



Biology Leaving Certificate Higher Level

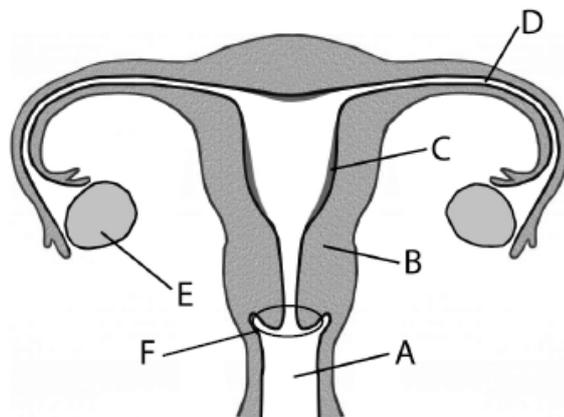
Past Exam Questions on:

Human Reproduction

Q13 2012

13. (a) (i) In humans, widening of the female hips is one example of *physical changes that distinguish the sexes but are not essential for reproduction*. To what term does the definition in italics refer?
- (ii) What term is used for the time in a young person's life when such changes take place?
- (iii) Name the hormone that maintains such changes throughout the life of a male.

- (b) The diagram shows the reproductive system of the human female.



- (i) Name the parts labelled A, B, C, D, E and F.
- (ii) Using the letters from part (i), identify the following locations:
1. Where meiosis occurs.
 2. Where zygote formation occurs.
 3. Where implantation occurs.
- (iii) Describe the role of oestrogen and progesterone in the control of the events of the menstrual cycle.
- (c) Answer the following questions in relation to the development of a human zygote.
- (i) By which type of cell division does the zygote divide?
- (ii) Further divisions result in the formation of a morula. What is the next developmental stage after the morula?
- (iii) The placenta forms from tissues of the mother and the foetus. Give two roles of the placenta.
- (iv) Give one change experienced by the mother that indicates to her that the birth process is starting.
- (v) Give a short account of the birth process.

Q14 (b) 2012

- (b) Answer the following questions from your knowledge of early human development in the womb.
- (i)
 1. Name the **three** germ layers in the early human embryo.
 2. For **each** germ layer name a structure in the adult body that develops from it.
 - (ii) From which tissues does the placenta develop?
 - (iii)
 1. What is the amnion?
 2. Explain the importance of the amnion for the foetus.

Q15 2011

15. Answer any **two** of (a), (b), (c).

(30, 30)

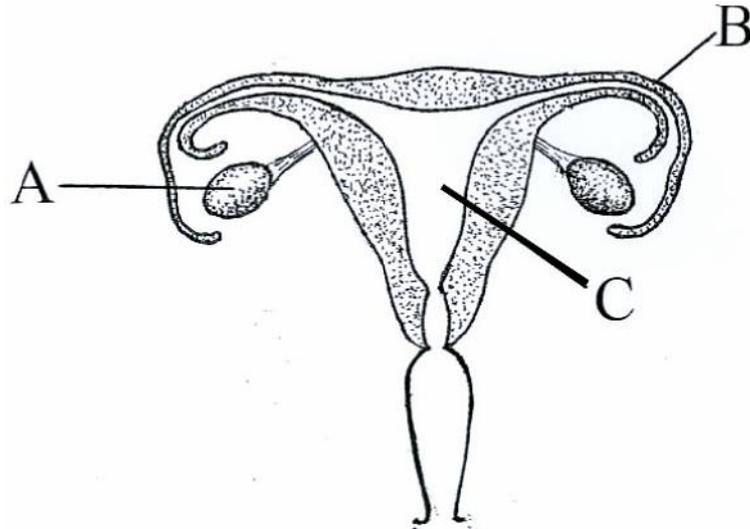
- (a)
 - (i) What is semen?
 - (ii) Draw a labelled diagram of the reproductive system of the human male. On your diagram, indicate clearly **and** name the part at which **each** of the following occurs.
 1. Production of sperm cells.
 2. Maturing of sperm cells.
 3. Mixing of fluid with sperm cells.
 4. Transport of semen.
 - (iii) State **two** secondary sexual characteristics of the human male.
 - (iv) What maintains the secondary sexual characteristics in the adult human male?

Q14 (b) 2009

- (b)
 - (i) Give an account of the importance of the placenta during human development in the womb.
 - (ii) From what tissues is the placenta formed?
 - (iii) Outline how birth occurs.
 - (iv) What is meant by *in-vitro fertilisation*?
 - (v) After implantation, the embryo first develops into a *morula* and then into a *blastocyst*. Explain the terms in italics.

Q 6 – 2008

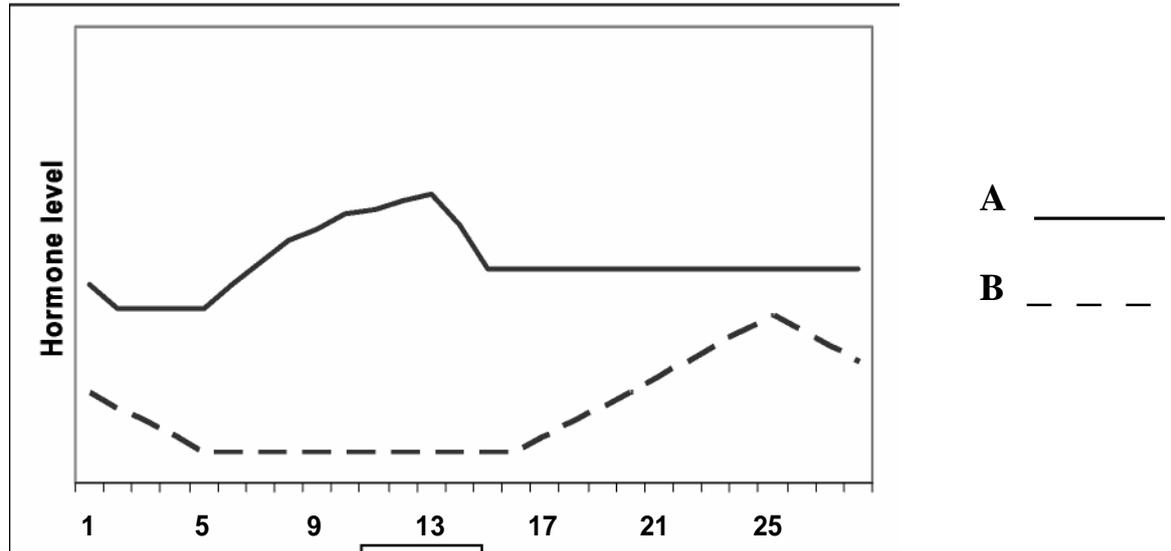
6 The diagram shows the female reproductive system.



- (a) Identify parts A, B and C.
A
B.....
C.....
- (b) Using the letters X, Y and Z and arrows, identify each of the following on the diagram: endometrium (X), where fertilization normally occurs (Y), where meiosis occurs (Z).
- (c) Which part of the system is influenced by both FSH and LH?
- (d) Give **two** biological advantages of breastfeeding.
1

Q 4 – 2007

The graphs illustrate changes in the levels of two hormones, A and B, which are involved in the development of the endometrium, during the human female menstrual cycle



- (a) Name one of these hormones
- (b) What happens in the ovary around day 14 of the cycle?
- (c) Apart from the two hormones illustrated, another hormone called FSH has a role in the cycle.
 - (i) Where is FSH produced?
 - (ii) Give one function of FSH.....
- (d) Which graph, A or B, represents the hormone secreted by the *corpus luteum* (yellow body)?
- (e) Draw a line graph in the space above A and B to illustrate the changes that take place in the thickness of the endometrium over the course of the cycle.

Q 15(a) – 2007

15 Answer any **two** of (a), (b) and (c). **(30, 30)**

- (a)
 - (i) Draw a detailed diagram of the reproductive system of the human male. Label the following parts on your diagram: testis, seminal vesicle, urethra, sperm duct (vas deferens), epididymis, prostate gland.
 - (ii) Place an X on your diagram where meiosis occurs.
 - (iii) Place a Y on your diagram where sperm are stored.
 - (iv) State **two** functions of testosterone.
 - (v) Give a cause of male infertility and suggest a corrective measure.

Q 15(c) – 2006

- ☉ Write notes on **three** of the following.
- (i) Menstruation and a disorder of menstruation.
 - (ii) Biological benefits of breastfeeding.
 - (iii) Survival times for sperm and ova.
 - (iv) Formation and functions of the placenta.

Q 13 – 2005

- 13.**
- (a) ☉
 - (i) Where is testosterone secreted in the body of the human male?
 - (ii) Give a brief account of the role of testosterone. **(9)**

 - (b) ☉
 - (i) Draw a large labelled diagram of the reproductive system of the human male.
 - (ii) Where are sperm produced?
 - (iii) State **two** ways in which sperm differ from ova (eggs).
 - (iv) Name a gland that secretes seminal fluid.
 - (v) State a function of seminal fluid. **(27)**

 - (c) ☉
 - (i) What is meant by contraception?
 - (ii) Give an example of a surgical method of male contraception. Suggest an advantage and a disadvantage of the method that you have named.
 - (iii) List **three** methods of contraception other than surgical. In your answer you may refer to either or both sexes.
 - (iv) Suggest a possible effect on a human population that may result from an increased availability of contraception. **(24)**