

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

SET
A

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 3 hrs.

Full Marks: 70

Time: 30 mins.

Marks: 20

(Objective)

Choose the correct answer from the following:

1 × 20 = 20

- Which of the following hormone is produced by a pituitary gland in both males and females but functional only in a female?
 - Relaxin
 - Vasopressin
 - Prolactin
 - Somatotrophic hormones
- Which of the following is an accumulation and releasing centre of neurohormone?
 - Hypothalamus
 - Posterior pituitary gland
 - Anterior lobe of pituitary gland
 - Intermediate lobe of pituitary
- MSH is produced by.....
 - Anterior lobe of pituitary gland
 - Parathyroid
 - Posterior pituitary gland
 - Pars intermedia of pituitary
- Sertoli cells are regulated by pituitary hormone known as.....
 - FSH
 - GH
 - LH
 - Prolactin
- Which hormone causes the contraction of labor?
 - Prolactin
 - Progesterone
 - Estrogen
 - Oxytocin
- Which of the following diseases not related to thyroid glands?
 - Myxoedema
 - Acromegaly
 - Cretinism
 - Goitre
- Grave's disease is due to.....
 - Hyperactivity of thyroid gland
 - Hyperactivity of adrenal cortex
 - Hyperactivity of adrenal medulla
 - Hyperactivity of islets of langerhans
- Hypothyroidism causes in an adult.....
 - Obesity
 - Cretinism
 - Diabetes
 - Myxoedema
- Which of the following is not the symptom of hypothyroiditis?
 - Accumulation of urea in blood.
 - Mental retardation
 - Edema
 - Lethargy
- Which of the following is protein hormone?
 - Oxytocin
 - TSH
 - Insulin
 - Anti diuretic hormone

11. Which of the following hormones stimulates the renal absorption of sodium, hydrogen, ammonium and magnesium?
 - a. Insulin
 - b. Prostaglandin
 - c. Aldosterone
 - d. Oxytocin
12. Both epinephrine and nor epinephrine are stored in the cytoplasmic granules of:
 - a. F- cells
 - b. Chief cells
 - c. Chromaffin cells
 - d. δ - cells
13. Sperms are produced by theof the testes.
 - a. Sertoli cells
 - b. Interstitial cells
 - c. Leydig cells
 - d. Seminiferous tubules
14. The hormone which prepares the uterine endometrium for implantation is:
 - a. Follicle Stimulating Hormone
 - b. Progesterone
 - c. Estrogen
 - d. LH and Progesterone
15. Glucagon:
 - a. Accelerates protein synthesis within cells
 - b. Accelerates conversion of glycogen into glucose
 - c. Decreases conversion of glycogen into glucose
 - d. Slows down glucose formation from lactic acid
16. Insulin activates cells by binding to the following receptor:
 - a. G protein Receptor
 - b. Tyrosine kinase Receptor
 - c. Nuclear receptor
 - d. None of the above
17. Estrogen can easily pass the membrane by simple diffusion because it is:
 - a. Hydrophilic
 - b. Lipophilic
 - c. Enter through the pore
 - d. None of the above
18. In the liver, insulin decreases the production of glucose by inhibiting:
 - a. Glycolysis
 - b. Gluconeogenesis
 - c. Glycogenesis
 - d. All of the above
19. The ovum is surrounded by a mass of several thousand small granulosa cells, called the:
 - a. Corona radiata
 - b. Antrum
 - c. Sertoli cells
 - d. Zona pellucida
20. Low level of adrenal cortex hormones results in.....
 - a. Addisons disease
 - b. Cushing syndrome
 - c. Goiters
 - d. Tetany

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(Descriptive)

Time : 2 hr. 30 mins.

Marks : 50

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

1. Describe the histology of thyroid gland. What is Iodine trapping?
Discuss the role of Iodine in biogenesis of thyroid hormones. 3+2+5=10
2. What are trophic hormones? What are the hormones secreted by
adenohypophysis? Describe their functions in the body. 2+3+5=10
3. "The adrenal medulla releases its hormones in response to acute, short-
term stress"-Justify the statement. 6+4=10
Compare and contrast the roles of aldosterone and cortisol.
4. Draw a Graffian follicle. What role does the pituitary hormones play in
ovulation? 3+7=10
5. Describe the mechanism of hormone response resulting from the
binding of a hormone with an intracellular receptor. What would be the
physiological consequence of a disease that destroyed the beta cells of
the pancreas? 8+2=10
6. Discuss the hypoglycemic role of insulin. How does it affect lipid
metabolism? What is the role of C-peptide in insulin formation? 4+4+2=10
7. Write short notes on the following: 5+5=10
 - a) Hypothalamo-hypophyseal axis
 - b) Function of Oxytocin
8. What is meant by endocrine, paracrine and autocrine signaling? 3+5+2=10
Differentiate between endocrine and exocrine gland. Why pancreas is
called heterocrine gland?

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