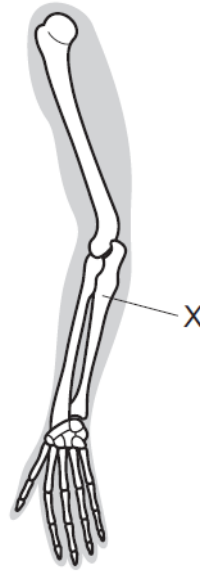


1. **Nov/2020/Paper_11/No.24**

The diagram shows the bones of the human arm.



Which is the bone labelled X?

- A humerus
- B radius
- C scapula
- D ulna

2. **Nov/2020/Paper_11/No.26**

The table shows the characteristics of four microorganisms.

Which one could be a virus?

	contains one or more cells	contains one or more cell nuclei	produces spores
A	x	x	x
B	✓	x	x
C	✓	✓	x
D	✓	✓	✓

key

✓ = true

x = false

3. Nov/2020/Paper_11/No.27

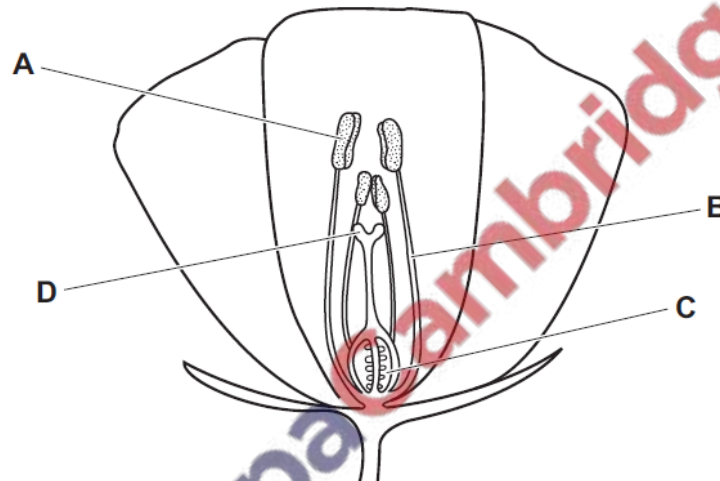
Which statement comparing the production of single cell protein and the production of protein in meat is **not** correct?

- A Single cell protein can be produced more quickly.
- B Production of single cell protein is independent of climatic changes.
- C Production of single cell protein requires more space.
- D Single cell protein contains less fat and more dietary fibre.

4. Nov/2020/Paper_11/No.33

The diagram shows a section of a flower.

Where are the male gametes made?



5. Nov/2020/Paper_11/No.34

What is **not** an essential condition for the germination of seeds?

- A presence of carbon dioxide
- B presence of oxygen
- C presence of water
- D suitable temperature

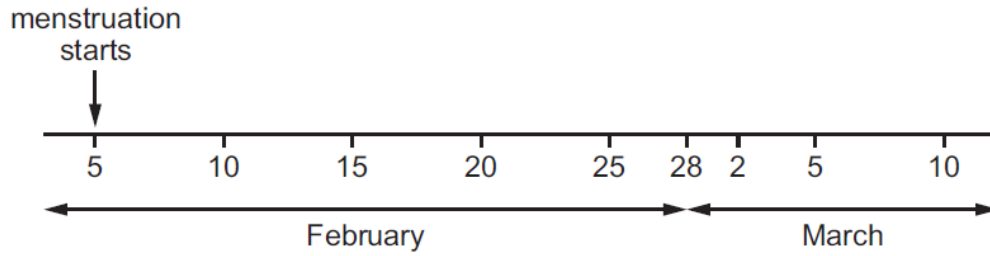
6. Nov/2020/Paper_11/No.35

What is an advantage to a baby of breast-feeding compared with bottle feeding?

- A Only breast milk contains all the vitamins a growing baby needs.
- B Only breast milk contains antibodies.
- C Only breast milk is sterile.
- D Only breast milk provides the correct volume of milk for the baby.

7. Nov/2020/Paper_11/No.36

The diagram shows a calendar for 33 days in February and March.



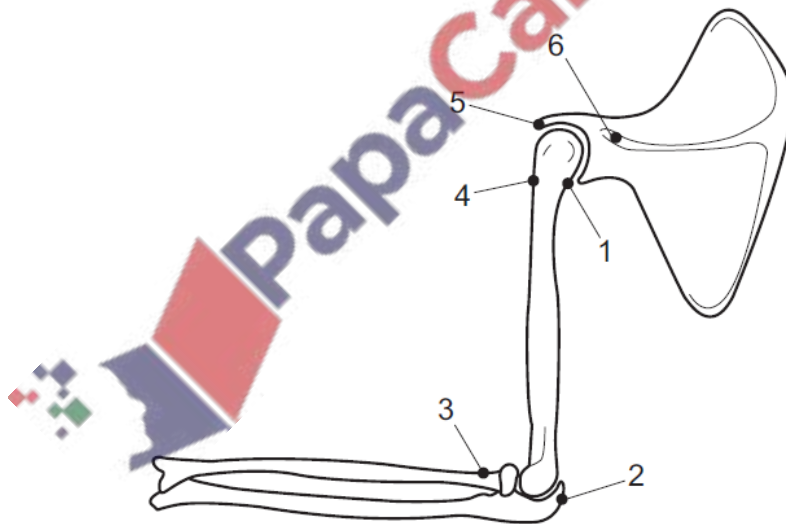
A girl, who has a regular menstrual cycle of 28 days, begins menstruation on 5 February.

During which dates would the progesterone concentration in her blood rise most rapidly?

- A 5–12 February
- B 13–19 February
- C 20–26 February
- D 27 February – 5 March

8. Nov/2020/Paper_12/No.24

The diagram shows the bones of the forelimb.



Which labels show where the muscle that straightens the hinge joint is attached?

- A 1 and 2
- B 3 and 4
- C 4 and 5
- D 4 and 6

9. Nov/2020/Paper_12/No.26

The table shows the characteristics of four microorganisms.

Which one could be a virus?

	contains one or more cells	contains one or more cell nuclei	produces spores
A	x	x	x
B	✓	x	x
C	✓	✓	x
D	✓	✓	✓

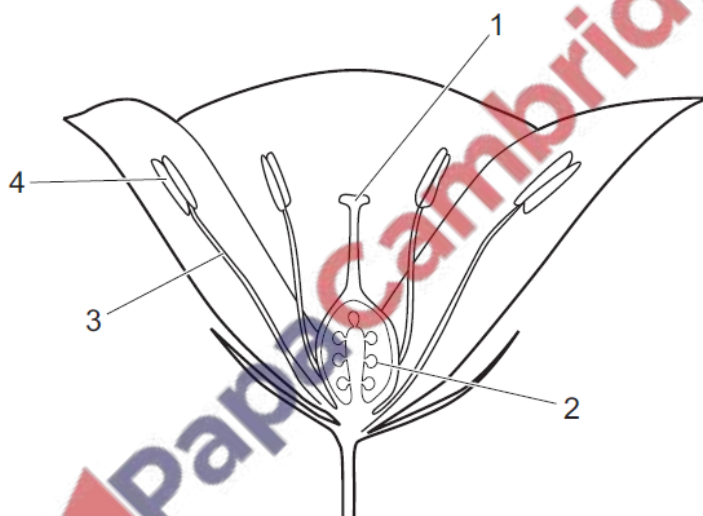
key

✓ = true

x = false

10. Nov/2020/Paper_12/No.33

The diagram shows a flower cut in half.



Which **two** parts of the flower produce haploid gametes?

A 1 and 2

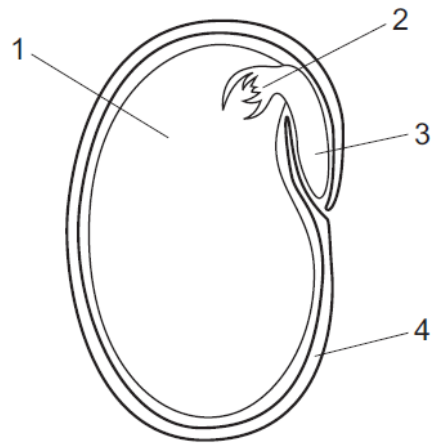
B 1 and 3

C 2 and 4

D 3 and 4

11. Nov/2020/Paper_12/No.34

The diagram shows a section through a non-endospermic seed.

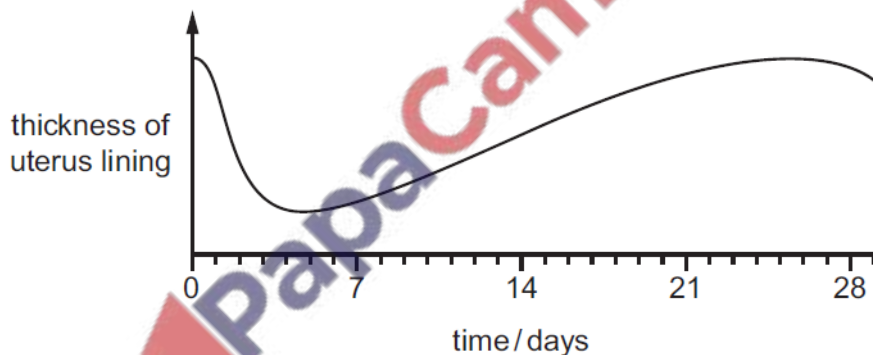


Which structures develop into the adult plant?

- A 1 and 2 B 1 and 4 C 2 and 3 D 3 and 4

12. Nov/2020/Paper_12/No.36

The diagram shows the changes in thickness of the uterus lining during one menstrual cycle.



When would the levels of progesterone and LH be highest?

	progesterone	LH
A	between day 12 and 16	between day 25 and 28
B	between day 19 and 23	on day 14
C	on day 5	between day 1 and 5
D	on day 13	on day 10

(a) Explain why plants that are grown commercially are often reproduced by asexual methods.

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..... [5]

(b) In some parts of the world, bees, which are insects, are being killed in large numbers by a parasite called the varroa mite. Suggest why this is widely considered to be a potentially serious problem to ecosystems.

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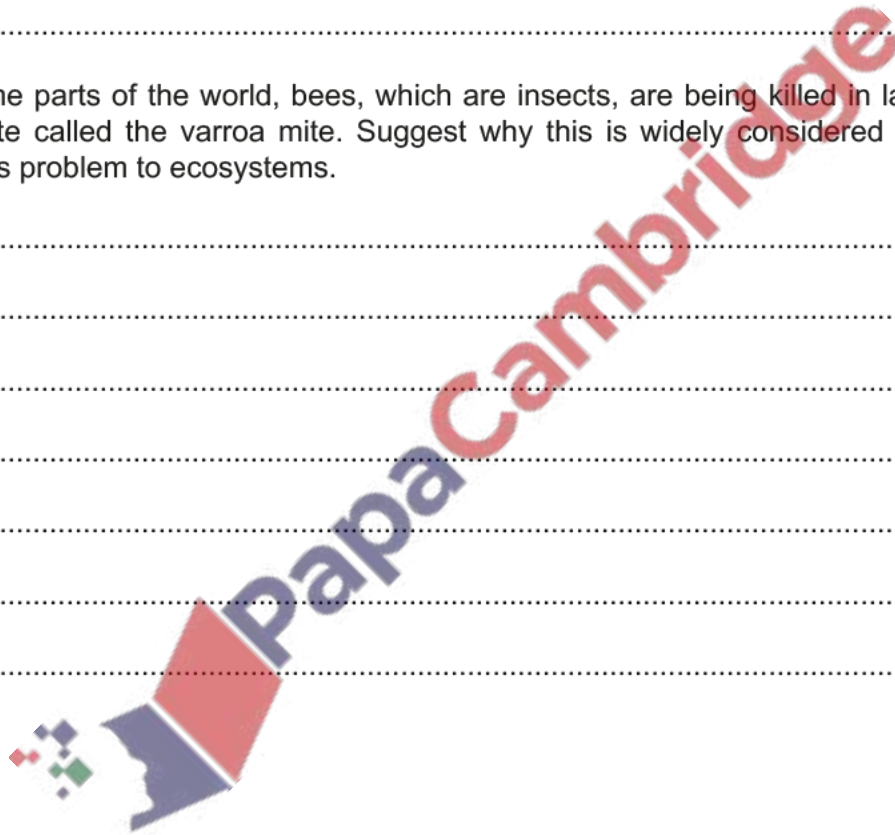
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[Total: 10]



(b) Two of the stages in the life cycle of this flowering plant **may** depend on the action of an animal.

Identify each of these stages **and** for each stage describe how the action of an animal may be required.

stage

action of an animal

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stage

action of an animal

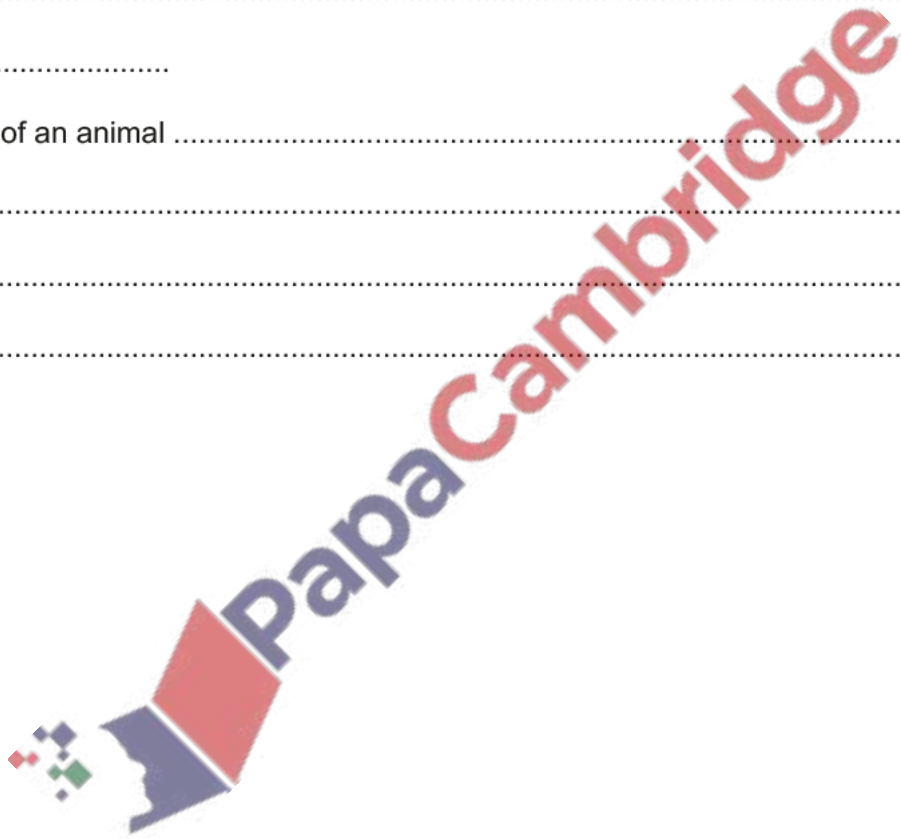
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[6]

[Total: 10]



(a) Explain how surgery may be used as an effective method of birth control in:

a man

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a woman.

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[5]

(b) Surgical methods of birth control do **not** prevent the spread of pathogens, such as HIV, that cause sexually transmitted diseases.

Describe the methods by which the spread of HIV may be controlled.

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[5]

[Total: 10]

16. Jun/2020/Paper_11/No.24

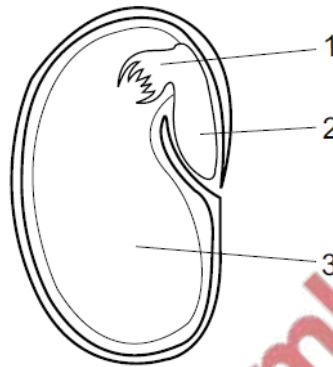
Which statements about the elbow joint are correct?

- 1 When the biceps muscle contracts, the elbow is bent.
- 2 When the triceps muscle relaxes, the elbow is straightened.
- 3 Skeletal muscles work in antagonistic pairs.

A 1, 2 and 3 **B** 1 and 2 only **C** 1 and 3 only **D** 2 and 3 only

17. Jun/2020/Paper_11/No.33

The diagram shows a section of a seed.



What are the numbered parts?

	1	2	3
A	cotyledon	plumule	radicle
B	plumule	cotyledon	radicle
C	plumule	radicle	cotyledon
D	radicle	plumule	cotyledon

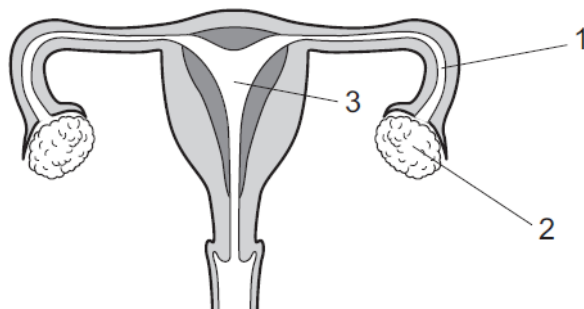
18. Jun/2020/Paper_11/No.35

What identifies a cause, a symptom and a treatment for syphilis in humans?

	cause	symptom	treatment
A	virus	infertility	using antibiotics
B	bacterium	burning sensation when urinating	vaccination
C	bacterium	joints becoming painful	using antibiotics
D	virus	severe headaches	vaccination

19. Jun/2020/Paper_11/No.36

The diagram shows the female reproductive system.

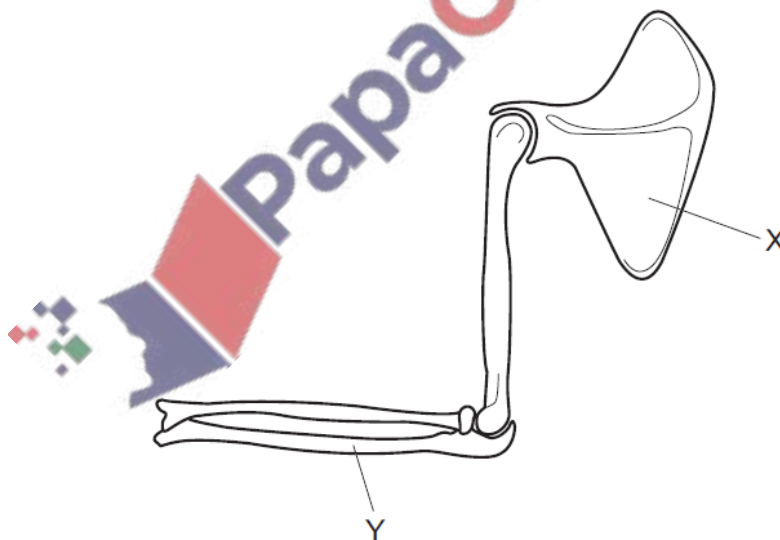


In which parts are the eggs and the zygote formed?

	eggs	zygote
A	1	2
B	1	3
C	2	1
D	2	3

20. Jun/2020/Paper_11/No.24

The diagram shows the bones of the human forearm.



What are the bones X and Y?

	X	Y
A	humerus	radius
B	humerus	ulna
C	scapula	radius
D	scapula	ulna

21. Jun/2020/Paper_12/No.25

When a mother smokes during pregnancy, the oxygen supply to the fetus is reduced.

Which row shows how components of tobacco smoke cause this?

	combines with haemoglobin	constricts blood vessels in umbilical cord
A	carbon monoxide	nicotine
B	carbon monoxide	tar
C	tar	carbon monoxide
D	tar	nicotine

22. Jun/2020/Paper_12/No.34

Which statements about meiosis are correct?

	meiosis produces genetically identical nuclei	meiosis produces haploid nuclei
A	x	x
B	x	✓
C	✓	x
D	✓	✓

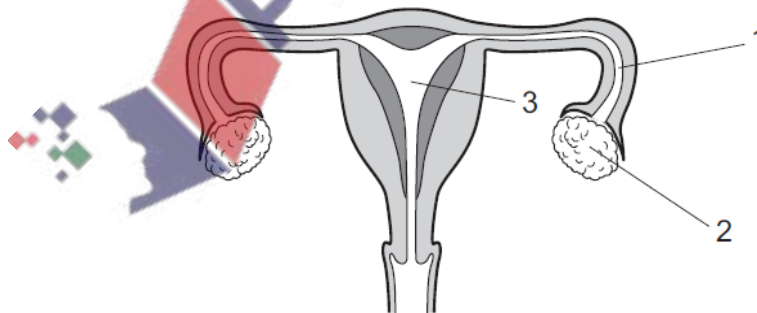
key

✓ = correct

x = not correct

23. Jun/2020/Paper_12/No.36

The diagram shows the female reproductive system.



In which parts are the eggs and the zygote formed?

	eggs	zygote
A	1	2
B	1	3
C	2	1
D	2	3

(b) Outline the importance to a plant species of fruit dispersal.

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[3]

[Total: 10]

