

## GOVERNMENT ZIRTIRI RESIDENTIAL SCIENCE COLLEGE

**Subject** : ZOOLOGY  
**Paper name** : ENDOCRINOLOGY AND REPRODUCTION BIOLOGY  
**Paper No** : ZOO/IV/EC/07  
**Semester** : IV

A. Multiple choice questions [25 (5 from each unit)]

1. Vasopressin is a hormone secreted from
  - a) pituitary gland
  - b) adrenal gland
  - c) thyroid gland
  - d) pineal gland
2. Type I diabetes is also known as
  - a) gestational diabetes
  - b) juvenile onset diabetes
  - c) Obesity onset diabetes
  - d) none of the above
3. Dwarfism is due to low secretion of
  - a) LH
  - b) FSH
  - c) GH
  - d) PRL
4. Cretinism is an endocrinal disorder, caused by
  - a) hypothyroidism
  - b) hyperthyroidism
  - c) Both (a) and (b)
  - d) Both (b) and (c)
5. Androgen is not secreted by
  - a) Testes
  - b) Ovaries
  - c) Adrenal gland
  - d) Pituitary gland
6. There are \_\_\_\_ transmembrane helices in G-protein coupled receptor (GPCR)
  - a) 5
  - b) 6
  - c) 7
  - d) 8
7. The function of adenylyl cyclase is to
  - a) break down a protein hormone when it binds to its receptor
  - b) turn on a G-protein
  - c) cause the conversion of ATP to cAMP

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- d) activate a protein kinase and inactivate cAMP
8. \_\_\_\_\_ controls the movement of the receptor to the nucleus in steroid hormone receptors
- Variable domain
  - DNA binding domain
  - Hinge region
  - Hormone binding domain
9. The peptide hormone's second messenger cAMP is converted to 5'-AMP by the enzyme
- phosphorylase
  - phosphodiesterase
  - transferase
  - adenyl cyclase
10. \_\_\_\_\_ helps the translocation of GLUT4 containing vesicles to the plasma membrane.
- Ca<sup>++</sup>
  - Na<sup>++</sup>
  - cFos
  - cJun
11. The hormone responsible for lowering calcium level in the blood is
- calcitonin
  - parathormone
  - thyroxine
  - tri-iodothyronine
12. The hormone responsible for rising the blood glucose level is
- insulin
  - glucagon
  - melatonin
  - calcitonin
13. The biological rhythm having a variation of over 24-hour period is called as
- Circadian rhythm
  - Circannual rhythm
  - Both of the above
  - None of the above
14. An external or environmental cue that entrains or synchronizes an organism's biological rhythms is termed as
- clock
  - synchronism
  - exogenic
  - zeitgeber
15. During parturition the appearance of the fetal head at the vaginal orifice is termed as
- dilation

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- b) primigravid
  - c) crowning
  - d) frontal
16. Spermatogenesis occurred in \_\_\_\_ of the testes
- a) Vas deferens
  - b) Seminiferous tubules
  - c) Epididymis
  - d) Vas eferens
17. Inhibin is secreted by
- a) Epididymis
  - b) Sertoli cells
  - c) vas deferens
  - d) Leydig cell
18. During spermatogenesis, each spermatid
- a) divides by meiosis to produce four sperm cells
  - b) divides by mitosis to produce four sperm cells
  - c) divides by meiosis to produce two sperm cells
  - d) differentiates into a sperm cell
19. Follicle stimulating hormone prevents the apoptosis of \_\_\_\_ spermatogonia
- a) type A
  - b) type B
  - c) type A & B
  - d) None of the above
20. Vitellogenesis occurs when the oocyte reaches the \_\_\_\_ stage of meiotic prophase.
- a) leptotene
  - b) zygotene
  - c) pachytene
  - d) diplotene
21. The absence of menstrual flow is called
- a) menarche
  - b) apoptosis
  - c) amenorrhea
  - d) menopause
22. The main component of hormone responsible for the function of anabolic steroids is
- a) estrogen
  - b) progesterone
  - c) androgen
  - d) prostaglandins

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23. The two main hormones of combined oral contraceptives are
- Prolactin and Oxytocin
  - Estrogen and Progestin
  - Estrogen and Testosterone
  - Progestin and Prolactin
24. In estrous cycle, the phase where female is sexually receptive is
- Proestrus
  - Estrus
  - Metestrus
  - Diestrus
25. .... are monoestrous animal.
- pigs
  - cows
  - squirrels
  - foxes

### B. Fill up the blanks [15 (3 from each unit)]

- An excess of growth hormone after the closure of epiphyseal plates specifically leads to \_\_\_\_\_
- The so-called emergency hormones involved in the "fight-or-flight response" are \_\_\_\_\_
- The circulatory system which collects blood from the hypothalamus and, directs the blood into the anterior pituitary gland is \_\_\_\_\_
- The tyrosine kinase activity of the insulin receptor is localized at the \_\_\_\_\_ subunit.
- The enzyme responsible for the conversion of glucose to glycogen is \_\_\_\_\_
- cAMP is used as second messenger by \_\_\_\_\_ hormones
- The normal range of glucose level in human blood is \_\_\_\_\_
- Women who have given birth to more than one viable fetus is termed as \_\_\_\_\_
- The endocrine gland responsible for the body's circadian rhythm is \_\_\_\_\_
- The major yolk component of eggs is a protein called \_\_\_\_\_
- The type of pheromones having slower onset but last longer duration are termed \_\_\_\_\_
- Inside the testes, testosterone is synthesized and secreted from \_\_\_\_\_
- A hormonal contraception used by a woman after she has had unprotected intercourse is termed as \_\_\_\_\_
- A fifth hormone important in female reproduction is \_\_\_\_\_
- The stage in menstrual cycle where the ovum is released is called \_\_\_\_\_

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## Key Answers

### A. Multiple choice questions

- |        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|
| 1. a)  | 2. c)  | 3. c)  | 4. a)  | 5. d)  | 6. c)  | 7. c)  |
| 8. c)  | 9. b)  | 10. a) | 11. a) | 12. b) | 13. a) | 14. d) |
| 15. c) | 16. b) | 17. b) | 18. d) | 19. a) | 20. d) | 21. c) |
| 22. c) | 23. b) | 24. b) | 25. d) |        |        |        |

### B. Fill up the blanks

1. Acromegaly
2. Epinephrine and norepinephrine
3. Hypothalamic-hypophyseal portal circulation
4.  $\beta$
5. Glycogen synthase
6. Peptide
7. 70 to 110 mg/dL
8. Multiparae
9. Pineal gland
10. Vitellogenin
11. Primer pheromones
12. Leydig cell
13. Emergency contraception
14. Prostaglandin
15. Ovulation