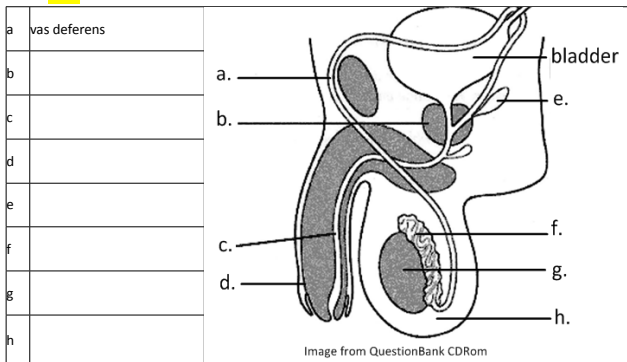


1. Define the following:

Gamete	<i>Haploid sex cell, which fuses with another gamete in fertilization. Sperm and eggs. <sup>(1)</sup></i>
Oogenesis	
Spermatogenesis	
Fertilisation	
Gestation	

2. Label this diagram of the male reproductive system.

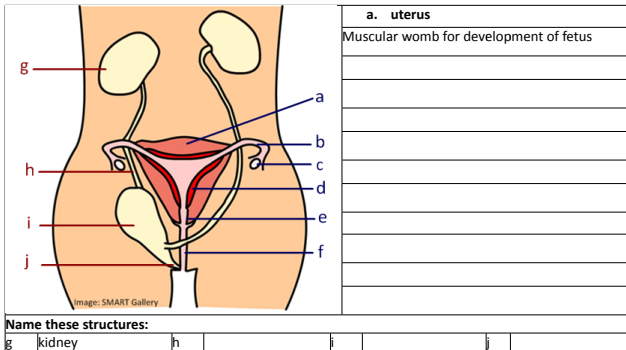


3. State three roles of the male sexual hormone *testosterone*.

- 
-

4. Label this diagram of the female reproductive system.

Annotate each structure with its function.



5. Outline the roles and origins of these menstrual cycle hormones.

<b>Follicle Stimulating Hormone (FSH)</b>	Origin: <i>pituitary gland (brain)</i>
Role:	

<b>Luteinizing Hormone (LH)</b>	Origin:
Role:	

<b>Oestrogen</b>	Origin: <i>ovary</i>
Role:	

Progesterone	Origin:
Role:	

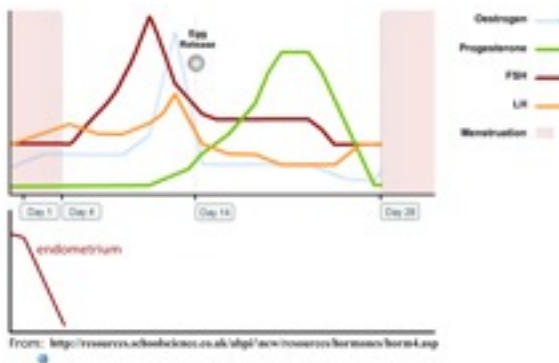
6. State the role of these two hormones in the female reproductive system.

HCG:

Oxytocin:

7. The graph below shows the human menstrual cycle.

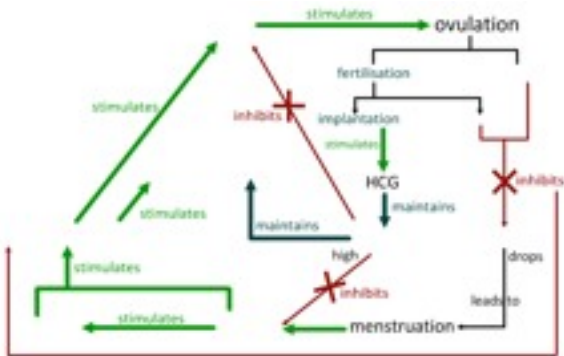
- a. Sketch the changes in the endometrium over the cycle.

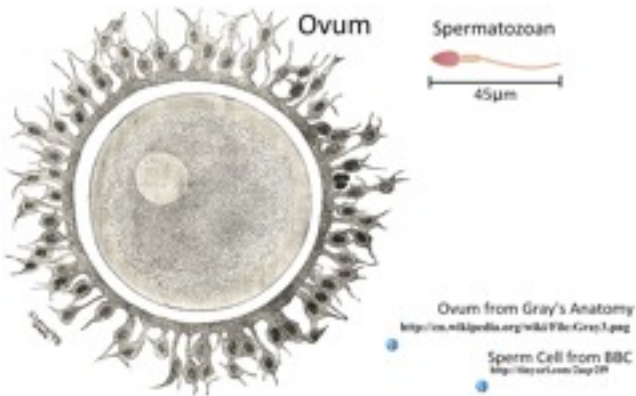


- b. Outline the events of the menstrual cycle, including the roles of the various hormones.

<b>1-4 Days</b>	<b>Follicular phase</b>
Events:	
<b>5-14 Days</b>	<b>Ovulatory phase</b>
Events:	

- You may print this page.





9. Calculate:

- The magnification of this image.
- The maximum diameter of the main body of the ovum.

10. Distinguish between *fertilization* and *pregnancy*.

•

11. The contraceptive pill manipulates the hormones of the menstrual cycle in order to prevent unwanted pregnancy.

- The combined pill contains oestrogen and progestin (a synthetic form of progesterone). Explain how this combination might prevent pregnancy.

- b. The package of pills usually contains 21 pills of the hormone and 7 'placebo' pills. These placebo pills can contain an iron supplement. Deduce the function of these pills.

12. The 'rhythm method' is used in family planning and contraception.

- a. Identify the days of the cycle during which a woman is:

- i. Most likely to conceive

○

- ii. Least likely to conceive.

•

13. Evaluate the following methods of contraception.

Effectiveness for...	Contraception	Protection against STI's
Oral contraceptive pill		
Rhythm method		
Condoms		

## 14. Outline the process of in-vitro fertilisation.

	1	FSH and LH are given in high doses to the potential mother in order to stimulate production of multiple ova.
	2	
	3	
	4	
	5	
	6	

## 15. Discuss the ethical issues of IVF.

Arguments for	Arguments against

**Reading:** IVF Wins Nobel Prize for Medicine 2010! [http://nobelprize.org/nobel\\_prizes/medicine/laureates/2010/press.html](http://nobelprize.org/nobel_prizes/medicine/laureates/2010/press.html)



## Works Cited

- Taylor, Stephen.** 6.6 Reproduction Core (Presentation). *Science Video Resources*. [Online] Wordpress, December 2010. <http://sciencevideos.wordpress.com>.
- Allott, Andrew.** *IB Study Guide: Biology for the IB Diploma*. s.l. : Oxford University Press, 2007. 978-0-19-915143-1.
- Mindorff, D and Allott, A.** *Biology Course Companion*. Oxford : Oxford University Press, 2007. 978-099151240.
- Clegg, CJ.** *Biology for the IB Diploma*. London : Hodder Murray, 2007. 978-0340926529.
- Campbell N., Reece J., Taylor M., Simon. E.** *Biology Concepts and Connections*. San Fransisco : Pearson Benjamin Cummings, 2006. 0-8053-7160-5.
- Burrell, John.** *Click4Biology*. [Online] 2010. <http://click4biology.info/>.
- IBO.** *Biology Subject Guide*. [Online] 2007. <http://xm1two.ibo.org/publications/migrated/production-app2.ibo.org/publication/7/part/2/chapter/1.html>.
- . *IB Biology QuestionBank 1st Edition*. [CD-Rom] Oxford, UK : IBO, 2005. [http://store.ibo.org/product\\_info.php?products\\_id=1224](http://store.ibo.org/product_info.php?products_id=1224).

Essential Biology							Assessment	
Criterion	Complete (2)			Partially complete (1)			Self	MtT
Presentation & Organisation	NA			Complete and neat. All command terms highlighted, tables and diagrams well presented.				
Academic Honesty	NA			Sources cited using the CSE (ISO 690 numerical) method, with Works Cited section complete and correct.				
Objective 1 understanding	All answers for the following command terms correct: Define Draw Label			Most answers for the following command terms correct: List Measure State				
Objective 2 understanding	All answers for the following command terms correct: Annotate Apply Calculate Describe			Most answers for the following command terms correct: Distinguish Estimate Identify Outline				
Objective3 understanding	All answers for the following command terms correct: Analyse Comment Compare Construct Evaluate Explain Predict			Most answers for the following command terms correct: Deduce Derive Design Determine Discuss Show Solve Sketch Suggest				
Logic, notation, mathematical working	NA			Answers are presented in a logical and concise manner. SI units used most times, with correct unit symbols and definitions of terms. All mathematical working shown.				
Further research	NA			Evidence is apparent of research and reading beyond the textbook and presentations to find correct answers to challenging questions. If any questions are unanswered, this criterion scores zero.				
Total (max 10):								





