



## BIOLOGY

### NEET & AIIMS

## CHEMICAL COORDINATION AND INTEGRATION

### Example

1. What is an endocrine system ?

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2. Why are endocrine glands called ductless glands ?

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3. What is hypothalamus ?



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4. Where is hypothalamus located ?



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5. Write down the two major types of hormones produced by the hypothalamus.



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6. Where is pituitary gland located ?



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7. Name the two parts of pituitary gland.

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8. What are the two portions of adenohypophysis in human beings ?

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9. Name the hormones released by neurohypophysis.

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10. Name the two gonadotrophic hormones secreted by pituitary gland.

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11. Name the pigment which provides colour to the skin.



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12. Name the hormone secreted by pineal gland.



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13. Write one function of melatonin.



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14. Describe the structure of thyroid gland.



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15. Name the different thyroid hormones.



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16. What is goitre ?

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17. What is cretinism ?

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18. What is the major role of parathormone ?

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19. Describe the structure of parathyroid glands in short.

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20. What is the effect of parathormone on calcium levels in the blood ?



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21. What is thymus ?



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22. What is the major role of thymus gland ?



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23. What is the location of adrenal glands ?



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24. Name the three types of corticoids.



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25. Name the three layers of adrenal cortex.

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26. Write down one role of catecholamines.

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27. Name three glucocorticoids.

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28. Name the main types of cells present in the Islets of Langerhans.

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29. Name the disorder which occurs due to prolonged hyperglycemia.



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**30.** Name the cells which are acted upon by insulin



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**31.** Name the cells which produce testosterone in testes.



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**32.** Name two groups of steroid hormones produced by ovaries.



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**33.** What is the role of ANF ?



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34. Name the site from where cholecystokinin is released.

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35. On which receptors binding of lipid insoluble hormones takes place ?

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### Try Yourself

1. The hormones secreted by endocrine glands are released into the

- A. Bile
- B. Venous blood
- C. Saliva
- D. Mucus

**Answer: B**



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2. Which of the following statements is incorrect ?

- A. Hormones are required in small quantities
- B. Hormones are released directly into the blood
- C. Hormones are highly specific in their function
- D. Hormones provide energy or building materials

**Answer: D**



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3. The system(s) which coordinate different functions of the body is/are

- A. Nervous system only

- B. Endocrine system only
- C. Digestive system and nervous system
- D. Nervous system and endocrine system

**Answer: D**

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4. The hypothalamus is connected to the anterior lobe of pituitary by

- A. Hypophyseal portal veins
- B. Hypophyseal portal arteries
- C. Renal portal arteries
- D. Hepatic portal veins

**Answer: A**

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5. Somatostatin inhibits the release of

- A. Thyroid hormone
- B. Calcitonin
- C. Growth hormone
- D. Parathormone

**Answer: C**



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6. GnRH stimulates the

- A. Thyroid gland
- B. Parathyroid gland
- C. Pituitary gland
- D. Pancreas

**Answer: C**



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7. The posterior lobe of pituitary gland is connected to hypothalamus through

- A. Hypophyseal veins
- B. Neurosecretory cells
- C. Hypophyseal arteries
- D. Pulmonary veins

**Answer: B**



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8. Which of the following is not an endocrine gland ?

A. Pituitary gland

B. Salivary gland

C. Parathyroid

D. Thyroid gland

**Answer: B**



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9. Pituitary dwarfism is caused due to the deficiency of

A. Oxytocin

B. Growth hormone

C. Prolactin

D. Luteinizing hormone

**Answer: B**



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10. FSH in males stimulates

- A. Oogenesis
- B. Spermatogenesis
- C. Secretion of LH
- D. Secretion of testosterone

**Answer: B**



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11. LH in females stimulates the corpus luteum to secrete

- A. Estrogen and progesterone
- B. Relaxin and FSH
- C. Testosterone and progesterone

D. Progesterone only

**Answer: A**



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12. Which of the following hormones controls the functioning of adrenal cortex ?

A. TSH

B. FSH

C. ACTH

D. LH

**Answer: C**



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13. Which of the following hormones controls the milk production in mammary glands ?

- A. Growth hormone
- B. Prolactin
- C. Oxytocin
- D. Vasopressin

**Answer: B**



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14. Whose excessive secretion causes abnormal elongation of long bones in childhood ?

- A. Growth hormone
- B. Prolactin
- C. Vasopressin

D. Oxytocin

**Answer: A**



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15. Melanin pigment is synthesised or secreted under the influence of

A. FSH

B. LH

C. MSH

D. TSH

**Answer: C**



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16. Neurohypophysis is also known as

- A. Pars distalis
- B. Pars intermedia
- C. Pars nervosa
- D. Hypophysis

**Answer: C**

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17. \_\_\_\_\_ stimulates the reabsorption of water and electrolytes by DCT.

- A. Vasopressin
- B. Oxytocin
- C. Prolactin
- D. Estrogen

**Answer: A**

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18. ADH is produced in

- A. Pars distalis
- B. Pars nervosa
- C. Pars intermedia
- D. Hypothalamus

**Answer: D**



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19. Which of the following is secreted from pars intermedia ?

- A. MSH
- B. LH
- C. FSH

D. TSH

**Answer: A**



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**20. ICSH is another name of**

A. TSH

B. FSH

C. MSH

D. LH

**Answer: D**



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21. The flap of connective tissue that connects the two lobes of thyroid gland is called

- A. Infundibulum
- B. Islet
- C. Isthmus
- D. Intercalated disc

**Answer: C**



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22. Which halogen element is necessary for the making of thyroxine hormone by the thyroid gland?

- A. Magnesium
- B. Iodine
- C. Calcium

D. Iron

**Answer: B**



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**23.** Thyroxine has an important role in regulating

- A. Blood calcium level
- B. Basal metabolic rate
- C. Water and electrolyte balance
- D. Both (2) & (3)

**Answer: D**



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**24.** Thyroxine is also called

A. Monoiodothyronine

B. Diiodothyronine

C. Triiodothyronine

D. Tetraiodothyronine

**Answer: D**



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**25. Erythropoiesis is supported by**

A. TCT

B. PRL

C.  $T_4$

D. PTH

**Answer: C**



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26. Pineal gland is located on the dorsal side of

- A. Midbrain
- B. Hindbrian
- C. Pons
- D. Forebrain

**Answer: D**



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27. Melatonin does not control

- A. Diurnal rhythm of body
- B. Metabolism
- C. Gonadotrophic effect

D. Pigmentation

**Answer: C**



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28. \_\_\_\_ reduces melatonin formation.

A. Temperature

B. Humidity

C. Light

D. Pressure

**Answer: C**



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29. Melatonin delays puberty by opposing the action of

A. MSH and progesterone

B. LH and FSH

C. TSH and MSH

D. Thrombin and relaxin

**Answer: B**

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**30.** Which of the following is the largest endocrine gland ?

A. Pituitary

B. Pancreas

C. Thyroid

D. Testis

**Answer: C**

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**31.** Thyroid lobers are present on either sides of the

A. Oesophagus

B. Pharynx

C. Bronchi

D. Trachea

**Answer: D**



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**32.** Excess of thyroid hormones results in

A. Hyperthyroidism

B. Hypothyroidism

C. Hyperparathyroidism

D. Hypoparathyroidism

**Answer: A**



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**33.** Which of the following increases the calcium level in the blood ?

A. Thyroxine

B. Calcitonin

C. Parathormone

D. Insulin

**Answer: C**



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34. \_\_\_\_ is/are glands that are present on the dorsal surface of thyroid gland.

- A. Thymus
- B. Pituitary gland
- C. Parathyroid glands
- D. Adrenal gland

**Answer: C**



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35. The calcium level is increased in blood by promoting

- A. Dissolution of skeletal structures
- B. Excretion of calcium in urine
- C. Mineralisation of bones
- D. Mineralisation of teeth

**Answer: A**



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**36.** Which of the following is a hypercalcemic hormone ?

- A. Thyroxine
- B. Parathyroid hormone
- C. Insulin
- D. Glucagon

**Answer: B**



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**37.** Which of the following hormones regulates the immune system ?

- A. Glucagon

B. Thyroxine

C. Thymosin

D. Adrenaline

**Answer: C**



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**38.** Which of the following hormones regulates humoral immunity ?

A. Thyroxine

B. Insulin

C. Glucagon

D. Thymosin

**Answer: D**



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39. The hormone that stimulates the maturation of T-lymphocytes is released from

- A. Thyroid gland
- B. Thymus
- C. Testis
- D. Pituitary gland

**Answer: B**



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40. Which of the following is a primary lymphoid organ ?

- A. Pancreas
- B. Liver
- C. Kidney
- D. Thymus

**Answer: D**



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**41.** The maturation and development of T-lymphocytes takes place in

- A. Thymus
- B. Thyroid gland
- C. Adrenal gland
- D. Parathyroid gland

**Answer: A**



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**42.** How many parathyroid glands are present in human beings ?

- A. Three

B. Four

C. Five

D. Eight

**Answer: B**



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**43.** How many pairs of adrenal glands are present in human body ?

A. one

B. Three

C. Two

D. Four

**Answer: A**



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44. Which of the following is a mineralocorticoid ?

- A. Cortisol
- B. Epinephrine
- C. Noradrenaline
- D. Aldosterone

**Answer: D**



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45. \_\_\_\_ retards phagocytotic activities of WBCs.

- A. Cortisol
- B. Epinephrine
- C. Estrogen
- D. Thymosin

**Answer: A**



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**46.** Fat is stored in

- A. Connective tissue
- B. Adipose tissue
- C. Epithelial tissue
- D. Areolar tissue

**Answer: B**



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**47.** Glucocorticoids are produced by

- A. Zona reticularis

B. Adrenal medulla

C. Zona fasciculata

D. Zona glomerulosa

**Answer: C**



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**48.** Which of the following stimulates the gluconeogenesis ?

A. Calcitonin

B. Cortisol

C. Aldosterone

D. Thymosin

**Answer: B**



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49. Cortisol increases \_\_\_ count but decreases \_\_\_\_\_ count in the blood.

- A. RBC, platelets respectively
- B. RBC, WBC respectively
- C. WBC, antibodies respectively
- D. WBC, RBC respectively

**Answer: B**



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50. Mineralocorticoids are produced by

- A. Zona fasciculata
- B. Zona glomerulosa
- C. Zona reticularis
- D. Both (1) & (3)

**Answer: B**



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51. Under the influence of aldosterone, reabsorption of \_\_\_\_ and excretion of \_\_\_\_ occur.

- A.  $Na^+$ ,  $K^+$  respectively
- B.  $Ca^{2+}$ ,  $Mg^{2+}$  respectively
- C.  $Mg^{2+}$ ,  $K^+$  respectively
- D.  $K^+$ ,  $Na^+$  respectively

**Answer: A**



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52. Which is the outermost layer of adrenal cortex ?

- A. Zona reticularis
- B. Zona fasciculata
- C. Zona glomerulosa
- D. None of these

**Answer: C**

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**53.** Which of the following pancreatic cells produce glucagon ?

- A.  $\beta$ -cells
- B.  $\alpha$ -cells
- C.  $\gamma$ -cells
- D.  $\delta$ -cells

**Answer: B**

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54. Insulin is secreted by

- A. Pancreas
- B. Liver
- C. Thyroid gland
- D. Gastric mucosa

**Answer: A**



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55. Testes are present in [In case of humans]

- A. Alveolar sacs
- B. Scrotal sacs
- C. Pharyngeal pouches

D. abdominal cavity

**Answer: B**



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**56.** Pancreas is a

A. Sebaceous gland

B. Not a gland

C. Gastric gland

D. Composite gland

**Answer: D**



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57. Glucagon acts on liver cells and stimulates the conversion of glycogen into

- A. Fructose
- B. Sucrose
- C. Glucose
- D. Ribose

**Answer: C**



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58. Which of the following hormones control the homeostasis of glucose ?

- A. Aldosterone and insulin
- B. Insulin and glucagon
- C. Thymosin and relaxin

D. Insulin and glycogen

**Answer: B**



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**59.** Which of the following statements is incorrect ?

- A. Insulin increases cellular uptake of glucose
- B. Insulin decreases fat synthesis
- C. Insulin increases synthesis of proteins
- D. Insulin promotes glycogenesis in liver

**Answer: B**



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**60.** Diabetes mellitus is due to

- A. Insulin
- B. Glucagon
- C. Thyroxine
- D. Adrenaline

**Answer: A**

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**61.** Which of the following is only an endocrine gland with no other function ?

- A. Liver
- B. Ovary
- C. Pancreas
- D. Thyroid gland

**Answer: D**

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62. \_\_\_\_ is synthesised by the growing ovarian follicles.

- A. Estrogen
- B. Testosterone
- C. Cortisol
- D. Prolactin

**Answer: A**

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63. Which of the following is an amino acid derived hormone ?

- A. Estrogen
- B. Epinephrine
- C. Cortisol

D. Insulin

**Answer: B**



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**64.** Which of the following works through binding the extracellular receptors ?

A. Cortisol

B. Glucagon

C. Testosterone

D. Thyroxine

**Answer: B**



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65. Which of the following hormones is not synthesised in GI tract ?

- A. Gastrin
- B. Renin
- C. Secretin
- D. Cholecystokinin

**Answer: B**



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66. The hormone that acts through interacting with intracellular receptors is

- A. Estradiol
- B. Insulin
- C. Epinephrine
- D. FSH

**Answer: A**



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**67.** Juxtaglomerular cells of kidney produce a hormone called

- A. Cholecystokinin
- B. Erythropoietin
- C. ADH
- D. ANF

**Answer: B**



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**68.** GIP functions antagonistic to

- A. ANF

B. CCK

C. Renin

D. Gastrin

**Answer: D**



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## Exercise

1. Which of the following is/are stored in Herring bodies ?

A. Somatocrinin

B. Vassopressin

C. Oxytocin

D. Both (2) & (3)

**Answer: D**



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2. Which of the following is incorrect match ?

- A. Thyroxine-Iodinated tyrosine
- B. Aldosterone-Polypeptide hormone
- C. Estrogen-Steroid hormone
- D. Thyrotropin-Glycoprotein hormone

**Answer: B**



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3. Which of the following hormones prevent water loss in urine?

- A. Oxytocin
- B. Vasopressin
- C. Somatocrinin

D. Somatostatin

**Answer: B**



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4. Which of the following lobes of pituitary atrophies during fetal development and is smaller in adults ?

A. Pars distalis

B. Pars intermedia

C. Adenohypophysis

D. Neurohypophysis

**Answer: B**



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5. Which of the following anterior pituitary hormones is linked directly to body whereas other hormones mostly control other glands ?

- A. Somatotrophin
- B. Somatocrinin
- C. Somatostatin
- D. Pitocin

**Answer: A**



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6. Which of the following pituitary hormones is known to have diabetogenic effect ?

- A. TSH
- B. LH
- C. GH

D. PRL

**Answer: C**



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7. Pituitary gland is located in a body cavity of which skull bone ?

A. Temporal

B. Occipital

C. Sphenoid

D. Parietal

**Answer: C**



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8. Which of the following statements is incorrect ?

- A. Pars intermedia atrophies during foetal development
- B. Pituitary gland is lodged in sella turcica
- C. Neurohypophysis synthesizes two hormones
- D. Herring bodies are present in neurohypophysis

**Answer: C**

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**9. Supra optic nuclei (in hypothalamus) secrete the hormone**

- A. ADH
- B. Oxytocin
- C. Pitocin
- D. Both (2) & (3)

**Answer: A**

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10. Which of the following hormones is secreted by corticotrophs in humans ?

A. ACTH

B. MSH

C. PRL

D. Both (1) & (2)

**Answer: D**



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11. Which of the following hormones is known to have calorogenic effect ?

A.  $T_3$  &  $T_4$

B. TCT

C. PTH

D. Calcitriol

**Answer: A**



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**12.** Which of the following hormones regulate calcium balance in body ?

A. TCT

B. PTH

C. ADH

D. Both A & B

**Answer: D**



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13. Which of the following is/are correct statement(s) about the non-iodised hormone secreted by thyroid gland ?

- A. It is secreted by parafollicular cells
- B. It is secreted in response to hypercalcemia
- C. It is antagonistic to PTH
- D. All of these

**Answer: D**



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14. Which of the following is caused due to hypersecretion of thyroxine hormone ?

- A. Goitre
- B. Exophthalmic goitre
- C. Cretinism

D. Myxoedema

**Answer: B**



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15. Which of the following is the widest layer adrenal cortex ?

A. Zona glomerulosa

B. Zona fasciculata

C. Zona reticularis

D. Both (1) & (3) together make widest layer

**Answer: B**



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16. Which of the following is incorrect about IDDM ?

- A. It commonly develops in younger people
- B. It is an autoimmune disorder
- C. It results in deficiency of insulin
- D. It is due to less sensitivity of target cells to insulin

**Answer: D**

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17. Which one of the following is not the function of insulin?

- A. Increases glycogenesis
- B. Increases glycogenolysis
- C. Promote oxidation of glucose and conversion of glucose into glycogen in muscle as well as liver cells
- D. Increase uptake of amino acids by liver and muscles

**Answer: B**



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18. Which of the following is/are NOT secretion(s) of islets of Langerhans ?

A. Glucagon

B. Insulin

C. Somatostatin

D. Androgen

**Answer: D**



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19. Which of the following is the hormone secreted by zona fasciculata

A. Aldosterone

B. Cortisol

C. Androstenedione

D. Mineralocorticoids

**Answer: B**



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**20. Mark antagonistic hormones**

A. Insulin and glucagon

B. Adrenaline and nor adrenaline

C. Calcitonin and parathormone

D. Both (1) & (3)

**Answer: D**



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21. Thyroxine brings about effects on target cells by

- A. Altering gene expression
- B. Activating adenlate cyclase
- C. Activating guanylate cyclase
- D. Activating G-protein

**Answer: A**



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22. Which of the following works in association with cytoplasmic or nuclear receptors ?

- A. Insulin
- B. Somatostatin
- C. Oxytocin
- D. Estrogen

**Answer: D**

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**23.** In which of the following gland(s), tissue mass is differentiated into cortex and medulla ?

A. Adrenal

B. Pituitary

C. Thymus

D. Both (1) & (3)

**Answer: D**

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**24.** Which of the following hormone(s) is/are responsible for maintaining corpus luteum ?

A. LH

B. Estrogen

C. hCG

D. Both (1) & (3)

**Answer: D**



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**25. Which of the following hormone works from outside the cell ?**

A. Estrogen

B. Cortisol

C. Insulin

D. Thyroxine

**Answer: C**



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26. Which of the following is/are correct about catecholamines ?

(a) Water soluble (b) Lipid soluble

(c) Work through second messengers (d) Alter gene expression

A. (a) & (d) only

B. (a) & (c) only

C. (a), (c) & (d) only

D. (b) & (d) only

**Answer: B**



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27. Hormonal action initiates an expanding cascade of response. It is known as \_\_\_\_

A. Amplification

- B. Synergistic effect
- C. Antagonistic effect
- D. Positive feed back

**Answer: A**



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**28. Male hypogonadism results in**

- A. Deficiency of androgens
- B. Hypofunction of Sertoli cells
- C. Hypofunction of Leydig cells
- D. All of these

**Answer: D**



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**29. Melatonin influences**

- A. Diurnal rhythm
- B. Menstrual cycle
- C. Defense capability
- D. All of these

**Answer: D**



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**30. Female reproductive cycle is regulated by**

- A. Estrogen
- B. Progesterone
- C. Relaxin
- D. Both (1) & (2)

**Answer: D**



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## Assignment Section A

1. \_\_\_ are responsible for chemical coordination.

- A. Neurons
- B. Nephrons
- C. Hormones
- D. Enzymes

**Answer: C**



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2. Neural coordination is

- A. Fast and long lived
- B. Fast and short lived
- C. Slow and long lived
- D. Slow and short lived

**Answer: B**

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### 3. The ductless glands

- A. Produce non-nutrient intercellular messengers
- B. Found only in non chordates
- C. Are absent in human body
- D. Are called exocrine glands

**Answer: A**

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4. Which of the following is an incorrect statement?

- A. Hormones are required in trace amounts
- B. Hormones are intra-cellular messengers
- C. Hormones are secreted by endocrine glandular cells
- D. Hormones are secreted in response to a particular stimulus

**Answer: B**



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5. Which of the following glands are present in the brain?

- A. Parathyroid gland and thyroid gland
- B. Pituitary gland and thymus
- C. Hypophysis and pineal gland

D. Pineal gland and thymus

**Answer: C**

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6. The two glands located in the neck region are

A. Thyroid gland and parathyroid gland

B. Pituitary gland and pineal gland

C. Adrenal gland and thymus

D. Pineal gland and thyroid gland

**Answer: A**

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7. Hypothalamus forms an important link between

- A. Digestive system and nervous system
- B. Nervous system and respiratory system
- C. Nervous system and endocrine system
- D. Integumentary system: and reproductive system

**Answer: C**

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**8. The neurosecretory cells of hypothalamus which produce hormones are called**

- A. Nephrons
- B. Nuclei
- C. Granular cells
- D. Globular cells

**Answer: B**

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9. The hypothalamic hormones regulate the synthesis and secretion of

- A. Thyroid hormones
- B. Pituitary hormones
- C. Adrenal hormones
- D. Parathormone

**Answer: B**

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10. Somatostatin inhibits the release of

- A. Prolactin
- B. Melanin
- C. Thymosin

D. Growth hormone

**Answer: D**



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11. GnRH stimulates \_\_\_ to release

- A. Hypothalamus, gonadotropins
- B. Pituitary gland, gonadotropins
- C. Pituitary gland, growth hormone
- D. Hypothalamus, growth hormone

**Answer: B**



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12. Which of the following is under the direct control of neurosecretory cells?

- A. Pars distalis and pars intermedia
- B. Pars intermedia and pars nervosa
- C. Pars nervosa only
- D. Pars distalis only

**Answer: C**



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13. The neuroendocrine structure is

- A. Hypothalamus
- B. Adrenal cortex
- C. Pancreas
- D. Thyroid

**Answer: A**



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**14. Adenohypophysis in humans consists of two portions**

- A. Pars distalis and Pars nervosa
- B. pars intermedia and Pars distalis
- C. Pars nervosa and Pars intennedia
- D. Anterior and posterior pituitary

**Answer: B**



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**15. Which of the following hormones is not released by pars distails, in frog ?**

- A. Growth hormone
- B. Prolactin
- C. Melanocyte stimulating hormone
- D. Luteinizing hormone

**Answer: C**

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**16.** Melanocyte stimulating hormone in frog is released by

- A. Hypothalamus
- B. Pars nervosa
- C. Pars distalis
- D. Pars intermedia

**Answer: D**

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17. The hormone which promotes protein anabolism, absorption of calcium from the bowel and retards use of blood glucose for ATP production

- A. Melatonin
- B. Adrenaline
- C. Growth hormone
- D. Insulin

**Answer: C**



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18. Dwarfism occurs when there is

- (i) Over secretion of growth hormone
- (ii) Under secretion of growth hormone

(iii) Over secretion of somatostatin

(iv) Under secretion of somatostatin

A. (i) and (iii)

B. Only (ii)

C. (ii) and (iii)

D. (ii) and (iv)

**Answer: C**



**Watch Video Solution**

**19.** Which of the following hormones is responsible for gigantism?

A. Growth hormone

B. Somatostatin

C. Adrenaline

D. GnRH

**Answer: A**



**Watch Video Solution**

**20. Prolactin activates**

- A. Growth of breasts and secretion of milk in mammary glands
- B. Secondary sexual characters in males
- C. Melatonin secretion
- D. Estrogen secretion

**Answer: A**



**Watch Video Solution**

**21. ACTH controls the secretion of**

- A. Insulin

B. Norepinephrine

C. Epinephrine

D. Glucocorticoids

**Answer: D**



**Watch Video Solution**

**22.** If 'X' is a hormone which controls the carbohydrate metabolism in the body and 'Y' is a hormone which controls the secretion of 'X', then 'X' and 'Y' are

A. insulin and somatotrophin

B. Aldosterone and growth hormone

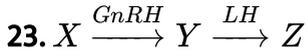
C. Glucocorticoid and ACTH respectively

D. Glucocorticoid and GHRH

**Answer: C**



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The glands which are represented as X, Y and Z are

- A. Pituitary gland, ovary and testis, respectively
- B. Hypothalamus, adrenal gland and liver, respectively
- C. Hypothalamus, pituitary gland and testis/ovary, respectively
- D. Pituitary gland, thyroid gland and parathyroid gland, respectively

**Answer: C**



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24. In females, LH stimulates \_\_\_\_\_ in the ovary to secrete \_\_\_\_\_

- A. Graafian follicle, ICSH respectively
- B. Graafian follicle, prolactin respectively

C. Corpus luteum, FSH respectively

D. Corpus luteum, progesterone respectively

**Answer: D**



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25. Graafian follicle gets converted into \_\_\_ after ovulation under the effect of \_\_\_

A. Corpus callosum GnRH

B. Corpus luteum, LH

C. Corpus albicans, FSH

D. Ovarian follicle, prolactin

**Answer: B**



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26. Which of the following is incorrect w.r.t. neurohypophysis?

- A. Neurohypophysis is also called pars nervosa
- B. It synthesises two hormones, oxytocin and vasopressin
- C. It receives neurohormones directly from neurosecretory cells
- D. It comprises 25% portion of pituitary gland

**Answer: B**



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27. P is a small, round, reddish structure located on the dorsal side of forebrain. It contains a stalk-and releases a hormone Q which controls diurnal rhythm of the body. P and Q are

- A. Hypothalamus, MSH respectively
- B. Pineal gland, melanin respectively
- C. Pineal gland, melatonin respectively

D. Pituitary gland, MSH respectively

**Answer: C**



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**28.** A hormone which maintains BMR, regulates the metabolism of proteins and erythropoiesis is

A. Adrenaline

B. Thymine

C. Thyroxine

D. Thymosin

**Answer: C**



**Watch Video Solution**

29. Cretinism can be prevented or cured by the administration of

- A. Renin
- B. Aldosterone
- C. Glucagon
- D. Thyroxine

**Answer: D**



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30. A gland X is present over the surface of another gland Y, latter secretes a hormone that controls the metabolism of proteins, fats and carbohydrates. The X and Y are

- A. Parathyroid and thyroid gland, respectively
- B. Pituitary and hypothalamus, respectively
- C. Adrenal gland and kidney, respectively

D. Thymus and heart, respectively.

**Answer: A**



**Watch Video Solution**

**31.** Ram has high level of calcium in his blood Excess of which hormone can cause this effect ?

A. Thyrocalcitonin

B. Growth hormone

C. Parathormone

D. Insulin

**Answer: C**



**Watch Video Solution**

32. Angiotensinogen  $\xrightarrow{x}$  Angiotensin-I  
(A) (AB)

'X' in the given statement refers to

A. Angiotensin-II

B. Aldosterone

C. Renin

D. Rennin

**Answer: C**



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33. The secretin promotes the release of

A. HCl and sodium carbonate ions

B. HCl and bicarbonate ions in gastric juice

C. Water and bicarbonate ions in pancreatic juice

D. Pancreatic enzymes and mucus

**Answer: C**



[Watch Video Solution](#)

**34.** CCK is secreted by

A. Duodenum

B. Pyloric part of stomach

C. Caecum

D. Rectum

**Answer: A**



[Watch Video Solution](#)

**35.** Progesterone and estradiol are

- A. Peptide hormones
- B. Amino acid derivatives
- C. Iodothyronines
- D. Steroid hormones

**Answer: D**

 [Watch Video Solution](#)

**36.** which of the following forms a hormone receptor complex on the cell membrane ?

- A. Cortisol
- B. Testosterone
- C. Insulin
- D. Progesterane

**Answer: C**

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## Assignment Section B

1. Which of the following can be included under heterocrine glands?

- A. Thyroid and parathyroid
- B. Pineal gland
- C. Gonads and pancreas
- D. Thymus

**Answer: C**

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2. Regulating hormones from hypothalamus reach adenohipophysis through

- A. Neuron
- B. Neuroendocrine cells
- C. Portal blood vessel
- D. Diffusion

**Answer: C**

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3. The anterior pituitary hormone that does not stimulate another endocrine gland is

- A. Somatotrophin
- B. Thyrotrophin
- C. Gonadotrophin
- D. Adrenocorticotrophin

**Answer: A**

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4. Luteinising hormone (LH) in female

- A. Helps in the appearance of secondary sexual characters
- B. Stimulates ovary to secrete oestradiol
- C. Helps in release of the ovum from the ovary
- D. Controls the blood pressure

**Answer: C**

 [Watch Video Solution](#)

5. On surgical removal of pituitary gland there is fall in levels of glucocorticoids and sexcorticoids. This is due to

- A. Oxytocin is no longer available from pituitary
- B. Atrophy of adrenal medulla

C. Atrophy of adrenal cortex

D. LTH from pituitary is no longer available

**Answer: C**



**Watch Video Solution**

6. Which pituitary hormone is responsible for enhancing the arterial blood pressure by causing the narrowing of arterioles ?

A. ACTH

B. Somatotropin

C. ADH

D. LTH

**Answer: C**



**Watch Video Solution**

7. The largest endocrine gland is

- A. Thyroid gland
- B. Adrenal gland
- C. Thymus
- D. Pituitary gland

**Answer: A**



[Watch Video Solution](#)

8. The failure of thyroid secretion from infancy leading to dwarfism and mental retardation is included under

- A. Grave's disease
- B. Cretinism
- C. Simple goitre
- D. Myxoedema

**Answer: B**



**Watch Video Solution**

**9.** Name the non-iodinized hormone secreted by paraforillicular cells of thyroid.

A. Calcitonin

B. Oxytocin

C. Vasopressin

D. Gonadotropin

**Answer: A**



**Watch Video Solution**

**10.** Symptoms such as pot-bellied, pigeon-like chest, protrudin tongue, and mental retardation are of

- A. Myxoedema
- B. Cretinism
- C. Cushing's Syndrome
- D. Addison's disease

**Answer: B**

 [Watch Video Solution](#)

**11. Hyposecretion of which hormone is responsible for cretinism?**

- A. Thyroxine
- B. Parathormone
- C. Growth Hormone
- D. Calcitonin

**Answer: A**

 [Watch Video Solution](#)

12. Increase in the excitability of nerves and muscles leading to sustained contraction of the muscles of larynx, face, hand and feet is due to

- A. Hyper activity of thyroid
- B. Hyper activity of parathyroid
- C. Hypoactivity of thyroid
- D. Hypoactivity of parathyroid

**Answer: D**



[Watch Video Solution](#)

13. Hormone secrete during allergy is

- A. Glucocorticoid
- B. Mineralocorticoid
- C. Insulin

D. Thyroxine

**Answer: A**



**Watch Video Solution**

**14.** Deficiency in the activity of adrenal cortex leads to

A. Cushing's disease

B. Conn's syndrome

C. Addison's disease

D. Simmond's disease

**Answer: C**



**Watch Video Solution**

**15.** One of the following symptoms pertain to Addison's disease.

- A. Low plasma  $Na^+$ , high plasma  $K^+$ , increased urinary  $Na^+$ , low blood sugar, vomiting, nausea and diarrhoea
- B. High blood sugar, obesity, wasting of limb muscles, fall in plasma  $K^+$ , high blood  $Na^+$ , rise in blood volume and high blood pressure
- C. Stunted growth, retarded sexual development, mental backwardness
- D. Increase of heart beat, rise in blood pressure, nervousness, bulging eyes, warm skin

**Answer: A**



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**16. Adrenal virilism results to**

- A. Poor secretion of sex corticoids

- B. Excess secretion of sex corticoids
- C. Excess secretion of aldosterone
- D. Poor setretion of aldosterone

**Answer: B**



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17. Secretion of aldosterone in birds, man, and other mammals is stimulated by

- A. Fall In concentration of  $Na^+$  in blood plasma
- B. Rise in concentration of  $K^+$  in blood plasma
- C. Both (1) & (2)
- D. Fall in  $ca^{++}$  concentration in blood plasma

**Answer: C**



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18. A patient who excretes large quantity of sodium in urine has

- A. Diseased adrenal medulla
- B. Diseased adrenal cortex
- C. Diseased pancreas
- D. Diseased thymus

**Answer: B**



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19. After receiving a hormonal shot, an asthma patient will get relief in exhaling the air. The hormone injected will be

- A. Oxytocin
- B. Adrenalin
- C. Insulin

D. Thyroxine

**Answer: B**



**Watch Video Solution**

**20.** The hormones produced during emotional stress is

A. Melatonin

B. Thyroxine

C. Calcitonin

D. Adrenaline

**Answer: D**



**Watch Video Solution**

21. When the normal heart of a man is injected with physiological concentration of adrenaline, it shows

- A. Systolic arrest
- B. Decreased rate
- C. Sustained increased rate
- D. First increased then normal rate

**Answer: D**



[Watch Video Solution](#)

22. Which of the following is the function of insulin ?

- A. Promote synthesis of fats from glucose by adipose tissue
- B. Promote protein synthesis by promoting uptaking aminoacids by liver and muscle cells
- C. Promote conversion of glucose into glycogen

D. All of these

**Answer: D**



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**23.** The organ which was considered vestigial till recently but now confirmed to be endocrine gland is

A. Thymus

B. Pancreas

C. pineal

D. Pituitary

**Answer: C**



**Watch Video Solution**

24. Which of the statements is incorrect w.r.t. melatonin hormone ?

- A. Shows diurnal variation.
- B. Antigonadial hormone
- C. Secreted by Pineal body
- D. Poorly vascularised

**Answer: D**



**Watch Video Solution**

25. Mammalian thymus' is mainly concerned with

- A. Regulation of body temperature
- B. Regulation of body growth
- C. Immunological functions
- D. Secretion of thyrotropin

**Answer: C**



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**26.** Which of the following glands grows to the maximum size at puberty and then diminishes gradually

- A. Thymus
- B. Pituitary
- C. Thyroid
- D. Adrenal

**Answer: A**



**Watch Video Solution**

**27.** Relaxin is secreted by which endocrine gland ?

A. Corpus luteum

B. Pituitary

C. Pineal

D. Ovary

**Answer: D**



[Watch Video Solution](#)

**28.** Gynecomastia condition can develop due to

A. Temporary increase in circulating estrogen in neonates

B. Temporary increase in circulating estrogen at puberty

C. Decreased testosterone in later life

D. All of these

**Answer: D**



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29. Placental hormone called chorionic gonadotropin (HCG) which stimulates secretion of progesterone by the ovary during pregnancy is

- A. by the ovary during pregnancy is
- B. Steroid in nature
- C. Biogenic amine
- D. Both (1) & (2)

**Answer: A**



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30. High-pitch juvenile voice in males can be retained by

- A. Ovarectomy
- B. Castration
- C. Synorchidism

D. Eunuchoidism

**Answer: B**



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**31.** Find the odd one out w.r.t. gland and secretions

A. Glucocorticoids, Mineralocorticoids, Sexcorticoids

B. Nor-epinephrine, Epinephrine, Adrenaline

C. Relaxin, Oestrogen, Progestrone

D. Insulin, Glucagon, Thymosin

**Answer: D**



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**32.** The name secondary messenger is given to

A. cAMP

B. ATP

C. ADP

D. DNA

**Answer: A**



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**33.** The secondary messenger which show antagonistic effect to c-AMP in heart muscle is

A.  $Ca^{2+}$

B. Inositol triphosphate ( $IP_3$ ).

C. DAG

D. c-GMP

**Answer: D**

 [Watch Video Solution](#)

**34.** The hormone which acts through intracellular receptor protein is

- A. Growth hormone
- B. Prolactin
- C. Thyroxine
- D. Adrenaline

**Answer: C**

 [Watch Video Solution](#)

**35.** Production, secretion, and ejection of milk requires the synergistic effects of prolactin and

- A. Estrogen
- B. Progesterone

C. Oxytocin

D. All of these

**Answer: D**



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## Assignment Section C

1. Hypersecretion of Growth Hormone in adults does not cause further increase in height, because

- A. Growth Hormone becomes -inactive-in adults
- B. Epiphyseal plates close after adolescence
- C. Bones loose their sensitivity to Growth Hormone in adults
- D. Muscle fibres do not grow in size after birth

**Answer: B**



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2. Which hormones do stimulate the production of pancreatic juice and juice bicarbonate

- A. Angiotensin and epinephrine
- B. Gastrin and insulin
- C. Cholecystokinin and secretin
- D. Insulin and glucagon

**Answer: C**



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3. Graves' disease is caused due to

- A. Hyposecretion of thyroid gland
- B. Hypersecretion of thyroid gland

C. Hyposecretion of adrenal gland

D. Hypersecretion of adrenal gland

**Answer: B**



[Watch Video Solution](#)

4. Name a peptide hormone which acts mainly on hepatocytes, adipocytes and enhances cellular glucose uptake and utilization :

A. Insulin

B. Glucagon

C. Secretin

D. Gastrin

**Answer: A**



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5. The posterior pituitary gland is not a 'true' endocrine gland because

- A. It is provided with a duct
- B. It only stores and releases hormones
- C. It is under the regulation of hypothalamus
- D. It secretes enzymes

**Answer: B**



**Watch Video Solution**

6. Which of the following pairs of hormones are not antagonistic (having opposite effects) to each other ?

- A. Relaxin - Inhibin
- B. Parathormone - Calcitonin
- C. Insulin - Glucagon
- D. Aldosterone - Atrial Natriuretic Factor

**Answer: A**



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7. The amino acid tryptophan is the precursor for the synthesis of

- A. Cortisol and Cortisone
- B. Melatonin and Serotonin
- C. Thyroxine and Triiodothyronine
- D. Estrogen and Progesterone

**Answer: B**



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8. Which one of the following hormones is not involved in sugar metabolism ?

A. Glucagon

B. Cortisone

C. Aldosterone

D. Insulin

**Answer: C**



**Watch Video Solution**

9. Which one of the following hormones through synthesized elsewhere is stored and released by the master gland

A. Melarocyte stimulating hormone

B. Antidiuretic hormone

C. Luteinizing hormone

D. Prolactin

**Answer: B**

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10. A chemical signal that has both endocrine and neural roles is

- A. Cortisol
- B. Melatonin
- C. calcitonin
- D. Epinephrine

**Answer: D**

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11. Fight-or-flight reactions cause activation of

- A. The parathyroid glands, leading to increased metabolic rate
- B. The kidney, leading to suppression of renin-angiotensin-aldosterone pathway

C. The adrenal medulla, leading to increased secretion of epinephrine and norepinephrine

D. The pancreas leading to a reduction in the blood sugar levels

**Answer: C**



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**12. Identify the hormone with its correct matching of source and function**

:

A. Oxytocin-posterior pituitary, growth and maintenance of mammary glands

B. Melatonin-pineal gland, regulates the normal rhythm of sleepwake cycle

C. Progesterone-corpora-luteum, stimulation of growth and activities of female secondary sex organs

D. Atrial natriuretic factor- ventricular wall increases the blood pressure

**Answer: B**



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**13.** Which of the following statements is correct in relation to the endocrine system ?

- A. Organs in the body like gastrointestinal tract, heart, kidney and liver do not produce any hormones
- B. Non-nutrient chemicals produced by the body in trace amount that act as intercellular messenger are known as hormones
- C. Releasing and inhibitory hormones are produced by the pituitary gland

D. Adenohypophysis is under direct neural regulation of the hypothalamus

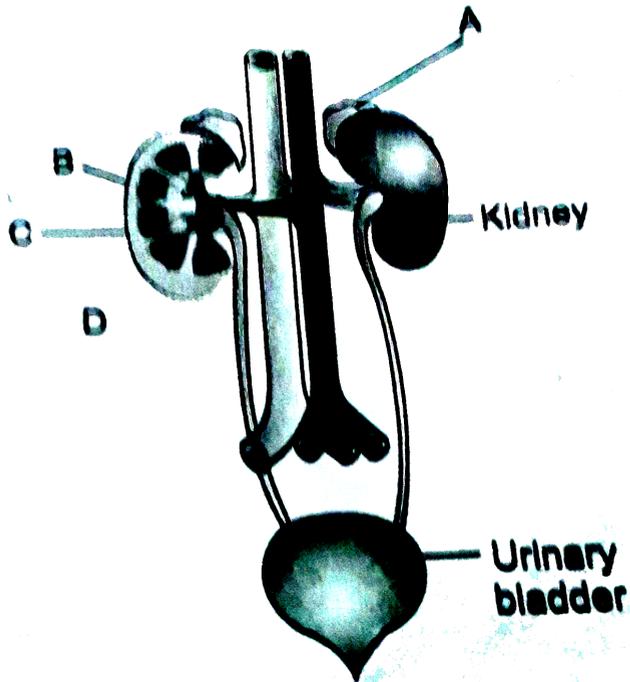
**Answer: B**



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**14.** Figure 19.17 shows human urinary system with structures labeled A-D. Select the option which correctly identifies them and gives their

characteristics and/or functions.



A. B-Pelvis-broad funnel shaped space inner to hilum, directly connected to loops of Henle

B. C-Medulla-inner zone of kidney and contains complete nephrons

C. D-Cortex-outer part of kidney and do not contain any part of nephrons

D. A-Adrenal gland-located at the anterior part of kidney. Secrete

Catecholamines which stimulate glycogen breakdown

**Answer: D**



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15. A pregnant female delivers a baby who suffers from stunted growth , mental retardation, low intelligence quotient and abnormal skin. This is the result of

- A. Low secretion of growth hormone
- B. Cancer of the thyroid gland
- C. Over secretion of pars distalis
- D. Deficiency of iodine in diet

**Answer: D**



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16. Select the answer which correctly matches the endocrine gland with the hormone it secretes and its function/deficiency symptom :

A.

	Endocrine gland	Hormone	Function/deficiency
(1)	Posterior pituitary	Growth Hormone (GH)	Oversecretion s

B.

	Endocrine gland	Hormone	Function/deficiency/symptoms
(2)	Thyroid-gland	Thyroxine	Lack of iodine diet results in goit

C.

	Endocrine gland	Hormone	Function/deficiency/symptom
(3)	Corpus luteum	Testosterone	Stimulates spermatogenesis

D.

	Endocrine gland	Hormone	Function/deficiency/symptoms
(4)	Anterior pituitary	Oxytocin	Stimulates uterus contraction d

**Answer: B**



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17. Which one of the following pairs of hormones are the examples of those that can easily pass through the cell membrane of the target cell and bind to a receptor inside it (mostly in the nucleus)

A. Somatostatin, oxytocin

B. Cortisol, testosterone

C. Insulin, glucagon

D. Thyroxin, Insulin

**Answer: B**



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18. Which one of the following pairs of chemical substances, is correctly categorised ?

A. Secretin and rhodopsin-Polypeptide hormones

B. Calcitonin and thymosin-Thyroid hormones

C. Pepsin and prolactin-Two digestive enzymes secreted in stomach

D. Troponin and myosin-complex proteins in straited muscles

**Answer: D**



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**19.** Match the source gland with its respective hormone as well as the function.



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**20.** Given below is an incomplete table about certain hormones, their source glands and one major effect on each one the body in humans.

Identify the correct option for the three blanks A, B and C

Glands	Secretion	Effect on body
A	Oestrogen	Maintenance of secondary sexual character
Alpha cells of Islets of Langerhans	B	Raises blood sugar level
Anterior pituitary	C	Over secretion leads to gigantism

- A. A            B            C  
Placenta    Glucagon    Calcitonin
- B.
- C. A            B            C  
Placenta    Insulin    Vasopressin
- D. A            B            C  
Ovary      Insulin    Calcitonin

**Answer: B**



**Watch Video Solution**

21. The 24 hour (diurnal) rhythm of our body such as the sleep-wake cycle is regulated by the hormone

Or

Which hormone is secreted more in dark condition

A. Adrenaline

B. melatonin

C. Calcitonin

D. Prolactin

**Answer: B**



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**22.** Injury to adrenal cortex is not likely to affect the secretion of which one of the following ?

A. Cortiso

B. Aldosterone

C. Both androstenedione and dehydroepiandrosterone

D. Adrenaline

**Answer: D**



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**23.** Which one of the following pairs is incorrectly matched ?

A. insulin-Diabetes mellitus (disease)

B. Glucagon - Beta cells (source)

C. Somatostatin - Delta cells (source)

D. Corpus luteum - Relaxin (secretion)

**Answer: B**



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24. Toxic agents present in food which interfere with thyroxine synthesis lead to the development of

- A. Thyrotoxicosis
- B. Toxic goitre
- C. Cretinism
- D. Simple goitre

**Answer: D**



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25. Select the correct matching pair of a hormone alongwith its source and function



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26. The letter "T" in T-lymphocyte refers to

A. Thalamus

B. Tonsil

C. Thymus

D. Thyroid

**Answer: C**



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27. A health disorder that results from the deficiency of thyroxine in adults and characterized by (i) a low metabolic rate (ii) increase in body weight and (iii) tendency to retain water in tissues is :

A. simple goitre

B. myxoedema

C. cretinism

D. hypothyroidism

**Answer: B**



**Watch Video Solution**

**28.** Which of the following is an amine hormone ?

A. Progesterone

B. thyroxine

C. Oxypurin

D. Insulin

**Answer: B**



**Watch Video Solution**

**29.** The blood calcium level is lowered by the deficiency of

A. Calcitonin

B. Parathormone

C. Thyroxine

D. Both Calcitonin and Parathormone

**Answer: B**



**Watch Video Solution**

**30.** Which one of the following pairs of organs includes only the endocrine glands

A. Adrenal and Ovary

B. Parathyroid and Adrenal

C. Pancreas and Parathyroid

D. Thymus and Testes

**Answer: B**



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31. Compared to a bull a bullock is docile because of

- A. Lower levels of adrenalin / noradrenalin in its blood
- B. Higher levels of thyroxin
- C. Higher levels of cortisone
- D. Lower levels of blood testosterone

**Answer: D**



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32. Feeling the tremors of an earthquake a scared resident of seventh floor of a multistoreyed building starts climbing down the stairs rapidly.

Which hormone initiated this action

Or

Injury to adrenal cortex is not likely to affect the secretion of which one of the following

- A. Gastrin
- B. Thyroxin
- C. Adrenaline
- D. Glucagon

**Answer: C**

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**33.** A person is having problems with calcium and phosphorus metabolism in his body. Which one of the following glands may not be functioning properly ?

- A. Thyroid
- B. Paarathyroid
- C. Parotid
- D. Pancreas

**Answer: B**



**Watch Video Solution**

**34.** A steroid hormone which regulates glucose metabolism is

Or

Excess of which of the following hormones causes Cushing's syndrome

- A. Cortisol
- B. Corticosterone
- C. 11-deoxycorticosterone
- D. Cortisone

**Answer: A**



**Watch Video Solution**

35. Which one of the following is not a second messenger in hormone action

- A. cGMP
- B. CALCIUM
- C. Sodium
- D. cAMP

**Answer: C**



[Watch Video Solution](#)

36. Which of the following is an accumulation and release centre of neurohormones

- A. Posterior pituitary lobe
- B. Intermediate lobe of the pituitary
- C. Hypothalamus

D. Anterior pituitary lobe

**Answer: C**



**Watch Video Solution**

**37.** Which hormone causes dilation of blood vessels, increased oxygen consumption and gluconeogenesis?

A. ACTH

B. Insulin

C. Adrenalin

D. Glucagon

**Answer: C**



**Watch Video Solution**

**38.** Damage to thymus in a child may lead to

- A. A reduction in stem cell production
- B. Loss of antibody mediated immunity
- C. Loss of antibody mediated immunity
- D. Loss of cell mediated immunity

**Answer: D**



**Watch Video Solution**

**39.** Thymosin hormone is secreted by

- A. Thyroid gland
- B. Parathyroid gland
- C. thymus gland
- D. Hypothalamus

**Answer: C**



**Watch Video Solution**

**40.** Insufficient quantities of antidiuretic hormone in blood lead to

- A. Diabetes mellitus
- B. Glycosuria
- C. Diabetes insipidus
- D. Uremia

**Answer: C**



**Watch Video Solution**

**41.** The hormone which regulates the basal metabolism in our body is secreted from

A. Adrenal cortex

B. Pancreas

C. Pituitary

D. Thyroid

**Answer: D**

 [Watch Video Solution](#)

**42.** Calcitonin is a thyroid hormone which

A. Elevates calcium level in blood

B. Has no effect on calcium

C. Elevates potassium level in-blood

D. lowers calcium level in blood

**Answer: D**

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43. Which of the following hormones stimulates the secretion of milk from female ?

- A. Oxytocin
- B. Progesterone
- C. LH
- D. Prolactin

**Answer: D**



[Watch Video Solution](#)

44. Secretion of progesterone by corpus luteum is initiated by

- A. Testosterone
- B. Thyroxine
- C. MSH

D. LH

**Answer: D**



**Watch Video Solution**

**45.** The function of oxytocin is to help in

A. Child birth

B. Gametogenesis

C. Growth

D. Lactation

**Answer: A**



**Watch Video Solution**

**46.** Melatonin is secreted by

A. Pineal body

B. skin

C. Pituitary gland

D. Thyroid

**Answer: A**



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**47.** The gonadotropic hormones are secreted by

A. Anterior lobe of pituitary

B. Interstitial cells of testes

C. Adrenal cortex

D. Posterior part of thyroid

**Answer: A**



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48. Which one of the following endocrine glands stores its secretion in the extracellular space before discharging in into the blood?

- A. Testis
- B. Thyroid
- C. Pancreas
- D. Adrenal

**Answer: B**



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49. Acromegaly/Gigantism is caused by

- A. Excess of S.T.H.
- B. Excess of thyroxin
- C. Deficiency of thyroxin

D. Excess of adrenalin

**Answer: A**



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50. Which of the following pair is correct match of a hormone with a disease resulting from its deficiency ?

A. Relaxin - Gigantism

B. Prolactin - Cretinism

C. Parathyroid hormone - Tetany

D. Insulin - Diabetes insipidus

**Answer: C**



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51. Which of the following hormones is modified amino acid ?

- A. Epinephrine
- B. Progesterone
- C. Prostaglandin
- D. Estrogen

**Answer: A**



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52. Adrenaline directly affects

- A. S.A. node
- B.  $\beta$ -cells of Langerhans
- C. Dorsal root of spinal nerve
- D. Epithelial cells of stomach

**Answer: A**



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**53.** Diabetes is due to

- A. Enzyme deficiency
- B. Iodine deficiency
- C.  $Na^+$  deficiency
- D. Hormonal deficiency

**Answer: D**



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**54.** If diabetes mellitus is not-controlled increased oxidation of\_\_\_\_\_produces ketone bodies such as acetoacetate and acetone

A. Carbohydrates

B. Fats

C. Proteins

D. Nucleic acids

**Answer: B**



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**55. Individuals with type-I diabetes**

A. Lack  $\beta$ -cells in the islets of Langerhans

B. Produce enough insulin but lack functional receptors on their cells

C. Can control their diabetes with diet and exercise

D. All of these are correct

**Answer: A**



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56. Mark the correct statement w.r.t. erythropoietin.

- A. Secreted by juxta glomerular cells
- B. secreted in response to hypoxia
- C. Activates bone marrow cells to produce more RBCs
- D. All of these

**Answer: D**



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57. What happens when the tadpole larva is kept in iodine deficient pond water ?

- A. Development of giant frog
- B. Accelerated metamorphosis
- C. inhibition of metamorphosis

D. Development of miniature frog

**Answer: C**



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**58.** Which of the following hormone is a derivative of tyrosine?

A. Thyroxine

B. Epinephrine

C. Nor epinephrine

D. All of these

**Answer: D**



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59. Adrenaline is released from the adrenal medulla under stress condition.

Which of the following can't be taken as a character of it?

- A. Elevates blood glucose by converting liver glycogen to glucose
- B. Acceleration of rate and force of heart beat
- C. Increase in breakdown of lipids
- D. Constriction in arterioles of skeletal muscle

**Answer: D**



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60. Which of the following is not caused by hyperactivity of endocrine gland ?

- A. Conn's syndrome
- B. Cushing's syndrome
- C. Addison's disease

D. Adrenal virilism

**Answer: C**



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**61.** Which of the following hormones plays a very important role in the regulation of a 24 hour (diurnal) rhythm of our body. It helps in maintaining the normal rhythms of sleep-wake cycle, body temperature. It influences pigmentation, the menstrual cycle as well as our defense capability?

A. Estrogen

B. Progesterone

C. Cortisol

D. Melatonin

**Answer: D**



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62. In heart cells, which one a second messenger that speeds up muscle contraction in response to adrenaline

- A. cAMP
- B. cGMP
- C. Inositol triphosphate
- D. Diacylglycerol

**Answer: A**



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63. Which of the following is a paracrine hormone?

- A. Insulin
- B. Glucagon

C. Somatostatin of pancreas

D. GH (Growth hormone)

**Answer: C**



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**64.** Which of the following is an auto-immune disorder in which the person produces antibodies that mimic the action of TSH, but are not regulated by the normal negative feedback controls?

A. Myxoedema

B. grave's diseas

C. Cretinism

D. Hypocalcemic tetany

**Answer: B**



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65. Which of the following hormones is used in transplantation surgery to suppress immunity, and thus, chances of organ rejection by recipient's body is decreased ?

- A. Thyroxine
- B. Cortisol
- C. Aldosterone
- D. Steroid hormone

**Answer: B**



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66. A destruction of adrenal cortex by diseases like tuberculosis produces

- A. Cushing syndrome
- B. Adrenal virilism

C. Addison's disease

D. Aldosteronism

**Answer: C**



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**67.** Which of the following is an action not produced by sympathetic-adrenal system ?

A. Constriction of skin and visceral smooth muscle

B. Dilation of arterioles of heart and skeletal muscles

C. Constriction of pupils

D. Dilation of bronchioles

**Answer: C**



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68. Eunuchoidism is due to

- A. Perturbation of estrogen to androgen ratio
- B. Failure of testosterone secretion
- C. Tumor in testis
- D. Tumor in ovaries

Answer: B



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69. What is correct to say about the hormone action in humans ?

- A. In females, FSH first binds with specific receptors on ovarian cell membrane
- B. FSH stimulates the secretion of estrogen and progesterone
- C. Glucagon is secreted by  $\beta$ -cells of Islets of Langerhans and stimulates glycogenolysis

D. Secretion of thymosins is stimulated with aging

**Answer: A**



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70. According to the accepted concept of hormone action, if receptor molecules are removed from target organs, then the target organ will

- A. Continue to respond to the hormone without any difference
- B. Not respond to the hormone
- C. Continue to respond to the hormone but will require higher concentration
- D. Continue to respond to the hormone but in the opposite way

**Answer: B**



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71. Hormones thyroxin, adrenaline and the pigment melanin are formed from

- A. Tyrosine
- B. Proline
- C. Tryptophan
- D. Glycine

**Answer: A**



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72. A sequential expression of a set of human genes occurs when a steroid molecule binds to the

- A. Messenger RNA
- B. DNA sequence
- C. Ribosome

D. Transfer RNA

**Answer: B**



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**73.** Which of the following set of hormones can easily pass through the cell membrane of a target cell and bind to specific intracellular receptors?

- a. Placental progesterone
- b. Aldosterone
- c. Estrogen
- d. Thyroxine

Mark the correct set

- A. b & c
- B. A, b & c
- C. a & c
- D. a, b, c & d

**Answer: D**



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**74.** Insulin receptor is

- A. Trimeric protein
- B. Membrane bound protein
- C. Intrinsic protein
- D. Intracellular receptor protein present in the cytoplasm

**Answer: B**



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**75.** The organ which was considered vestigial till recently but now confirmed to be endocrine gland is

- A. thymus
- B. Pancreas
- C. Pineal
- D. Pituitary

**Answer: C**

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**76. Find the odd one out.**

- A. Glucocorticoids, Mineralocorticoids, Sexcorticoids
- B. Nor-epinephrine, Epinephrine, Adrenaline
- C. Relaxin, Oestrogen, Progestrone
- D. Insulin, Glucagon, Thymosin

**Answer: D**

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77. The hormones produced during emotional stress is

- A. Melatonin
- B. Thyroxine
- C. Calcitonin
- D. Adrenalin

**Answer: D**



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## Assignment Section D

1. Assertion : Diabetes insipidus is marked by excessive urination and too much thirst for water .

Reason : Anti-diuretic hormone (ADH) is secreted by the posterior lobe of pituitary gland .

- A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).
- B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion then mark (2).
- C. If Assertion is true statement but Reason is false, then mark (3).
- D. If both Assertion and Reason are false statements, then mark (4)

**Answer: B**

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**2. Assertion :** Insulin is not given orally.

**Reason :** Insulin hormone is lipid-soluble and directly enters inside the cell membrane.

- A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4)

**Answer: C**

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3. Assertion : Chorionic gonadotrophin prevents corpus luteum from involuting.

Reason : It has the property similar to luteinizing hormone.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4)

**Answer: A**



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**4. Assertion :** Thyroxine shows calorogenic effect.

**Reason :** Thyroxine increases catabolism, produces energy and increases body temperature.

- A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).
- B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion then mark (2).
- C. If Assertion is true statement but Reason is false, then mark (3).
- D. If both Assertion and Reason are false statements, then mark (4)

**Answer: A**



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5. Assertion : Inhibin is secreted by the corpus luteum.

Reason : They inhibit the FSH and GnRH production.

- A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).
- B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion then mark (2).
- C. If Assertion is true statement but Reason is false, then mark (3).
- D. If both Assertion and Reason are false statements, then mark (4)

**Answer: B**



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6. Assertion: Our body secretes adrenaline in intense cold.

Reason: Adrenaline raises metabolic rate.

- A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).
- B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion then mark (2).
- C. If Assertion is true statement but Reason is false, then mark (3).
- D. If both Assertion and Reason are false statements, then mark (4)

**Answer: A**

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7. A: Occasionally mammary glands are functional in males and the condition is called gynaecomastia.

R: Decreased testosterone in later life may also lead to gynaecomastia. It is usually due to Perturbation of estrogen to androgen ratio.

- A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4)

**Answer: A**

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8. A : Prolactin is unique among the pituitary hormones as it is under predominant inhibitory control of hypothalamus.

R: The controlling agent is neurotransmitter- dopamine produced by tuberoinfundibular neuron.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4)

**Answer: B**

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**9. A:** Ethanol is a diuretic agent.

**R:** It inhibits vasopressin secretion.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4)

**Answer: A**

**10. A:** Oxytocin stimulates contraction-of uterine muscles during birth and initiates ejection of milk.

**R :** It is synthesized in the posterior lobe of pituitary.

- A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).
- B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion then mark (2).
- C. If Assertion is true statement but Reason is false, then mark (3).
- D. If both Assertion and Reason are false statements, then mark (4)

**Answer: C**