REPRODUCTION

Checklist

Make sure you …

- Can describe different reproductive strategies of vertebrates
- Are able to identify the structure and function of the male and female reproductive organs in humans
- Can describe the process involved in human reproduction

Exam Questions

Question 1
(Adapted from DBE Feb 2014 Paper2, Question 1.4)

The diagrams below show the human male and female reproductive systems.

Write the LETTER (A–H) and NAME of the part:

1.1 Which transports urine to the outside of the body   (2)
1.2 Where fertilisation occurs                       (2)
1.3 Where sperms are produced                       (2)
1.4 Where ova are produced                           (2)
Question 2
(Adapted from DBE Feb 2013 Paper2, Question 1.4)
The diagram below shows the structure of the female reproductive system.

Give the LETTER and NAME of:

2.1 The part that breaks down when the levels of progesterone and oestrogen drop (2)
2.2 The part that plays a role during copulation (2)
2.3 The part where the zygote will be formed (2)
2.4 The part where the Graafian follicles develop (2)

Question 3
(Adapted from DBE Feb 2013 Paper1v2, Question 4.1)
The graph below shows the levels of the hormones oestrogen and progesterone in a pregnant woman's blood.

3.1 When are the levels of oestrogen and progesterone the same? (2)
3.2 How much oestrogen is in the blood on day 14? (2)
3.3 What evidence from the graph shows that an ovum was fertilised (2)
Question 4

Study the diagram and answer the questions that follow:

4.1 Identify the membrane numbered 1, 2 and 4
4.2 Provide the functions of the fluid found within part 1.
4.3 Provide the number that represents the allantois in this diagram
4.4 What is the function of the allantois?
4.5 Explain the difference between viviparous and oviparous embryo development.
4.6 Briefly explain the meaning of the terms:
   a) precocial young
   b) altricial young

Question 5

Study the diagram below showing the sequence of events of the development of an ovum in a 28-day cycle

5.1 Identify the following:
   (a) Follicle labelled A
   (b) Structure labelled C
   (c) Process shown at B
   (d) Hormone responsible for the formation of part A
   (e) Hormone responsible for the formation of part C

5.2 What type of cell division resulted in the formation of part D?
5.3 State whether fertilisation took place during this 28 day cycle.
5.4 Explain your answer to QUESTION 1.3
5.5 Explain HOW and WHY the production of FSH is inhibited when fertilisation takes place.
Question 6
The diagram below shows the circulation of blood in the wall of the uterus of a pregnant woman. The arrows indicate the direction of flow of blood.

6.1 Label structures A and D.
6.2 Which blood vessel, B, C, E or F, carries the following:
   a.) Food to the foetus
   b.) Blood from the mother
6.3 The foetal capillaries are located inside numerous finger-like villi. Explain why this is useful.
6.4 Name and describe the role of the TWO glands and their hormones in preparing part D for pregnancy.

Question 7
Describe the menstrual cycle and how it is influenced by different hormones.

Test Yourself
Select the most correct answer from the options given. Write down only the correct letter

Question 1
Which ONE of the following correctly represents the correct sequence of events that take place in a female’s reproductive cycle should fertilisation occur?

(i) Fertilisation
(ii) Ovulation
(iii) Implantation
(iv) Gestation
A. (i), (ii), (iii), (iv)
B. (i), (iii), (ii), (iv)
C. (ii), (i), (iii) and (iv)
D. (ii), (i), (iv), (iii)
Question 2
In humans, a sperm cell and an egg cell normally fuse in the upper portion of the
A. Vagina  
B. Cervix  
C. Ovary  
D. Oviduct

Question 3
___________is responsible for creating the increase in cells in the pictures between B and C.

A. Meiosis  
B. Fertilization  
C. Mitosis  
D. Gastrulation

Question 4
The human menstrual cycle is controlled by hormones produced and secreted by the:
A. Pituitary gland and ovaries  
B. Pituitary gland and uterus  
C. Ovaries, only  
D. Uterus, only

Question 5
Which ONE of the following represents the correct order of the parts through which spermatozoa pass?
A. Testis → vas deferens → epididymis → ureter  
B. Vas deferens → seminal vesicles → ureter → urethra  
C. Testis → epididymis → vas deferens → urethra  
D. Vas deferens → prostate gland → urethra → ureter

Additional Questions

Question 1
Draw diagrams to illustrate the differences between a human sperm and ovum.

Question 2
State the term used for the time of life when a person becomes sexually mature. Also describe features in males and females that are indicative of them reaching sexual maturity.