 (mm)
allow in the range of 35 to 37 (mm) 1
- conversion*
36 000 (µm)
allow an answer using student's measurement × 1000 1
- substitution*
$$\frac{36\,000}{40}$$

allow student's converted measurement divided by 40 1
- magnification*
900
*do **not** accept if units given* 1

[13]