ALBERTA BIOLOGY 30 · UNIT B · 25 QUESTIONS

Reproduction & Development — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **Sperm cells are produced in the**

- A Epididymis
- B Seminiferous tubules
- C Vas deferens
- D Prostate gland

Understand It with Pulse | Flag a mistake

2 **In humans, fertilization normally takes place in the**

A Fallopian tube

B Uterus

C Ovary

D Cervix

Understand It with Pulse | Flag a mistake

3 **Ovulation is triggered by a sudden surge in the secretion of**

A FSH

B Estrogen

C LH

D Progesterone

Understand It with Pulse | Flag a mistake

4 **The number of chromosomes in a mature human sperm cell is**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **The function of the epididymis is to**

A Produce testosterone

B Add a fructose rich fluid to semen

C Produce sperm cells

D Store sperm while they mature

Understand It with Pulse | Flag a mistake

6 **In oogenesis, one primary oocyte that completes meiosis produces**

A Four functional ova

B One functional ovum

C Two functional ova

D No functional ova

Understand It with Pulse | Flag a mistake

7 **The graph shows estrogen level over a menstrual cycle. Point A marks the highest estrogen level. On which day of the cycle does point A occur?**

A 7

B 12

C 21

D 28

Understand It with Pulse | Flag a mistake

8 **The main function of the placenta is to**

A Mix the blood of the mother and the fetus together

B Store food reserves for the developing fetus

C Cushion the fetus and protect it from shocks

D Allow nutrients, gases, and wastes to diffuse between maternal and fetal blood

Understand It with Pulse | Flag a mistake

9 **The graph shows hCG level during early pregnancy. Point A is on the curve. What is the hCG level at point A, in arbitrary units? Record your answer as a number.**

ANSWER _____

Understand It with Pulse | Flag a mistake

10 **After ovulation, one hormone is mainly responsible for maintaining the endometrium so that implantation can occur. This hormone, secreted by the corpus luteum, is**

- A FSH
- B LH
- C Progesterone
- D Testosterone

Understand It with Pulse | Flag a mistake

11 **Inhibin, secreted by cells in the seminiferous tubules, normally inhibits the secretion of FSH. If a man's inhibin secretion is blocked, the expected result is**

- A A decrease in FSH secretion
- B An increase in FSH secretion
- C A decrease in LH secretion
- D A complete stop in testosterone production

Understand It with Pulse | Flag a mistake

12 **Some men who use anabolic steroids (synthetic testosterone) develop low sperm counts. This happens because high testosterone levels**

- A Decrease GnRH and LH secretion through negative feedback, so the testes are less stimulated
- B Directly destroy the cells that line the seminiferous tubules
- C Block the vas deferens so sperm cannot leave the testes
- D Increase FSH secretion until the tubules are damaged

Understand It with Pulse | Flag a mistake

13 **Early in pregnancy, the developing embryo secretes hCG, which maintains the corpus luteum. A lower than normal level of hCG during the first weeks of pregnancy could result in**

- A The release of several mature ova at ovulation
- B The immediate start of uterine contractions
- C The failure of the embryo to begin cell division
- D The breakdown of the corpus luteum, a fall in progesterone, and the loss of the endometrium

Understand It with Pulse | Flag a mistake

14 **Which of the following rows correctly matches an embryonic germ layer with a structure that develops from it?**

A Endoderm - spinal cord

B Mesoderm - heart and skeletal muscles

C Ectoderm - lining of the digestive tract

D Endoderm - skin and hair

Understand It with Pulse | Flag a mistake

15 **The graph shows progesterone level over a menstrual cycle. Point A is on the curve. What is the progesterone level at point A, in arbitrary units? Record your answer as a number.**

ANSWER _____

Understand It with Pulse | Flag a mistake

16 **Before ova are collected for in vitro fertilization, a woman is given a hormone so that several follicles mature at the same time. The hormone given is most likely**

A FSH

B LH

C Oxytocin

D Progesterone

Understand It with Pulse | Flag a mistake

17 **During in vitro fertilization, a single cell can be removed from an embryo at the eight cell stage for genetic screening without preventing normal development. This is possible because**

A The removed cell is replaced by meiosis in the remaining cells

B The removed cell would have formed the placenta rather than the fetus

C Each early embryonic cell contains a complete copy of the genome and is not yet specialized, so the remaining cells can form a complete embryo

D The embryo does not need all of its cells until after birth

Understand It with Pulse | Flag a mistake

18 **Some structures of the male reproductive system are listed below. 1 Epididymis 2 Vas deferens 3 Seminiferous tubules 4 Urethra The order of the structures through which sperm pass, from where sperm are produced to where they leave the body, is**

ANSWER

Understand It with Pulse | Flag a mistake

19 **The hormone that stimulates uterine contractions during labour, and the gland that releases it into the bloodstream, are**

A Oxytocin - ovary

B Oxytocin - pituitary gland

C Progesterone - corpus luteum

D Estrogen - placenta

Understand It with Pulse | Flag a mistake

20 **A fetus has an XY genotype and develops testes that produce testosterone, but its body cells have no functional testosterone receptors. The external reproductive structures that develop are**

- **A** Male, because the Y chromosome is present
- **B** Male, because testosterone is produced
- **C** Female, because target tissues cannot respond to testosterone
- **D** Neither male nor female in any respect

Understand It with Pulse | Flag a mistake

21 **Combination birth control pills contain estrogen and progesterone. These pills prevent pregnancy mainly by**

- **A** Physically blocking both Fallopian tubes
- **B** Destroying sperm cells that enter the uterus
- **C** Keeping FSH and LH levels low so that no follicle matures and ovulation does not occur
- **D** Causing the endometrium to be shed every day

Understand It with Pulse | Flag a mistake

22 **The graph shows the number of cells in an embryo as cleavage divisions occur. How many cells are present after 4 divisions? Record your answer as a number.**

ANSWER _____

Understand It with Pulse | Flag a mistake

23 **Blood taken on day 21 of a woman's menstrual cycle shows a high level of progesterone. The main source of this progesterone is the**

A Pituitary gland

B Mature follicle

C Hypothalamus

D Corpus luteum

Understand It with Pulse | Flag a mistake

24 **A woman gives birth to twins, a boy and a girl, and each twin has its own placenta. The twins most likely developed from**

A Two ova, each fertilized by a different sperm cell

B One fertilized ovum that split into two embryos

C One ovum fertilized by two sperm cells at once

D Two sperm cells that developed without ova

Understand It with Pulse | Flag a mistake

25 **The graph shows the number of sperm cells produced from primary spermatocytes. How many sperm cells are produced from 100 primary spermatocytes? Record your answer as a number.**

ANSWER _____

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. B
2. A
3. C
4. 23
5. D
6. B
7. B
8. D
9. 200
10. C
11. B
12. A
13. D
14. B
15. 40
16. A
17. C
18. 3124
19. B
20. C
21. C
22. 16
23. D
24. A
25. 400

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