Reproduction – 2021 IGCSE 0610

1. Nov/2021/Paper_11/No.30

Which is an example of sexual reproduction?

A a female insect laying unfertilised eggs that develop into new insects

B division of a single-celled bacterium to produce two new bacteria

C fusion of a pollen grain nucleus with an ovule nucleus to produce a seed

D growing cuttings taken from one plant to produce new, genetically identical plants

2. Nov/2021/Paper_11/No.32

Which type of birth control prevents sperm from entering the vagina?

A contraceptive pill

B diaphragm

C IUD

D vasectomy

3. Nov/2021/Paper_12/No.30

Fertilisation is defined as the fusion of the ……X…… of two gametes to form a ……Y…… .

Which row completes the sentence?

	X	Y
A	alleles	sex cell
B	alleles	zygote
C	nuclei	sex cell
D	nuclei	zygote

4. Nov/2021/Paper_12/No.31

What is the correct description of pollination?

A Pollen grains are transferred from the anther to the ovary.

B Pollen grains are transferred from the anther to the stigma.

C Pollen grains are transferred from the ovary to the stigma.

D Pollen grains are transferred from the stamen to the anther.

5. Nov/2021/Paper_13/No.30

Which statement describes a structural adaptation of wind-pollinated flowers?

A They have long filaments so that the anthers hang outside of the flower.

B They have round, sticky sepals to trap pollen grains.

C Their large petals protect the stigma.

D Their stamens are feathery so there is a large surface area.

6. Nov/2021/Paper_13/No.31

What is the correct order of structures through which human sperm must pass in order to fertilise an egg cell?

A sperm duct → testes → cervix → vagina → urethra → uterus → oviduct

B sperm duct → testes → urethra → vagina → cervix → oviduct → uterus

C testes → sperm duct → urethra → vagina → cervix → uterus → oviduct

D testes → sperm duct → vagina → urethra → uterus → oviduct → cervix

7. Nov/2021/Paper_13/No.32

Which pair of birth control methods are chemical methods of preventing pregnancy?

A cervical mucus and diaphragm

B contraceptive pill and monitoring body temperature

C femidom and vasectomy

D IUD and IUS

8. Nov/2021/Paper_13/No.33

Which process occurs in asexual reproduction?

A fertilisation

B meiosis

C mitosis

D pollination

9. Nov/2021/Paper_21/No.29

Which hormone stimulates the release of an egg from the ovary during the menstrual cycle?

A FSH

B LH

C oestrogen

D progesterone

10. Nov/2021/Paper_22/No.29

Commercial plant growers use asexual reproduction to grow coffee plants which produce crops of coffee beans.

What is a disadvantage of asexual reproduction?

A The coffee beans produced by all of the plants are identical.

B Two parent plants are needed.

C One parent is needed.

D All plants are equally susceptible to the same disease.

11. Nov/2021/Paper_23/No.29

Which statement describes a structural adaptation of wind-pollinated flowers?

A They have long filaments so that the anthers hang outside of the flower.

B They have round, sticky sepals to trap pollen grains.

C Their large petals protect the stigma.

D Their stamens are feathery so there is a large surface area.

12. Nov/2021/Paper_31/No.2

(a) Fig. 2.1 shows some of the processes involved in the water cycle.

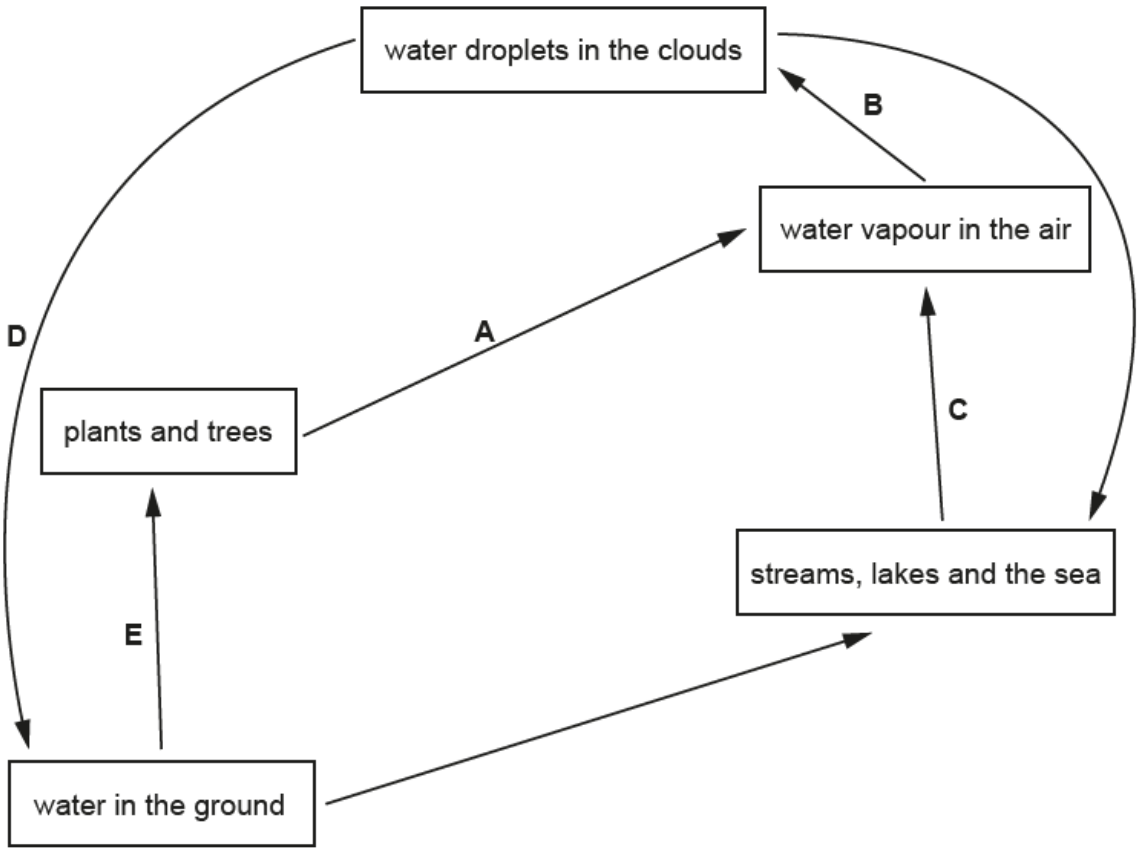

Fig. 2.1

(i) Identify the processes labelled **A** to **D** in Fig. 2.1.

A .....

B .....

C .....

D .....

[4]

(ii) Describe the process that occurs at **E** in Fig. 2.1.

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.....

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..... [3]

(b) Some animals can only live in clean water that has a high concentration of dissolved oxygen.

Some animals can live in polluted water.

A student investigated which animal species lived in different locations in a river.

Fig. 2.2 is a diagram of the river. The numbers are the locations of where the student counted how many of each animal species were present.

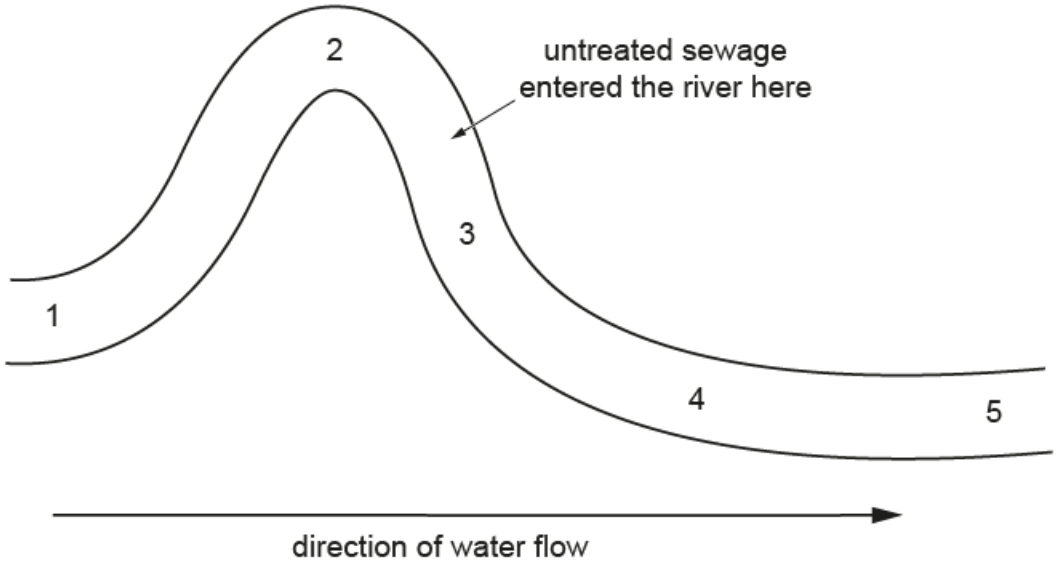

Fig. 2.2

The number of each animal species present is shown in Table 2.1.

Table 2.1

animal species	total number of each animal species found				
	location 1	location 2	location 3	location 4	location 5
mayfly nymph	76	78	0	0	0
freshwater shrimp	70	73	9	17	35
bloodworm	2	1	65	45	16
sludge worm	0	0	111	77	34

(i) State which location has the most animals present.

..... [1]

(ii) Using the information in Fig. 2.2 and Table 2.1, suggest which animal species is unable to survive in polluted water. Give reasons for your choice.

species .....

reasons .....

.....

.....

.....

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.....

[3]

(iii) Suggest which animal species in Table 2.1 indicates that the water is polluted when it is present.

..... [1]

(iv) Calculate the percentage change in the freshwater shrimp numbers between location **2** and location **3**.

Give your answer to **one** decimal place.

Space for working.

..... %

[3]

[Total: 15]

13. Nov/2021/Paper_32/No.6

(a) Fig. 6.1 shows the changes that happen to the thickness of the uterus lining during the menstrual cycle.

The loss of the lining of the uterus is called menstruation.

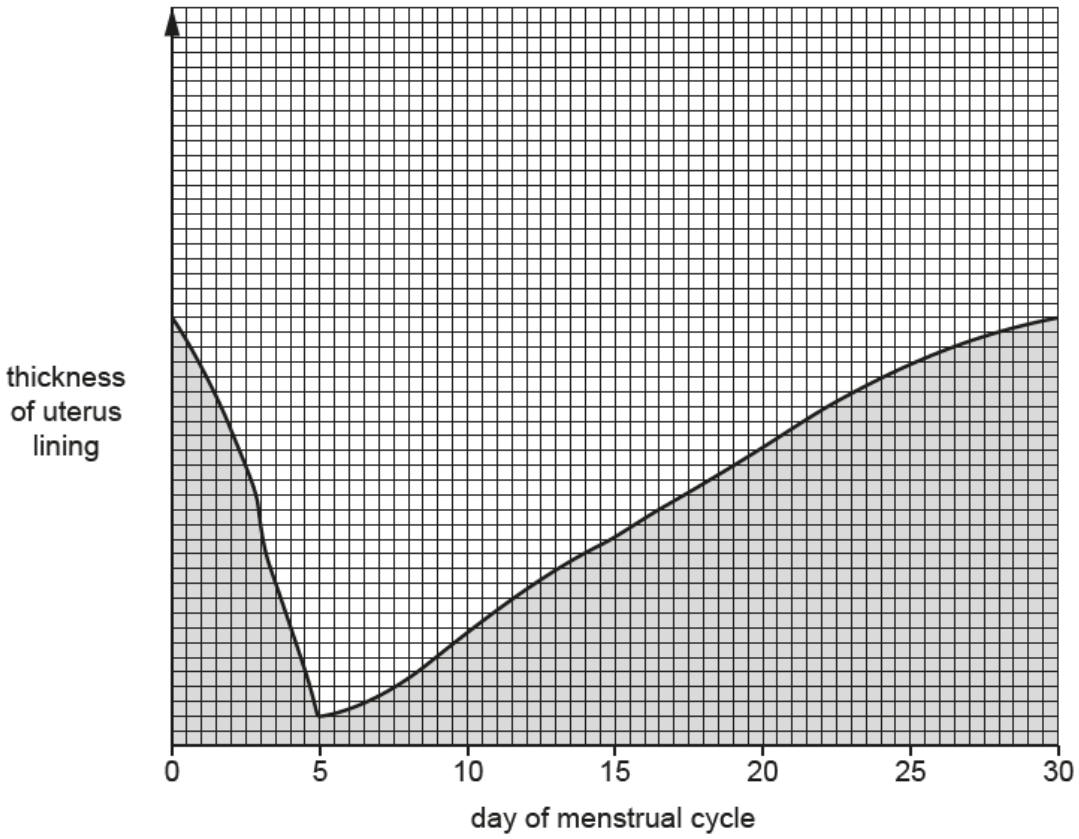

Fig. 6.1

Use Fig. 6.1 and the numbers from the list to answer these questions.

Each number can be used once, more than once or not at all.

0 5 8 15 28 30

State the number of days of this menstrual cycle. .....

State the number of days that menstruation lasts. .....

State the day on which ovulation is most likely to occur. .....

State **one** day when the uterus lining is at its thickest. .....

[4]

(b) Table 6.1 shows some of the changes that happen to boys and girls during puberty.

Place ticks (✓) in Table 6.1 to show which changes happen in boys and which changes happen in girls.

Table 6.1

	boys	girls
breasts grow		
growth of pubic hair		
widening of hips		

[3]

(c) State the name of the hormone that causes the development of secondary sexual characteristics in girls.

..... [1]

(d) State where the hormone that causes the development of secondary sexual characteristics in boys is produced.

..... [1]

[Total: 9]

14. Nov/2021/Paper_33/No.4

(a) Fig. 4.1 is a diagram of the female reproductive system.

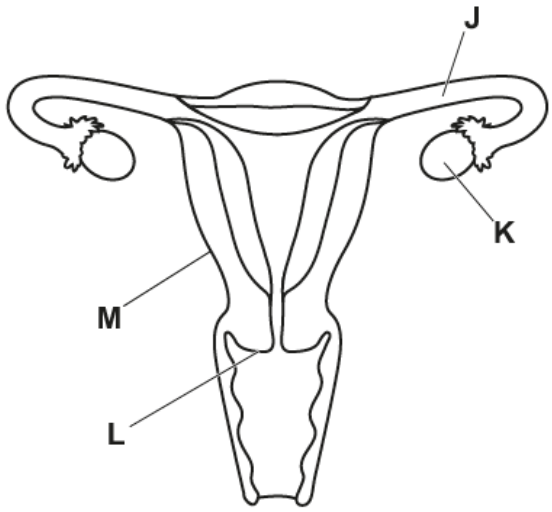

Fig. 4.1

Table 4.1 shows some of the names and functions of the structures labelled with letters **J** to **M** in Fig. 4.1.

Complete Table 4.1.

Table 4.1

letter in Fig. 4.1	name of the structure	function of the structure
J		transfers egg cells to the uterus
K		production of eggs
L	cervix	
M	uterus wall	

[4]

(b) There are a range of birth control options available to humans. Table 4.2 shows some information about types of birth control.

Complete Table 4.2.

Table 4.2

type of birth control	example of birth control
barrier	
	contraceptive implant
natural	

[3]

[Total: 7]

15. Nov/2021/Paper_42/No.3

Fig. 3.1 shows the changes in the concentrations of the hormones FSH and LH during a menstrual cycle.

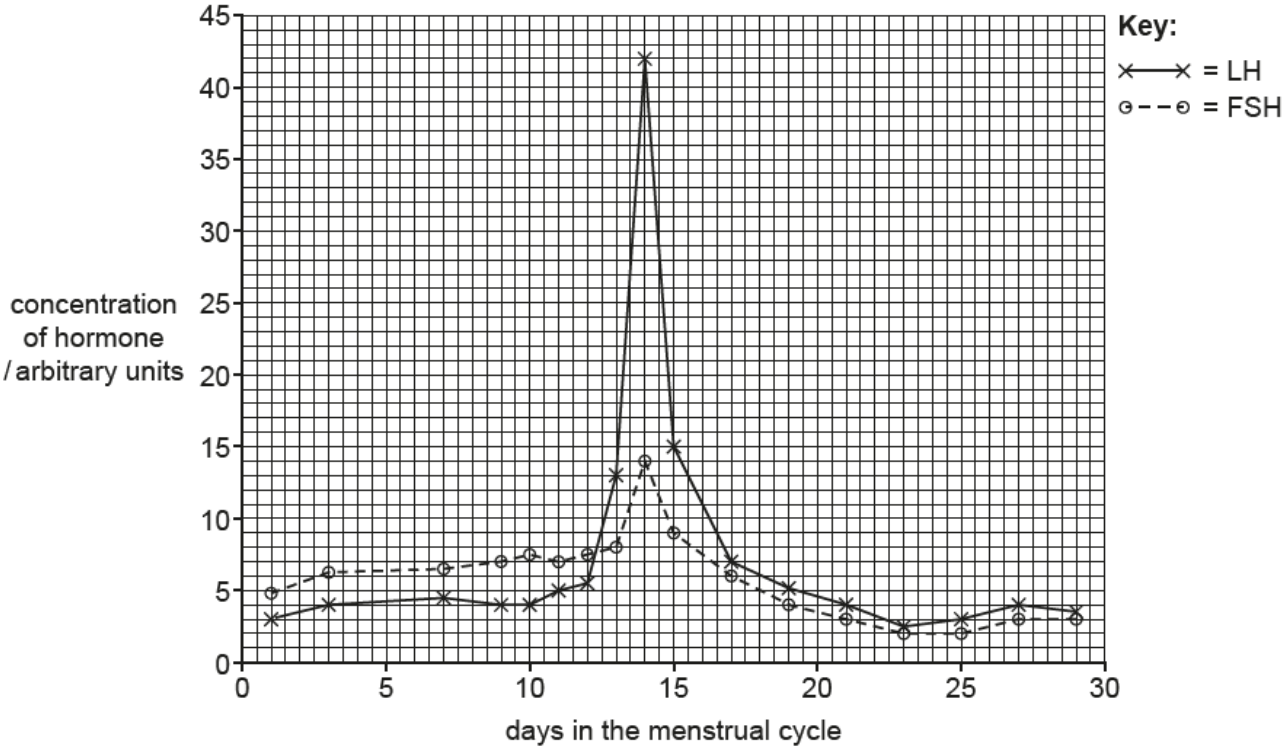

Fig. 3.1

(a) (i) Suggest the target organ for FSH.

..... [1]

(ii) State how FSH reaches its target organ.

..... [1]

(iii) Describe the relationship shown by the two hormones in Fig. 3.1.

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..... [2]

(b) Describe the roles of FSH and LH in the menstrual cycle.

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..... [4]

(c) Describe the changes that occur in the lining of the uterus during one menstrual cycle.

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..... [3]

(d) Oral contraceptives are a method of birth control taken by women.

Outline how the hormones in contraceptives act as a method of birth control.

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..... [3]

[Total: 14]