

7: Human reproduction – Topic questions

Paper 4

The questions in this document have been compiled from a number of past papers, as indicated in the table below.

Use these questions to formatively assess your learners' understanding of this topic.

Question	Year	Series	Paper number
1	2016	November	43
5	2016	June	42

The mark scheme for each question is provided at the end of the document.

You can find the complete question papers and the complete mark schemes (with additional notes where available) on the School Support Hub at www.cambridgeinternational.org/support

- 1 An *in vitro* fertilisation (IVF) procedure is outlined in Fig. 1.1.

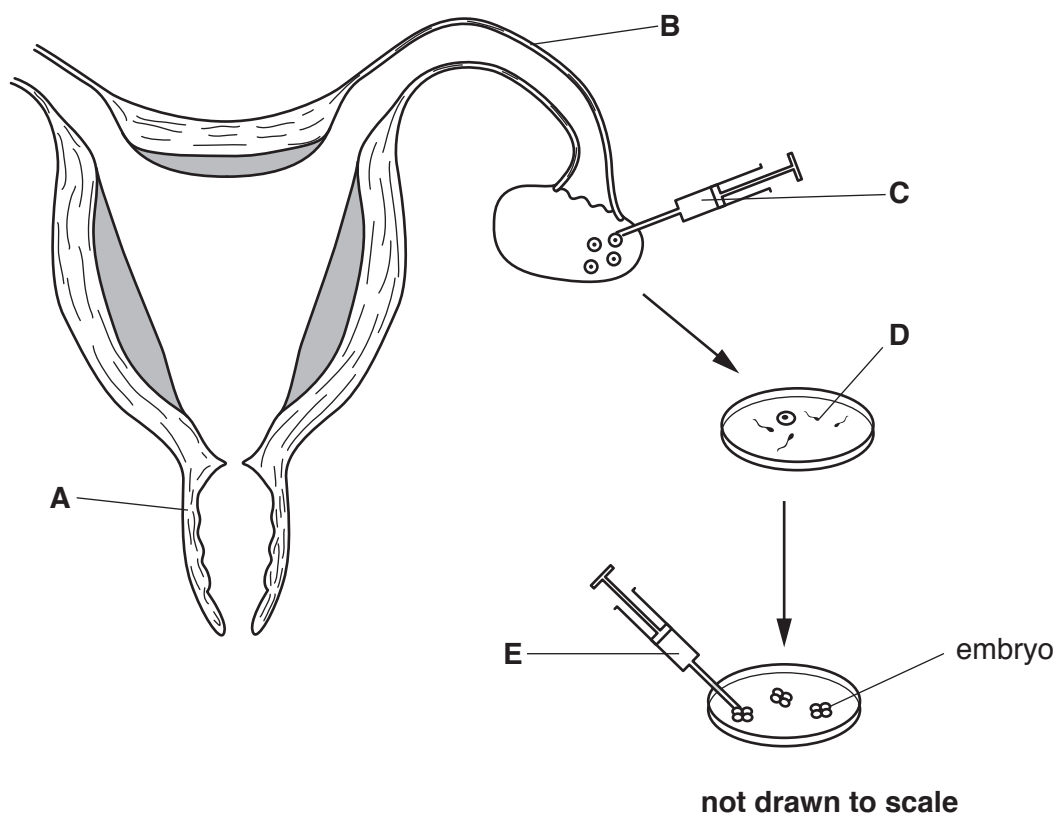


Fig. 1.1

- (a) (i) Name structures **A**, **B** and **D**.

A

B

D [3]

- (ii) State the purpose of syringe **C**.

.....

..... [1]

- (b) (i) Name a hormone that would be injected to stimulate egg cell development.

..... [1]

- (ii) State when, during the menstrual cycle, this hormone should be injected.

..... [1]

- (iii) Draw an **X** on Fig. 1.1 at the position where the embryos should be placed.

[1]

(c) Discuss the social implications of IVF.

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.....[4]

[Total: 11]

5 Hormones are secreted by glands or made artificially by drug companies.

(a) **(i)** Name the gland that secretes testosterone.

..... [1]

(iii) Describe the role of progesterone in the menstrual cycle.

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..... [1]

(iv) Synthetic progesterone is found in oral contraceptives.

Name **one** other hormone often found in oral contraceptives.

..... [1]

Abbreviations used in the Mark Scheme:

;	separates marking points
/	alternatives
I	ignore
R	reject
A	accept (for answers correctly cued by the question, or guidance for examiners)
AW	alternative wording (where responses vary more than usual)
AVP	any valid point
ecf	credit a correct statement / calculation that follows a previous wrong response
ora	or reverse argument
()	the word / phrase in brackets is not required, but sets the context
<u>underline</u>	actual word given must be used by candidate (grammatical variants excepted)
max	indicates the maximum number of marks that can be given

Question	Answer	Marks
1 (a) (i)	A: vagina; B: oviduct / Fallopian tube; D: sperm / male gamete;	[3]
1 (a) (ii)	to remove, egg cells / ova / female gametes;	[1]
1 (b) (i)	follicle stimulating hormone / FSH; luteinizing hormone / LH;	[1]
1 (b) (ii)	start of new cycle / days 1–10 / during menstruation / AW;	[1]
1 (b) (iii)	X positioned anywhere in uterus (wall / lining);	[1]
1 (c)	1 allows infertile couples / single parents / same sex couples (to have children); 2 religious / legal / moral / ethical, concerns about IVF; 3 may not treat infertility successfully; 4 expense of fertility treatment; 5 may lead to multiple births; 6 <i>idea of</i> genetic screening before implanting is possible; 7 storage of, eggs / embryos, is possible (during chemotherapy); 8 qualification of an religious / ethical / legal / moral, issue; 9 has allowed stem cell research on embryos; 10 AVP	[4]
[Total: 11]		

Question	Answer	Marks
5 (a) (i)	testes	[1]
5 (a) (ii)	increases, muscle mass / strength / power ; improved recovery of muscle damage / promotes protein synthesis ; increase, competitive drive / aggression / AW ; increases bone, density / mass ;	[max 1]
5 (a) (iii)	maintains, uterine lining / endometrium ; inhibits, FSH / LH (release) ;	[max 1]
5 (a) (iv)	oestrogen	[1]
		[Total: 4]