

B.Sc. ZOOLOGY
THIRD SEMESTER (SPECIAL REPEAT)
PHYSIOLOGY: CONTROLLING & COORDINATING SYSTEMS)
BSZ-302

(Use separate answer scripts for Objective & Descriptive)

Duration : 3 hrs.

Full Marks : 70

Time : 20 min.

[PART-A : Objective]

Marks : 20

Choose the correct answer from the following:

1X20=20

1. The following is the hyperglycemic hormone
 - a. Insulin
 - b. Glucagon
 - c. Cortisol
 - d. None of the above
2. The cells which secretes insulin are
 - a. α -cells
 - b. β - cells
 - c. γ - cells
 - d. δ - cells
3. Glucocorticoids are secreted by
 - a. Zona glomerulosa
 - b. Zona fasciculata
 - c. Zona reticularis
 - d. Both a and b
4. Adrenal gland is made up of
 - a. One layer
 - b. Two layer
 - c. Three layer
 - d. None of the above
5. Deoxycorticosterone is a
 - a. Glucocorticoid
 - b. Mineralocorticoid
 - c. Adrenal androgen
 - d. Gonadotrophic
6. Medullary hormones are secreted by
 - a. F-cells
 - b. Chief cells
 - c. Chromaffin cells
 - d. δ - cells
7. Which of the following hormone is known as flight and fight hormone?
 - a. Thyroxine
 - b. Adrenalin
 - c. ADH
 - d. Oxytocin
8. Testosterone is secreted by
 - a. Leydig cells
 - b. Seminiferous tubules
 - c. Sertoli cells
 - d. None of the above
9. Corpus luteum secretes
 - a. Progesterone
 - b. LH
 - c. Estrogen
 - d. Progesterone and LH
10. Diabetes is a condition which arises due to
 - a. High level of blood insulin
 - b. High level of glucose
 - c. Low level of glucose
 - d. Both a and c
11. Hormone can be classified on the basis of
 - a. Chemical nature
 - b. Mechanism of action
 - c. Both
 - d. None

12. Which of the following is not an accurate statement about hormones?
- | | |
|---|--|
| a. Most hormones move through the circulatory system to their destination | b. Target cells have specific molecular receptors for hormones |
| c. All hormones are secreted by endocrine glands | d. All of the above |
13. The role of cAMP is to
- | | |
|---|---|
| a. Act as second messenger and activate enzymes | b. Activate adenylyl cyclase |
| c. Bind a specific hormone to the plasma membrane | d. Release Ca into the cell and initiate enzyme cascade |
14. Oxytocin is secreted by the
- | | |
|---------------------|--------------------|
| a. Adenohypophysis | b. Neurohypophysis |
| c. Zona glomerulosa | d. Pars intermedia |
15. Which of the following is not a second messenger?
- | | |
|------------|-----------|
| a. Calcium | b. c GMP |
| c. cAMP | d. Sodium |
16. Which of the following disease is not related to thyroid glands?
- | | |
|---------------|--------------|
| a. Myxedema | b. Cretinism |
| c. Acromegaly | d. Goitre |
17. Which type of epithelium is present in the thyroid follicles?
- | | |
|-------------|-----------------|
| a. Squamous | b. Cuboidal |
| c. Columnar | d. Transitional |
18. Steroid hormone easily pass the membrane by simple diffusion because
- | | |
|---------------------------|---------------------------|
| a. They are water soluble | b. They are lipid soluble |
| c. Enter through pore | d. None of the above |
19. Thyroid gland is
- | | |
|----------------|----------------------|
| a. Bilobed | b. Trilobed |
| c. Tetra lobed | d. None of the above |
20. Which of the following is not released by the anterior pituitary gland?
- | | |
|--------------------------------|---------------------------------|
| a. Thyroid stimulating hormone | b. Follicle stimulating hormone |
| c. Prolactin | d. Antidiuretic hormone |

(PART-B : Descriptive)

Time : 2 hrs. 40 min.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

1. What are hormones? How are they classified? 3+7=10
2. What is adrenal gland? State briefly the structure and the hormones secreted by adrenal gland and its function. 1+3+6=10
3. What is second messenger? Describe the mechanism of peptide hormone action. 3+7=10
4. Describe the mechanism of synthesis of thyroid hormone. Write about any one type of hypothyroid condition. 7+3=10
5. What is pancreas? Explain its structure and the function of hormones secreted by it. 2+3+5=10
6. With a neat labelled diagram explain the structure of pituitary gland. Mention the functions of hormones of adenohypophysis. 6+4=10
7. What are different types of endocrine glands? Discuss the different properties of hormones. 3+7=10
8. Describe the Female Reproductive system with suitable diagrams. 10

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