Exercise-1

Marked Questions are for Revision Questions.

ONLY ONE OPTION CORRECT TYPE

SECTION - A # ENDOCRINE GLAND

1. Which one of the following flows directly into blood from the site of its production to act on an organ away from it?
(1) Enzyme (2) Hormone (3) Blood (4) Lymph

2. Hormones may be –
(1) Amino acid derivatives (2) Peptides
(3) Steroids (4) All the above

3. Secretin is secreted from–
(1) Endocrine gland and acts on an endocrine gland
(2) Exocrine gland and acts on an exocrine gland
(3) Endocrine gland and acts on an exocrine gland
(4) Exocrine gland and acts on an endocrine gland

SECTION - B # PITUITARY GLAND

1. Growth hormone is produced in–
(1) Pituitary (2) Adrenal (3) Thyroid (4) Gonad

2. Hormones of pituitary gland are–
(1) All proteins
(2) All steroids
(3) Some steroids and some proteins
(4) Complex substances formed from proteins, steroids and carbohydrates

3. ADH is released by–
(1) Adrenal (2) Anterior pituitary (3) Posterior pituitary (4) Thyroid

4. Midgets are due to the deficiency of–
(1) Pituitary (2) Thyroid (3) Pancreas (4) Adrenal

5. The posterior lobe of the pituitary is–
(1) Glandular (2) Neural (3) Ganglionic (4) Vascular

6. The hormones of posterior pituitary are oxytocin and vasopressin; but vasopressin is better known as–
(1) Antidiuretic hormone (2) Growth hormone
(3) Corticotrophic hormone (4) Neurohypophyseal

7. The other name of anterior pituitary is–
(1) Neurohypophysis (2) Pars tuberalis (3) Pars intermedia (4) Adenohypophysis

8. Neurohypophysis releases the–

(1) Vasopressin and ACTH (2) ADH and pitocin
(3) Pitressin and ACTH (4) Oxytocin and LTH

9. Secretion of the androgen by Leydig cells of testis is under the regulatory influence of
(1) LTH (2) FSH (3) STH (4) ICSH

10. The process of spermatogenesis or sperm formation is under the regulatory influence of
(1) FSH (2) ADH (3) LH (4) LTH

11. In man, enlargement of hands feet, nose and lower jaw, are symptoms of–
(1) Myxoedema (2) Cretinism (3) Acromegaly (4) Gigantism

12. Hypersecretion of growth hormone by pituitary results in–
(1) Dwarfism (2) Gigantism (3) Cretinism (4) Myxoedema

13. The activity of adrenal cortex is governed by a pituitary hormone called as –
(1) hCG (2) FSH (3) ACTH (4) TSH

14. Adrenocorticotrophin is a hormone of–
(1) Pituitary (2) Adrenal (3) Thyroid (4) Adrenal medulla

15. The intermediate lobe of the pituitary gland produces a secretion which causes a dramatic darkening of the skin of many fishes, amphibians and reptiles. It is
(1) Adrenocorticotropic hormone (ACTH) (2) Follicle stimulating hormone (FSH)
(3) Melanocyte stimulating hormone (MSH) (4) Luteinizing hormone (LH)

16. Occurrence of diuresis following saline ingestion is due to–
(1) Suppression of adrenocorticoid release
(2) Reduction in the rate of water absorption by kidney capillaries
(3) Suppression of ADH release
(4) Reduction of Colloidal Osmotic Pressure (COP) of blood

17. Which of the following pituitary hormone is a direct action hormone?
(1) MSH (2) ICSH (3) ACTH (4) TSH

18. If there is deficiency of AD, its effect would be –
(1) The volume of urine will increase (2) The volume of urine will decrease
(3) The pH of urine will change from 4.8 to 8.0 (4) Secretion of urochrome will take place

19. Hormone released by posterior lobe of pituitary is concerned with–
(1) Metabolism of carbohydrates (2) Stimulation of thyroid
(3) Secondary sexual characters (4) Contraction of uterus

20. The anterior lobe of pituitary affects–
(1) Protein metabolism (2) Fat metabolism
(3) Carbohydrate metabolism (4) All of the above

21. Hypophysis is an alternative name for–
(1) Thyroid gland (2) Pituitary gland (3) Thymus gland (4) Pineal gland

22. A substance called ADH is
(1) A hormone that promotes glycogenesis in liver cells

(2) An enzyme secreted by cell of intestinal wall; hydrolyses dipeptides into amino acids
(3) A pituitary secretion which promotes reabsorption of water from glomerular filtrate
(4) A high energy compound involved in muscle contraction

23. Acromegaly is caused by irregular secretion of–
(1) Adrenal (2) Pancreas (3) Thyroid (4) Pituitary

24. FSH is a –
(1) Catecholamine (2) Glycoprotein (3) Polypeptide (4) Steroid

25. Pituitary gland is made up of –
(1) Pars distalis and pars nervosa (2) Pars intermedia
(3) Pars intermedia and pars distalis (4) Pars distalis, pars intermedia and pars nervosa

26. Gonadotrophic hormones are produced in the–
(1) Posterior part of thyroid (2) Adrenal cortex
(3) Adenohypophysis of pituitary (4) Interstitial cells of testis

27. The hormone that stimulates the secretion of glucocorticoids is –
(1) FSH (2) ACTH (3) Cortisol (4) LH

28. Which of the following secretes luteinizing hormone?
(1) Pituitary (2) Thyroid (3) Parathyroid (4) Adrenal

29. Pitressin is also called as–
(1) ADH (2) LH (3) NADH (4) FSH

30. The important function of vassopressin hormone is to–
(1) Cause contraction of the uterus and thus help in child birth
(2) Increase reabsorption of water in the kidney tubule
(3) Stimulate the secretion of milk in the mammary glands
(4) Lower the level of blood glucose

31. Contraction of the uterus, increase in arterial pressure and reduction in urine output are produced by–
(1) Oxytocin and ACTH (2) Vasopressin and TSH
(3) ADH and ACTH (4) Oxytocin and vasopressin

32. Diabetes insipidus is due to undersecretion of–
(1) Aldosterone (2) ADH (3) ACTH (4) TSH

33. Which one controls the secretion of estrogen?
(1) hCG (2) Progesteron (3) LH (4) FSH

34. FSH is produced by –
(1) Adrenal cortex (2) Anterior pituitary lobe
(3) Middle pituitary lobe (4) Posterior pituitary lobe

35. At cellular level GH affects growth by controlling the production of
(1) r-RNA (2) t-RNA (3) m-RNA (4) All of these

36. The synthesis of vasopressin is done by –
(1) Hypothalamus (2) Kidney (3) Anterior pituitary (4) Posterior pituitary

37. In a pregnant woman having prolonged labour pains, if child birth has to be hastened *i.e* to aid parturition, it is advisable to administer a hormone that can
(1) Activate the smooth muscles (2) Increase the metabolic rate
(3) Release glucose into the blood (4) Stimulate the ovary

38. Which one of the following statement about sex hormones is correct?
(1) Testosterone is produced by Leydig cells under the influence of Luteinizing Hormone (LH)
(2) Progesterone is secreted by Corpus luteum and soften ligaments during child birth
(3) Estrogen is secreted by both Sertoli cells and Corpus luteum
(4) The Progesterone produced by Corpus luteum is biologically different from the one produced by placenta

39. Luteinizing hormone–
(1) Stimulates ovulation
(2) Stimulates the egg mother cell to undergo completion of meiotic cycle
(3) Stimulates the Corpus luteum to secrete Progesterone
(4) All of the above

40. Which hormone stimulates the release of milk during sucking of milk by baby?
(1) Oxytocin (2) Relaxin (3) Prolactin (4) Progesteron

41. High increase in oxytocin level in a pregnant lady results in–
(1) Increased synthesis of milk (2) Decrease is blood haemoglobin
(3) Abortion (4) High blood pressure

SECTION - C # PINEAL BODY

1. Pineal body originates from–
(1) Dorsal part of diencephalon (2) Ventral part of diencephalon
(3) Ventral part of cerebellum (4) Dorsal part of cerebellum

2. According to recent knowledge, the pineal body is considered as–
(1) A vestigial organ (2) An organ of intelligence
(3) An endocrine gland (4) An organ of involuntary action

3. The recently discovered hormones, melatonin and serotonin are secreted at ends of nerve fibres by the activity of–
(1) Adrenal gland (2) Pineal gland (3) Thymus gland (4) Thyroid gland

4. Daily rhythms are usually associated with–
(1) Pineal (2) Pituitary (3) Thymus (4) Thalamus

SECTION - D # THYROID GLAND

1. Which disease is caused by the deficiency of thyroxin in the adults?
(1) Diabetes insipidus (2) Diabetes mellitus

(3) Myxoedema (4) Exopthalmic goitre (Grave's disease)

2. Cretinism is due to–
(1) Excess growth hormone (2) Absence of insulin
(3) Excess adrenaline (4) Hyposecretion of thyroid in childhood (Thyroxin)

3. Substance responsible for metamorphosis is–
(1) Estrogen (2) Thyroxine (3) Propandiol (4) Glucagon

4. High incidence of goitre is seen in the mountaineous region because of
(1) Deficiency of iodine in water (2) Deficiency of iodine in food
(3) Presence of antagonistic agents (4) (1) and (2) both

5. Which endocrine gland stores its secretion in the extracellular space before discharging it into the blood?
(1) Adrenal (2) Pancreas (3) Testis (4) Thyroid

6. Which of the following absorbs iodine from blood?
(1) Pituitary gland (2) Thyroid gland (3) Adrenal gland (4) Pancreas

7. Which is not a steroid hormone?
(1) Aldosterone (2) Androgen (3) Estrogen (4) Thyroxine

8. When the thyroid secretion is too much, the gland itself gets enlarged, conversely, if the secretion is too little, the gland gets
(1) Enlarged (2) Reduced (3) Disappeared (4) None of above

9. Why thyroxine is a hormone not an enzyme?
(1) It is secreted in small quantity (2) It is not a polypeptide
(3) It has no special effect (4) It is directly poured into blood

10. The other name for autoimmune thyroiditis is–
(1) Addison's disease (2) Simmond's disease
(3) Hashimoto's disease (4) Cushing's disease

11. Which of the following hormone governs the metabolism of carbohydrates?
(1) Corticoids (2) Glucagon (3) Insulin (4) Glucagon and insulin

SECTION - E # PARATHYROID GLAND

1. Tetany (prolonged muscle contraction) and osteoporosis are caused due to the malfunctioning of
(1) Cortisone (2) Estrogen (3) Insulin (4) Parathormone

2. Which of the following two hormones have antagonistic effects?
(1) Parathormone and calcitonin (2) FSH and LH
(3) Oestrogen and progesterone (4) ADH and melatonin

3. Hypokalaemia means –
(1) High level of potassium in blood (2) High level of sodium in blood
(3) Low level of potassium in blood (4) Low level of sodium in blood

4. Calcitonin secretion is stimulated by–

(1) Hypocalcemia (2) Hyperkalemia (3) Hyperglycemia (4) Hypercalcemia

5. Parathormone is secreted during–

(1) Increased blood calcium level (2) Decreased blood calcium level

(3) Increased blood sugar level (4) Decreased blood sugar level

SECTION - F # THYMUS GLAND

1. According to one of the theory of ageing, the decline and disappearance of which gland by late middleage is the primary cause of ageing?

(1) Parathyroid (2) Thyroid (3) Thymus (4) Posterior lobe of pituitary

2. Which of the following is related to the production of lymphocytes and antibodies?

(1) Thymus (2) Hypothalamus (3) Thyroid (4) Leydig cells

SECTION - G # ADRENAL GLAND

1. The adrenal cortical hormone that reduces inflammation and reduces healing response is–

(1) Cortisol (2) Deoxycorticosterone

(3) Corticosterone (4) Aldosterone

2. The mineralocorticoid hormone of the adrenal cortex which causes the Na^+ retention and K^+ excretion is

(1) Cortisol (2) Corticosterone (3) Progesterone (4) Aldosterone

3. If adrenal cortex function is impaired, it results in decreased concentration of one of the following in the blood?

(1) Ammonium salts (2) Sodium salts (3) Glucose (4) 2 and 3 both

4. A human female starts developing male characteristics like beard, degeneration of uterus and ovaries, enlargement of clitoris etc. It may be due to –

(1) Over production of estrogen and testosterone

(2) Damage to posterior pituitary

(3) Over production of adrenal androgens

(4) Surgical removal of mammary gland

5. Cushing's syndrome and myxoedema respectively are associated–

(1) Thyroid, adrenal (2) Adrenal, thyroid

(3) Parathyroid, thyroid (4) Adrenal, pituitary

6. Deficiency in the activity of adrenal cortex leads to–

(1) Addison's disease (2) Simmond's disease (3) Cohn's syndrome (4) Cushing's disease

7. Blood pressure is controlled by–

(1) Adrenal (2) Thyroid (3) Thymus (4) Corpus luteum

8. Which of the following is not under direct control of pituitary gland with respect to the regulation of its secretory function–

(1) Adrenal cortex (2) Adrenal medulla (3) Thyroid (4) Testis

9. Adrenal cortex secretes androgen, it is

(1) Testosterone (2) Androsterone (3) Progesterone (4) Aldosterone

10. The hormone responsible for the sodium metabolism is–
(1) Aldosterone (2) ACTH (3) Vasopressin (4) Parathyroid Hormone

11. Which of the following hormone is released in excess quantity during excitement?
(1) Cortisone (2) Serotonin (3) Adrenaline (4) Nor-adrenaline

12. When a normal man's heart is injected with physiological concentration of adrenaline it causes–
(1) Decreased in heart rate (2) Systolic arrest
(3) Sustained increased rate (4) First increase then normal heart rate

13. Life saving hormone is secreted by which gland?
(1) Adrenal gland (2) Hypothalamus gland (3) Pituitary gland (4) Thyroid gland

14. Which of the following hormones is a derivative of amino acid?
(1) Estrogen (2) Epinephrine (3) Progesterone (4) Prostaglandin

15. Conn's disease is caused by the over-secretion of –
(1) ADH (2) ACTH (3) Aldosterone (4) Oxytocin

16. Nor epinephrine is secreted from–
(1) Zona glomerulosa (2) Zona fasciculata (3) Zona reticularis (4) Medulla of adrenal

17. Gluconeogenesis is controlled by –
(1) Cortisol (2) Corticosterone (3) Thyroxine (4) All the above

18. Which one of the following hormone is anti-inflamatory?
(1) Secretin (2) Epinephrine (3) Glucoprotein (4) Glucocorticoid

SECTION - H # PANCREAS

1. An overdose of intravenous insulin may lead to the death of an individual it is due to –
(1) An excessive increase of blood glucose (2) An excessive decrease of blood glucose
(3) An inhibition of glucagon secretion (4) An over production of histamine

2. Which one of the following pair is the matching pair of the part and the hormone it secretes
(1) Thyroid – Epinephrin (2) Alpha cells of pancreas - *Glucagon*
(3) Anterior pituitary – *Adrenalin* (4) Stomach epithelium – *Secretin*

3. "*Islets of Langerhans*'' are found in–
(1) Pancreas (2) Pituitary (3) Stomach (4) Spleen

4. The hormone glucagon–
(1) Has the opposite effect as that of insulin (2) Is produced in the beta cells of pancreas
(3) Converts glucose into glycogen (4) Is used in the treatment of diabetes mellitus

5. A disease characterised by raised levels of blood glucose as well as increased fat and protein metabolism is
(1) Diabetes (2) Cancer (3) Ulcer (4) Enlargement of pancreas

6. The rise of blood sugar above the normal level is known as
(1) Hyperglycemia (2) Hypoglycemia (3) Glucosuria (4) Glycolysis

7. In case the islets of Langerhans stop functioning which hormone will be in short supply and what will be its effect?
(1) Insulin–Blood glucose level will rise (2) Adrenaline–Heart beat will increase
(3) Thyroxine–Growth will be retarded (4) Cortisol–Tetany will develop

8. Treatment with alloxan destroys–
(1) STH cells (2) β - cells of Islets of Langerhans
(3) Cell of Sertoli (4) Cells of Leydig

9. Somatostatin hormone is secreted by
(1) α - cells (2) β - cells (3) δ cells (4) All the above

10. Man A short, fat and stocky man with stupid look and protruding tongue is due to the hormonal deficiency of–
(1) Parathyroid (2) Thyroid (3) Adrenal (4) Pineal

11. Which one affects liver, muscle and adipose tissue?
(1) Androgen (2) Insulin (3) Progesterone (4) Glucagon

SECTION - I # HORMONE SECRETING OTHER ORGANS

1. Progesterone hormone is secreted by–
(1) Corpus luteum (2) Corpus callosum (3) Corpus uteri (4) Corpus albicans

2. Progesterone is–
(1) An enzyme for digesting proteins
(2) A hormone to initiate uterine contraction during child birth
(3) An amino acid which may cause Alkaptonuria
(4) A hormone concerned with retention and growth of pregnancy

3. Hormone responsible for the implantation of embryo in uterus and formation of placenta is–
(1) Adrenaline (2) Progesterone (3) Estradiol (4) FSH

4. All the hormone are proteins, peptides and amino acid derivatives except–
(1) Hormone of ovary (2) Thyroid hormone
(3) Parathyroid hormone (4) Pancreatic hormone

5. The hormone which brings about characteristic changes in the male at puberty is called–
(1) Testosterone (2) Estrogen (3) FSH (4) LH

6. Leydig's cells secrete–
(1) Estrogen (2) Progesterone (3) Testosterone (4) Aldosterone

7. Manifestation of masculinity pattern in females due to hormonal effects is known as–
(1) Masculinity (2) Virilism (3) Castration (4) Epitaxis

8. Development of mammary gland during pregnancy is induced by–
(1) Estradiol (Estrogen) (2) Progesterone (3) Relaxin (4) Estrin

9. When mammary glands of male develop similar to that of female, then this condition is known as–
(1) Gonochorism (2) Gynaecomastia (3) Feminism (4) Gynaecism

10. Pregnancy hormone is–
(1) Oestrogen (2) Androgen (3) Progesterone (4) Gestron

SECTION - J # MODE OF ACTION OF HORMONES

1. Action of the peptide hormone on a target cell is mediated by–
(1) A cytoplasmic receptor (2) Cyclic AMP
(3) ATP (4) Epinephrine

2. Receptors for protein hormones are located–
(1) In cytoplasm (2) On cell surface (3) In nucleus (4) On endoplasmic reticulum

3. According to the accepted concept of hormone action, if receptor molecules are removed from target organs–
(1) The target organ will continue to respond to the hormone without any difference
(2) The target organ will continue to respond to the hormone but will require higher concentration
(3) The target organ will not respond to the hormone
(4) The target organ will continue to respond to the hormone but in the opposite way

MISCELLANEOUS QUESTIONS

1. Hormone controlling Na^+ –K^+ ion concentration is–
(1) Aldosterone (2) Anti-diuretic hormone
(3) Progesterone (4) Pitocin

2. Hormones of adrenal cortex are synthesised from–
(1) Tyrosine (2) Tryptophan (3) Cholesterol (4) Glycoproteins

3. Hypoglycemic hormone is–
(1) Insulin (2) Glucagon (3) Thyroxine (4) ACTH

4. Oxytocin is released from–
(1) Hypothalamus (2) intermediate lobe
(3) Adenohypophysis (anterior lobe) (4) neurohypophysis

5. Parathormone controls –
(1) Calcium and phosphate metabolism (2) Na and K metabolism
(3) Fatty acid metabolism (4) protein metabolism

6. Nor epinephrine is secreted from–
(1) Medulla of adrenal (2) Zona fasciculata (3) Zona reticularis (4) Zona glomerulosa

7. Thymosine stimulates–
(1) Milk secretion (2) erythrocytes (3) T-lymphocytes (4) melanocytes

8. FSH is–
(1) Glycoprotein (2) phospholipid (3) glycolipid (4) metalloprotein

9. Myxoedema is due to–
(1) Decreased production of thyroxin (2) Increased production of thyroxin
(3) Excess GH (4) Decreased insulin

10. Hormone produced more in dark is–
(1) Thyroxine (2) Melatonin (3) Adrenaline (4) Insulin

11. Which is not involved in endocrine secretion?
(1) Leydig cell (2) Lutein cell
(3) Para-follicular cells of thyroid (4) Kupffer cells

12. Metamorphosis of Frog from tadpole to adult is controlled by–
(1) Adrenalin (2) thyroxin (3) secretin (4) lymph

13. The basal metabolic rate of the body is regulated by–
(1) Parathyroid (2) Thymus (3) Pituitary (4) Thyroid

14. Increase in blood pressure, heart beat and blood glucose level is due to secretion of?
(1) Thyroxine (2) Aldosterone (3) Adrenaline (4) Testosterone

15. Pheromones are–
(1) Produced by endocrine glands (2) mRNAs
(3) Chemicals used in animal communication (4) Protein

16. Goitre is a pathological condition associated with –
(1) Glucagon (2) Thyroxine (3) Progesterone (4) Testosterone

Exercise-2

1. Thyroid stimulating hormone (TSH), luteinizing hormone (LH) and oxytocin are all–
(1) Released from the pituitary gland
(2) Tropic hormones (act on other endocrine tissue)
(3) Steroid hormones
(4) Sex hormones

2. Which of the following would not result from the release of adrenaline (epinephrine)?
(1) Decreased blood flow to skin
(2) Increased oxygen consumption
(3) Increased conversion of glycogen to glucose
(4) Increased blood flow to intestine

3. The pancreas secretes insulin in response to–
(1) An increase in body activity (2) A hormone released by the pituitary gland
(3) Low blood glucose (4) High blood glucose

4. Which of the following compounds is involved in decreasing blood glucose levels?
(1) Insulin (2) Glycogen (3) Glucagon (4) parathyroid hormone

5. Oxytocin is released by the pituitary in response to–
(1) Foetal movements (2) Dislodging of mucus plug from cervix
(3) Uterine contraction (4) Secretions from placenta

6. Disorders caused by hypersecretion of concerned hormones are–
(1) Gigantism and exophthalmic goiter
(2) Mongolism and cretinism
(3) Cretinism diabetes and goiter
(4) Rickets, diabetes mellitus

7. If the hypophyseal stalk is damaged which of the following hormones will not be released by pituitary gland?
(1) Somatotropin (2) Oxytocin (3) Prolactin (4) ACTH

8. Steroid hormones transmit their information by–
(1) Stimulating the receptors present on cell membrane
(2) Entering into the cell and modifying cellular contents
(3) Entering into the cell and modifying nuclear organization
(4) The help of an intracellular second messenger

9. Prostaglandins are–
(1) Steroids (2) Fatty acids (3) Amino acids (4) Carbohydrate

10. Bombykol or gyplure is a–
(1) Drug (2) Hormone (3) Antibiotic (4) Pheromone

11. With increasing age, secretion of which of the following reduces to almost half?
(1)GTH (2) HGH (3) Estrogen (4) Melatonin

12. Anterior lobe of pituitary gland secretes–
A. FSH, GH and LH B. STH, GH and TSH
C. TSH, ADH and Prolactin D. ACTH, TSH and Oxytocin
Options :
(1) A and B are correct (2) B and D are correct
(3) A and C are correct (4) A, B and C are correct

13. 'Which of the following is responsible for excretion of dilute urine?
(1) More secretion of insulin (2) Less secretion of glucagon
(3) Less secretion of vasopressin (4) More secretion of aldosterone

14. Hypothyroidism causes–
(1) Cretinism (2) Myxodema (3) Both (1) and (2) (4) Exophthalmic goitre

15. The element present in thyroxine is obtained from–
(1) *Gelidium* (2) *Porphyra* *(3) Laminaria* (4) *Polysiphonia*

16. Increase in bleeding time and delay in blood coagulation is due to the deficiency of which hormone?
(1) *Thyroxine* (2) *Adrenaline* (3) *Noradrenaline* (4) *Parathormone*

17. The hyposecretion of which hormones leads to loss of sodium and water through urine and, low blood pressure?
(1) Thyrotropic hormones (2) Luteotrophic hormones
(3) Hormones of adrenal cortex (4) Hormones of adrenal medulla

18. Which one of the following is the hormone of adrenal medulla?

(1) ACTH (2) Prolactin
(3) Epinephrine (4) Corticosterone

19. Pineal gland of human brain secretes melatonin concerned with–
(1) Sleep (2) Anger
(3) Body temperature (4) Coloration of skin

20. Which one of the following four glands correctly matched with the accompanying description?
(1) Thyroid –Hyperactivity in young children causes cretinism
(2) Thymus –Starts undergoing atrophy after–puberty
(3) Pancreas –Delta cells of the Islets of Langerhans secrete a hormone which stimulates glycolysis in liver
(4) Parathyroid – Secretes parathormone which promotes flow of calcium ions from blood into bones during calcification

21. Hormones secreted by pancreas are–
(1) ACTH (2) Oxytocin
(3) LH and FSH (4) Insulin and Glucagon

22. Which one of the following pairs correctly matches a hormone with a disease resulting from its deficiency?
(1) Insulin - Diabetes insipidus
(2) Thyroxine - Tetany
(3) Parathyroid hormone - Diabetes mellitus
(4) Luteinzing hormone - Failure of ovulation

23. LH in males stimulates Leydig cells to release–
(1) Pitressin (2) Progesterone (3) Oxytocin (4) Testosterone

24. Which is not involved as second messenger in Ca^{2+} mediated hormone?
(1) IP3 (2) DG (Diacyl glycerol)
(3) c-AMP (4) Phospholipase

25. Which of the following is true for the effect of steroid hormone?
(1) Fast and Short term (2) Fast and long lasting
(3) Slow and Short term (4) Slow and long lasting

26. Match the items in Column I with Column II and choose the correct option –

Column I	**Column II**
A Calcitonin	1. Treatment of viral infections
B Gonadotropin	2 Treatment of rickets
C Erythropoietin	3. Enhancement of immune action
D Interferon	4. Formation of erythrocytes
E Interleukin	5. Treatment of infertility

(1) A = 3, B = 1, C = 4, D = 2, E = 5
(2) A = 3, B = 2, C = 1, D = 5, E = 4
(3) A = 2, B = 5, C = 4, D = 1, E = 3

(4) A = 2, B = 3, C = 4, D = 5, E = 1

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

(1) Parotid (2) Thyroid (3) Pancreas (4) Parathyroid

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

(1) Ribosome (2) DNA sequence (3) Transfer RNA (4) Messenger RNA

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

(1) Thyroxine (2) Calcitonin

(3) Parathormone (4) Both calcitonin and parathormone

30. In human adult females the oxytocin –

(1) Is secreted by anterior pituitary

(2) Stimulates growth of mammaryglands

(3) Stimulates pituitary to secrete vasopressin

(4) Causes strong uterine contaction during parturition

31. Steroid hormones work as –

(1) These enter into target cells, bind with specific receptor and activates specific genes to form protein

(2) These catalyse formation of c-AMP

(3) These bind to cell membrane

(4) These require second messenger

32. Spermatogenesis is promoted by–

(1) Oxytocin (2) Oestrogen (3) Testosterone (4) Progesterone

33. LH in human female–

a. Helps in milk secretion.

b. Called ovulation hormone.

c. Activates Leydig's cell to secrete androgen.

d Facilitates luteinization of granulosa cells of ovulated follicle. Answer codes:

Option :

(1) a and b are correct (2) b and d are correct

(3) a and c are correct (4) a , b and c are correct

34. Goitre can occur as a consequence of all of the following except–

(1) Grave's disease (2) Iodine deficiency

(3) Pituitary adenoma (4) Excessive intake of exogenous thyroxine

35. The hormone that increases the blood calcium level and decreases its excretion by kidney is:

(1) Insulin (2) Thyroxine (3) Calcitonin, (4) Parathormone

36. Obesity of face, hyperglycemia and virilism in females are characteristics of –

(1) Grave's disease (2) Conn's disease

(3) Cushing's syndrome (4) Addison's disease

37. Which of the following hormones is not steroid?

(1) Androgen (2) Vasopressin (3) Aldosterone (4) Progesterone

38. Which of the following hormones does not contain a polypeptide?
(1) Insulin (2) Oxytocin (3) Prostaglandin (4) Antidiuretic hormone

39. Signalling between cells usually results in the activation of Protein–
(1) Lipases (2) Protein Kinase (3) Proteases (4) Nucleases

40. Steroid hormones easily pass through the plasma membrane by simple diffusion because they –
(1) Are lipuid soluble (2) Are water soluble
(3) Enter through pores (4) Contain carbon and hydrogen

41. Estrogen and testosterone are steroid hormones and are most likely bind to–
(1) Cytoplasmic receptors (2) Membrane ions channels
(3) Enzyme-linked membrane receptors (4) G-protein linked membrane receptors

42. The chemical nature of hormones secreted by α and δ cells of pancreas is–
(1) Steroid (2) Glycolipid (3) Polypeptide (4) Glycoprotein

43. Parathormone influences calcium absorption in the small intestine by regulating the metabolism of–
(1) Vitamin (2) Vitamin D (3) Vitamin B_6 (4) Enterogastrone

44. Which hormone regulates sleep-wake cycle in man is–
(1) Oxytocin (2) Vasopressin (3) Thyroxine (4) Melatonin

45. Which one of the following pairs is incorrectly matched?
(1) Glucagon - Beta cells (Source) (2) Somatostatin -Delta cells (Source)
(3) Corpus luteum - Relaxin (Secretion) (4) Insulin - Diabetes mellitus (Disease)

46. Which of the following is not the function of insulin?
(1) Increases the permeability of cell membrane to glucose
(2) Increases the oxidation of glucose in the cells
(3) Initiates the conversion of glycogen to glucose
(4) Initiates the formation of hepatic glycogen from excess of glucose

47. Somatostatin is secreted by–
(1) Chief cells (2) Goblet cells (3) Brunner's gland (4) Islets of Langerhans

48. Somatostatin–
(1) Stimulates glucagon release while inhibits insulin release
(2) Stimulates release of insulin and glucagon
(3) Inhibits release of insulin and glucagon
(4) Inhibits glucagon release while stimulates insulin release

49. Thyrnosin hormone is secreted by–
(1) Thyroid gland (2) Thymus gland (3) Hypothalamus (4) Parathyroid gland

50. Select the correct matched pair–
(1) Pineal gland - does not influence menstrual cycle
(2) Corpus luteum- secretes oxytocin
(3) Interstitial cells - erythropoietic
(4) Cholecystokinin- stimulates contraction of gall bladder

51. Match the column I with column II and select the correct option–

List I	List II
A ANF	1. Regulates blood calcium levels
B MSH	2. Decrease blood pressure
C GIP	3. Pigmentation
D TCT	4. Inhibits gastric secretion

(1) A-4, B-1, C-2, D-3
(2) A-2, B-1, C-4, D-3
(3) A-4, B-1, C-3, D-2
(4) A-2, B-3, C-4, D-1

52. Diabetes insipidus is due to insufficient release of –
(1) Insulin (2) Glucagon (3) ADH (4) Thyroxine

53. Erythropoietin is secreted from –
(1) Kidney (2) Pancreas (3) Adrenal gland (4) Pituitary gland

54. Hyposecretion of thyroid druing pregnancy causes
(1) Goitre (2) Cretinism (3) Hypoglycemia (4) Diabetes mellitus

55. During summer season, which hormone concentration is maintained at high level?
(1) Insulin (2) Oxytocin (3) Corticoid (4) Vasopressin

56. Ca^{2+}regulation occurs with the help of–
(1) Insulin (2) Glucagon (3) Thyroxine (4) Parathormone

57. Acromegaly causes:
(1) Dwarfism (2) Extra growth in height
(3) Smaller hands, feet and face (4) Extra growth in hands, feet and lower jaw

58. Juvenile diabetes mellitus is due to–
(1) Loss of pancreatic beta cells (2) Resistance to insulin
(3) Malnutrition (4) Obesity

59. Which among the following hormones is not secreted by adenohypophysis?
(1) LH (2) hCG (3) FSH (4) ICSH

60. Match the source gland with its respective hormone as wellas the function–

	Source gland	**Hormone**	**Function**
(1)	Thyroid	Thyroxine	Regulates blood calcium level
(2)	Anterior pituitary	Oxytocin	Contraction of uterus muscles during child birth
(3)	Posterior pituitary	Vasopressin	Simulates reabsorption of water in the distal tubules in the nephron
(4)	Corpus luteum	Estrogen	Supports pregnancy

61. 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)?
(1) Insulin, glucagon (2) Thyroxine, insulin
(3) Somatostatin, oxytocin (4) Cortisol, testosterone

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

(1) Glucagon is secreted by β-cells of islets of Langerhans and stimulates glycogenolysis.

(2) Secretion of the thymosins is stimulated with ageing.

(3) In females, FSH first binds with specific receptors on ovarian cell membrane.

(4) FSH stimulates the secretion of estrogen and progesterone.

Exercise-3

PART - I : NEET / AIPMT QUESTION (PREVIOUS YEARS)

1. Hormone controlling metabolism is– **(CBSE-2000)**

(1) ACTH from pituitary gland (2) FSH from pituitary

(3) Thyroxine from thyroid (4) Adrenaline from adrenal medulla

2. Injection of glucagon will– **(CBSE-2001)**

(1) Cause hypoglycemia (2) Cause galactosemia

(3) Increase blood sugar (4) Cause goitre

3. Sertoli cells are regulated by the pituitary hormone known as **(CBSE-2006)**

(1) LH (2) FSH (3) GH (4) Prolactin

4. Which one of the following is not a second messenger in hormone action? **(CBSE-2006)**

(1) cAMP (2) cGMP (3) Calcium (4) Sodium

5. A steroid hormone which regulates glucose metabolism is **(CBSE-2006)**

(1) Cortisone (2) Cortisol (3) Corticosterone (4) 11-deoxycorticosterone

6. Which of the following is an accumulation and release centre of neurohormones? **(CBSE-2006)**

(1) Anterior pituitary lobe (2) Posterior pituitary lobe

(3) Intermediate lobe of the pituitary (4) Hypothalamus

7. Which hormone causes dilation of blood vessels, increased oxygen consumption and glycogenolysis? **(CBSE-2006)**

(1) Glucagon (2) ACTH (3) Insulin (4) Adrenaline

8. Which one of the following pair of organs includes only the endocrine glands? **(AIPMT-2008)**

(1) Thymus and testes (2) Adrenal and ovary

(3) Parathyroid and adrenal (4) Pancreas and parathyroid

9. A health disorder that results from the deficiency of thyroxine in adults and characterised by

(i) a low metabolic rate

(ii) increase in body weight and

(iii) tendency to retain water in tissues **(AIPMT-2009)**

(1) simple goitre (2) myxoedema

(3) cretinism (4) hypothyroidism

10. The letter T in T-lymphocyte refers to **(AIPMT-2009)**

(1) thalamus (2) tonsil

(3) thymus (4) thyroid

11. Injury to adrenal cortex is not likely to affect the secretion of which of the following? **(AIPMT Pre-2010)**

(1) Both Androstendione and Dehydroepiandroserone

(2) Adrenaline

(3) Cortisol

(4) Aldosterone

12. Which one of the following pair is incorrectly matched? **(AIPMT Pre-2010)**

(1) Somatostatin - Delta cells (source)

(2) Corpusluteum - Relaxin (secretion)

(3) Insulin - Diabetes mellitus (disease)

(4) Glucagon - Beta cells (source)

13. Select the correct matching of a hormone, its source and function. **(AIPMT Mains-2010)**

	Hormone	**Source**	**Function**
(1)	Prolactin	Posterior	Regulates growth of mammary glands and milk formation in females
(2)	Vasopressin	Posterior pituitary	Increase loss of water through urine
(3)	Norepinephrine	Adrenal medulla	Increases heart beat, rate of respiration and alertness
(4)	Glucagon	Beta-cells of Islets of langerhans	Stimulates glycogenolysis

14. Match the source gland with respective hormone as well as the function. **(AIPMT Pre-2011)**

	Source gland	**Source**	**Function**
(1)	Anterior pituitary	Oxytocin	Contraction of uterus muscles during child birth
(2)	Posterior pituitary	Vasopressin	Stimulates resorption of water in the distal tubules in the nephron
(3)	Corpus luteum	Estrogen	Supports pregnancy
(4)	Thyroid	Thyroxine	Regulates blood calcium level

15. Given below is an incomplete table about certain hormones, their source glands and one major effect of each on the body in humans. Identify the correct option for the three blanks A, B and C.

(AIPMT Pre-2011)

Gland	**Secretion**	**Effect on Body**
A	Estrogen	Maintenance of secondary sexual characters
Alpha cells of islets of Langerhans	B	Raises blood sugar level
Anterior pituitary	C	Over secretion leads to gigantism

Options :

	A	B	C
(1)	Ovary	Glucagon	Growth hormone
(2)	Placenta	Insulin	Vasopressin
(3)	Ovary	Insulin	Calcitonin
(4)	Placenta	Glucagon	Calcitonin

16. The 24 hour (diurnal) rhythm of our body such as the sleep-wake cycle is regulated by the hormone: **(AIPMT Mains-2011)**

(1) Calcitonin (2) prolactin (3) adrenaline (4) melatonin

17. What is correct to say about the hormone action in humans? **(AIPMT Pre-2012)**

(1) Glucagon is secreted by β -cells of lslets of Langerhans and stimulates glycogenolysis

(2) Secretion of thymosins is stimulated with aging

(3) In females FSH first binds with specific receptors on ovarian cell membrane

(4) FSH stimulates the secretion of estrogen and progesterone

18. 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) **(AIPMT Pre-2012)**

(1) Insulin, glucagon (2) Thyroxine, insulin

(3) Somatostain, oxytocin (4) Cortisol, testosterone

19. A person entering an empty room suddenly finds a snake right in front on opening the door. Which one of the following is likely to happen in his neuro-hormonal control system? **(AIPMT Pre-2012)**

(1) Sympathetic nervous system is activated releasing epinephrine and norepinephrine from adrenal medulla.

(2) Neurotransmitters diffuse rapidly across the cleft and transmit a nerve impulse.

(3) Hypothalamus activates the parasympathetic division of brain.

(4) Sympathetic nervous system is activated releasing epinephrine and norepinephrine from adrenal cortex.

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

(1) Calcitonin and thymosin - Thyroid hormones **(AIPMT Mains-2012)**

(2) Pepsin and prolactin - Two digestive enzymes secreted in stomach

(3) Troponin and myosin - Complex proteins in striated muscles

(4) Secretin and rhodopsin - Polypeptide hormones

21. A chemical signal that has both endocrine and neural roles is **(AIPMT-2015)**

(1) Calcitonin (2) Epinephrine (3) Cortisol (4) Melatonin

22. Which one of the following hormones is not involved in sugar metabolism? **(Re-AIPMT-2015)**

(1) Aldosterone (2) Insulin (3) Glucagon (4) Cortisone

23. Which one of the following hormones though synthesised elsewhere, but is stored and released by the master gland? **(Re-AIPMT-2015)**

(1) Luteinizing hormone (2) Prolactin

(3) Melanocyte stimulating hormone (4) Antidiuretic hormone

24. Which of the following pairs of hormones are **not** antagonistic (having opposite effects) to each other? **(NEET-1-2016)**

(1)	Relaxin	Inhibin
(2)	Parathormone	Calcitonin
(3)	Insulin	Glucagon
(4)	Aldosterone	Atrial Natriuretic Factor

25. The amino acid Tryptophan is the precursor for the synthesis of: **(NEET-1-2016)**

(1) Cortisol and Cortisone (2) Melatonin and Serotonin

(3) Thyroxine and Triiodothyronine (4) Estrogen and Progesterone

26. Which hormones do stimulate the production of pancreatic juice and bicarbonate? **(NEET-2-2016)**

(1) Insulin and glucagon (2) Angiotensin and epinephrine

(3) Gastrin and insulin (4) Cholecystokinin and secretin

27. Graves' disease is caused due to **(NEET-2-2016)**

(1) hypersecretion of adrenal gland (2) hyposecretion of thyroid gland

(3) hypersecretion of thyroid gland (4) hyposecretion of adrenal gland

28. Name a peptide hormone which acts mainly on hepatocytes, adipocytes and enhances cellular glucose uptake and utilization. **(NEET-2-2016)**

(1) Gastrin (2) Insulin (3) Glucagon (4) Secretin

29. Osteoporosis, an age related disease of skeletal system, may occur due to **(NEET-2-2016)**

(1) accumulation of uric acid leading to inflammation of joints

(2) immune disorder affecting neuromuscular junction leading to fatigue

(3) high concentration of Ca^{++} and Na^{+}

(4) decreased level of estrogen

30. The posterior pituitary gland is **not** a 'true' endocrine gland because **(NEET-2-2016)**

(1) it secretes enzymes

(2) it is provided with a duct

(3) it only stores and releases hormones

(4) it is under the regulation of hypothalamus

31. Several hormones like hCG, hPL, estrogen. Progesterone are produced by **(NEET-2-2016)**

(1) Pituitary (2) ovary (3) placenta (4) fallopian tube

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

(1) Growth Hormone becomes inactive in adults. **(NEET-2017)**

(2) Epiphyseal plates close after adolescence.

(3) Bones loose their sensitivity of Growth Hormone in adults.

(4) Muscle fibres do not grow in size after birth.

33. A temporary endocrine gland in the human body is: **(NEET-2017)**

(1) Pineal gland (2) Corpus cardiacum (3) Corpus luteum (4) Corpus allatum

34. GnRH, a hypothalamic hormone, needed in reproduction, acts on: **(NEET-2017)**

(1) anterior pituitary gland and stimulates secretion of LH and oxytocin.

(2) anterior pituitary gland and stimulates secretion of LH and FSH.

(3) Poserior pituitary gland and stimulates secretion of oxytocin and FSH.

(4) Poserior pituitary gland and stimulates secretion of LH and relaxin.

35._ Which of the following .hormones can play a significant role in osteoporosis? **(NEET-2018)**

(1) Aldosterone and Prolactin (2) Parathyroid hormone and Prolactin

(3) Estrogen and Parathyroid hormone (4) Progesterone and Aldosterone

36._ Which of the following is an amino acid derived hormone? **(NEET-2018)**

(1) Epinephrine (2) Estriol (3) Estradiol (4) Ecdysone

37. How does steroid hormone influence the cellular activities? **(NEET-1-2019)**

(1) Using aquaporin channels 'as second messenger.

(2) Changing the permeability of the cell membrane.

(3) Binding to DNA and forming a gene-hormone complex.

(4) Activating cyclic AMP located on the cell membrane

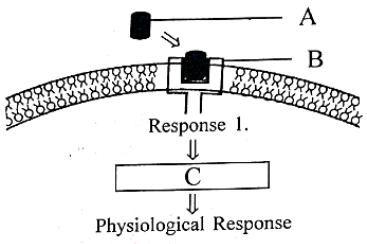
38. Match the followmg hormones with the respective disease: **(NEET-1-2019)**

(a) Insulin	(i) Addisons disease
(b) Thyroxin	(ii) Diabetes insipudus
(c) Corticoids	(iii) Acromegaly
(d) Growth Hormone	(iv) Goitre
	(v) Diabetes mellitus

Select the correct option.

	(a)	(b)	(c)	(d)
(1)	(ii)	(iv)	(i)	(iii)
(2)	(v)	(i)	(ii)	(iii)
(3)	(ii)	(iv)	(iii)	(i)
(4)	(v)	(iv)	(i)	(iii)

39. Identify A, B and C in the diagrammatic representation of the mechanism of hormone action. **(NEET-2-2019)**



Select the correct option from the following:

(1) A = Steroid Hormone; B = Hormone receptor Complex; C = Protein

(2) A = Protein Hormone; B = Receptor; C = Cyclic AMP
(3) A = Steroid Hormone; B = Receptor; C = Second Messenger
(4) A = Protein Hormone; B = Cyclic AMP; C = Hormone-receptor Complex

40. Artificial light, extended work-time and reduced sleep-time disrupt the activity of **(NEET-2-2019)**
(1) Thymus gland (2) Pineal gland
(3) Adrenal gland (4) Posterior pituitary gland

41. Which of the following conditions will stimulate parathyroid gland to release parathyroid hormone? **(NEET-2-2019)**
(1) Fall in active Vitamin D levels (2) Fall in blood Ca^{+2} levels
(3) Fall in bone Ca^{+2} levels (4) Rise in blood Ca^{+2} levels

PART - II : AIIMS QUESTION (PREVIOUS YEARS)

1. A person passes much urine and drinks much water but his blood glucose level is normal. This condition may be the result of **(AIIMS-2003)**
(1) a reduction in insulin secretion from pancreas
(2) a reduction in vasopressin secretion from posterior pituitary
(3) a fall in the glucose concentration in urine
(4) an increase in secretion of glucagon.

2. The source of somatostatin is same as that of **(AIIMS-2003)**
(1) thyroxine and calcitonin (2) insulin and glucagon
(3) somatotropin and prolactin (4) vasopresin and oxytocin

3. Which one of the following four secretions is correctly matched with its source, target and nature of action? **(AIIMS-2005)**

	Secretion	**Source**	**Target**	**Action**
(1)	Gastrin	Stomach lining	Oxyntic cell	Production of HCl
(2)	Inhibin	Sertoli cells	Hypothalamus	Inhibition of secretion of gonadotropin releasing hormone
(3)	Enterokinase	Duodenum	Gall bladder	Release of bile juice
(4)	Atrial Natriuretic factor (ANF)	Sinoatrial node (SAN) M-cells of Atria	Juxtaglomerular apparatus (JGA)	Inhibition of release of renin

4. Which one of the following four glands is correctly matched with the accompanying description? **(AIIMS-2005)**

(1) Thyroid - hyperactivity in young children causes cretinism
(2) Thymus - starts undergoing atrophy after puberty
(3) Parathyroid - secretes parathormone which promotes movement of calcium ions from blood into bones during calcification
(4) Pancreas - Delta cells of the Islets of Langerhans secrete a hormone which stimulates glycolysis in liver.

5. Which of the following match is correct? **(AIIMS-2007)**

Hormone	**Effect**
(1) Oxytocin	Milk ejection hormone
(2) Glucagon	Decreases blood sugar level
(3) Adrenaline	Decreases heart rate
(4) Thyroxine	Decreases BMR

6. Which of the following statements regarding glucagon is false? **(AIIMS-2007)**

(1) It is secreted by α-cells of Langerhans

(2) It acts antagonistically to insulin

(3) It decreases blood sugar level

(4) The gland responsible for its secretion is heterocrine gland

7. What is the effect of GnRH produced by hypothalamus? **(AIIMS-2010)**

(1) stimulates the synthesis and secretion of androgens

(2) stimulates secretion of milk in mammary glands

(3) stimulates foetal ejection reflex

(4) stimulates synthesis of carbohydrates from non-carbohydrates in liver

8. Which gland is concerned with salt equilibrium in body? **(AIIMS-2012)**

(1) Anterior pituitary (2) Pancreas (3) Adrenal (4) Thyroid

9. Which endocrine gland is called 'the Throne of immunity' **(AIIMS-2016)**

(1) Spleen (2) Thymus (3) Pineal (4) Adrenal medulla

10. The 'amino acid derivative' among the following hormone is **(AIIMS-2017)**

(1) insulin (2) testosterone (3) oestradiol (4) epinephrine

11. Adrenocorticoids are released from – **(AIIMS-I-2018)**

(1) Adrenal cortex (2) Thyroid gland (3) Adrenal medulla (4) Gonads

12. Hormone secreted by α-cells of Pancreas? **(AIIMS-II-2018)**

(1) Insulin (2) Glucagon (3) Somatocrinin (4) Somatostatin

13. Which of the following hormones coordinate with each other to maintain ideal blood Ca level? **(AIIMS-II-2018)**

(1) Thyrocalcitonin and glucagon (2) Parathyroid hormone and cortisol

(3) Thyrocalcitonin and Thyroxin (4) Thyrocalcitonin and Parathyroid hormone

14. Type-1 diabetes is - **(AIIMS-III-2018)**

(1) Insulin independent (2) Insulin dependent

(3) Caused by UV-radiation (4) Infectious

Answers

EXERCISE - 1

SECTION - A

1.	(2)	**2.**	(4)	**3.**	(3)

SECTION - B

1.	(1)	**2.**	(1)	**3.**	(3)	**4.**	(1)	**5.**	(2)	**6.**	(1)	**7.**	(4)
8.	(2)	**9.**	(4)	**10.**	(1)	**11.**	(3)	**12.**	(2)	**13.**	(3)	**14.**	(1)
15.	(3)	**16.**	(3)	**17.**	(1)	**18.**	(1)	**19.**	(4)	**20.**	(4)	**21.**	(2)
22.	(3)	**23.**	(4)	**24.**	(2)	**25.**	(4)	**26.**	(3)	**27.**	(2)	**28.**	(1)
29.	(1)	**30.**	(2)	**31.**	(4)	**32.**	(2)	**33.**	(4)	**34.**	(2)	**35.**	(3)
36.	(1)	**37.**	(1)	**38.**	(1)	**39.**	(4)	**40.**	(1)	**41.**	(3)		

SECTION - C

1.	(1)	**2.**	(3)	**3.**	(2)	**4.**	(1)

SECTION - D

1.	(3)	**2.**	(4)	**3.**	(2)	**4.**	(4)	**5.**	(4)	**6.**	(2)	**7.**	(4)
8.	(1)	**9.**	(4)	**10.**	(3)	**11.**	(4)						

SECTION - E

1.	(4)	**2.**	(1)	**3.**	(3)	**4.**	(4)	**5.**	(2)

SECTION - F

1.	(3)	**2.**	(1)

SECTION - G

1.	(1)	**2.**	(4)	**3.**	(4)	**4.**	(3)	**5.**	(2)	**6.**	(1)	**7.**	(1)
8.	(2)	**9.**	(2)	**10.**	(1)	**11.**	(3)	**12.**	(4)	**13.**	(1)	**14.**	(2)
15.	(3)	**16.**	(4)	**17.**	(4)	**18.**	(4)						

SECTION - H

1.	(2)	**2.**	(2)	**3.**	(1)	**4.**	(1)	**5.**	(1)	**6.**	(1)	**7.**	(1)
8.	(2)	**9.**	(3)	**10.**	(2)	**11.**	(2)						

SECTION - I

1.	(1)	**2.**	(4)	**3.**	(2)	**4.**	(1)	**5.**	(1)	**6.**	(3)	**7.**	(2)
8.	(2)	**9.**	(2)	**10.**	(3)								

SECTION - J

1.	(2)	**2.**	(2)	**3.**	(3)

MISCELLANEOUS QUESTIONS

1.	(1)	**2.**	(3)	**3.**	(1)	**4.**	(4)	**5.**	(1)	**6.**	(1)	**7.**	(3)
8.	(1)	**9.**	(1)	**10.**	(2)	**11.**	(4)	**12.**	(2)	**13.**	(4)	**14.**	(3)
15.	(3)	**16.**	(2)										

EXERCISE - 2

PART- I

1.	(1)	**2.**	(4)	**3.**	(4)	**4.**	(1)	**5.**	(3)	**6.**	(1)	**7.**	(2)
8.	(3)	**9.**	(2)	**10.**	(4)	**11.**	(2)	**12.**	(1)	**13.**	(3)	**14.**	(3)
15.	(3)	**16.**	(4)	**17.**	(3)	**18.**	(3)	**19.**	(4)	**20.**	(2)	**21.**	(4)
22.	(4)	**23.**	(4)	**24.**	(4)	**25.**	(4)	**26.**	(3)	**27.**	(4)	**28.**	(2)
29.	(3)	**30.**	(4)	**31.**	(1)	**32.**	(3)	**33.**	(2)	**34.**	(4)	**35.**	(4)
36.	(3)	**37.**	(2)	**38.**	(3)	**39.**	(2)	**40.**	(1)	**41.**	(1)	**42.**	(3)
43.	(2)	**44.**	(4)	**45.**	(1)	**46.**	(3)	**47.**	(4)	**48.**	(3)	**49.**	(2)
50.	(4)	**51.**	(4)	**52.**	(3)	**53.**	(1)	**54.**	(1)	**55.**	(4)	**56.**	(4)
57.	(4)	**58.**	(1)	**59.**	(2)	**60.**	(3)	**61.**	(4)	**62.**	(3)		

EXERCISE - 3

PART- I

1.	(3)	**2.**	(3)	**3.**	(2)	**4.**	(4)	**5.**	(2)	**6.**	(2)	**7.**	(4)
8.	(3)	**9.**	(2)	**10.**	(3)	**11.**	(2)	**12.**	(4)	**13.**	(3)	**14.**	(2)
15.	(1)	**16.**	(4)	**17.**	(3)	**18.**	(4)	**19.**	(1)	**20.**	(3)	**21.**	(2)
22.	(1)	**23.**	(4)	**24.**	(1)	**25.**	(2)	**26.**	(4)	**27.**	(3)	**28.**	(2)
29.	(4)	**30.**	(3)	**31.**	(3)	**32.**	(2)	**33.**	(3)	**34.**	(2)	**35.**	(3)
36.	(1)	**37.**	(3)	**38.**	(4)	**39.**	(2)	**40.**	(2)	**41.**	(2)		

PART- II

1.	(2)	**2.**	(2)	**3.**	(4)	**4.**	(2)	**5.**	(1)	**6.**	(3)	**7.**	(1)
8.	(3)	**9.**	(2)	**10.**	(4)	**11.**	(1)	**12.**	(2)	**13.**	(4)	**14.**	(2)

Self Practice Paper (SPP)

1. Hormones differ form enzymes in being
(1) Found in plants only (2) Found in animals only
(3) Used up in metabolism (4) Not used in metabolism

2. Hormones are produced by
(1) Exocrine glands (2) Endocrine gland (3) Holocrine glands (4) Apocrine glands

3. An organ, where a hormone shows its effect is called
(1) Effector (2) Target (3) Initiator (4) Terminator

4. Thyroid is
(1) A bone in thorax
(2) A waste material produced in intestine
(3) An endocrine gland located at the base of the neck
(4) An endocrine galnd located near the kindneys

5. Hormone that promotes cell division, protenin syntehesis and bone growth is
(1) ADH (2) ACTH (3) PTH (4) GH

6. Which one is an emergency gland?
(1) Testis (2) Adrenal (3) Thymus (4) Pituitary

7. Hormone produced in allergic reactions is
(1) Glucocorticoid (2) Mineralocorticioid (3) Norepinephrine (4) Epinephrine

8. The gland, which is exocrine and endocrine is
(1) Adrenal (2) Pituitary (3) Pancreas (4) Liver

9. Parathormone induces
(1) Increase in blood sugar (2) Increase in serum calcium
(3) Decrease in serum calcium (4) Decrease in blood sugar lavel

10. Corpus luteum produces
(1) Progesterone (2) Cortisol (3) Oestradiol (4) Testosterone

11. Progesterone is a / an
(1) Enzyme for digesting proteins
(2) Hormone to initiate uterine contraction
(3) Amino acid which may be cause of alkaptonuria
(4) Hormone concerned with retention and growth of pregnancy

12. Hormone connected with increased rate of glycogenolysis, blood pressure and heart beat is
(1) Insulin (2) Glucagon (3) Adrenaline (4) FSH

13. The gonadotropic hormone is secreted by
(1) Posterior part of thyroid (2) Adrenal cortex
(3) Adenohypophysis of pituitary (4) Interstitial cells of testes

14. Oxytocin controls

(1) Growth (2) Lactation (3) Child birth (4) Both (2) and (3)

15. Gigantism and acromegaly are two defects produced due to improper functioning of
(1) Thyroid (2) Pituitary
(3) Thyroid and pituitary (4) Thyroid, pituitary and thymus

16. Injury to adrenal cortex is not likely to affect the secretion of which of the following?
(1) Both Androstendione and Dehydroepiandroserone
(2) Adrenaline
(3) Cortisol
(4) Aldosterone

17. Hormone controlling contractions during parturition is
(1) Luteinising hormone (2) Oestrogen (3) Progesterone (4) Oxytocin

18. Brain sand occurs in
(1) Thymus (2) Pineal (3) Thyroid (4) Pituitary

19. Undersecretion of cortisol (corticoids) prouduces a disease known as
(1) Addison's disease (2) Haemophilia (3) Anaemia (4) Mental disease

20. Deficiency of the adrenal cortex activity leads to
(1) Cushing's disease (2) Conn's syndrome (3) Addison's disease (4) Simmond's disease

21. Which hormone stimulates the gastric glands to release the gastric secretion?
(1) Enterogastrone (2) Gastrin (3) Pancreozymin (4) Cholecystokinin

22. Secretion of gastic juice is stopped by?
(1) Gastrin (2) Secretin (3) Enterogastrone (4) Cholecystokinin

23. What will happen if the thyroid is removed from a tadpole?
(1) The tadpole will grow into a dwarf frog (2) The larva will produce giant frog
(3) It will continue indefinitely in larval stage (4) The larva will die

24. The releasing hormones are produced by
(1) Testes (2) Pancreas (3) Pituitary (4) Hypothalamus

25. Islets of langerhans are present in
(1) Brain (2) Stomach (3) Ovary (4) Pancreas

26. If both the ovaries are removed from a female rat, hormone will decrease in case of
(1) Oxytocin (2) Prolactin
(3) Oestrogen (4) Gonadotropin releasing factor

27. Thyroid deficiency in infant leads to
(1) Hypothyroidism (2) Myxoedema (3) Cretinism (4) Thyrotoxicosis

28. Name the hormone secreted by adrenal cortex, which controls water and salt concentration in urine
(1) Adrenaline (2) Aldosterone (3) Norepinephrine (4) Corticosterone

29. Thyrotropic releasing factor (TRF) is secreted by
(1) Hypothalamus (2) Adenohypophysis (3) Pars intermedia (4) Neurohypophysis

30. Gonadotropic hormones are

(1) Testosterone and androsterone (2) Oestrogen and progesterone

(3) LH and FSH (4) Prolactin and luteotropin

31. A woman may develop beard and moustaches due to

(1) Hyper secretion of adrenal cortex (2) Hyper secretion of thyroxine

(3) Hypo secretion of adrenaline (4) Hypo secretion of thyroxine

32. Hormones thyroxine, adrenaline Pigment melanin are formed from

(1) Glycine (2) Tryptophan (3) Tyrosine (4) Proline

33. The hormone, which regulates the growth and metamorphosis in frog is

(1) Adrenaline (2) Insulin (3) Thyroxine (4) Cortisol

34. While dwarfs and cretins are somewhat of the same height, the main difference is that, the

(1) Dwarfs have normal intelligence, while cretins do not

(2) Cretins are mentally more developed

(3) Head of cretins are especially large

(4) Dwarfs have elongated chin

35. Pars nervosa is a part of

(1) Brain (2) Spinal cord (3) Pituitary gland (4) Pineal gland

36. Integration system in the body is

(1) Nervous system (2) Endocrine system

(3) Circulatory system (4) Nervous and endocrine system

37. Depict the correct site of hormone.

(1) α–glucagon, β–insulin, δ–somatostatin (2) α–insulin, β–glucagon, δ–somatostatin

(3) δ – insulin, α–somatostatin, β–glucagon (4) α–somatostatin, β–insulin, δ–glucagon

38. Insulin receptors are

(1) Extrinsic protein (2) Intrinsic protein (3) G – protein (4) Trimeric protein

39. RAAS secretes which of the following hormone?

(1) Mineralocorticoids (2) Glucocorticoids (3) Both (1) and (2) (4) Thyroxine

40. What is true about neurohypophysis?

(1) Stores hormones produced by adenohypophysis

(2) Functionless in humane

(3) Stores and releases neurohormones secreted by hypothalamus

(4) Secretes its own hormone

41. Feeling the tremore of an earthquake, a scared resident of seventh floor of a multistoreyed building starts climbing down the stairs rapidly. Which hormone initiated this action?

(1) Thyroxine (2) Adrenaline (3) Glucagon (4) Gastrin

42. Sella turcica is

(1) A band connecting cerebral hemispheares (2) Foramen of skull

(3) Skull depression for lodging pituitary (4) lodging of heart

43. Which one of the following is an example of negative feedback loop in humans?

(1) Constriction of skin blood vessels and contraction of skeletal muscles when it is too cold

(2) Secretion of tears after falling of sand particles into the eye

(3) Salivation of mouth at the sight of delicious food

(4) Secretion of sweat glands and constriction of skin blood vessels when it is too hot

44. Which pair of actions describes the effect of the sympathetic division of the ANS on the pupil of the eye and the gastrointestinal tract?

(1) Dilates/ inhibits (2) Dilates/ stimulates

(3) Constricts / inhibits (4) Constricts / stimulates

45. Stimulation of the mother's nipples by a nursing baby initiates sensory impulses which pass into the central nervous system and eventullay reach the hypothalamus. These impulses result in

(1) Synthesis and release of prolactiin from the posterior pituitary

(2) Release of lactogenic hormone from the anterior pituitary

(3) Release of oxytocin from the posterior pituitary

(4) Release of prolactin - inhibiting factor

SPP Answers

1.	(3)	**2.**	(2)	**3.**	(2)	**4.**	(3)	**5.**	(4)	**6.**	(2)	**7.**	(1)
8.	(3)	**9.**	(2)	**10.**	(1)	**11.**	(4)	**12.**	(3)	**13.**	(3)	**14.**	(4)
15.	(2)	**16.**	(2)	**17.**	(4)	**18.**	(2)	**19.**	(1)	**20.**	(3)	**21.**	(2)
22.	(3)	**23.**	(3)	**24.**	(4)	**25.**	(4)	**26.**	(3)	**27.**	(3)	**28.**	(2)
29.	(1)	**30.**	(3)	**31.**	(1)	**32.**	(3)	**33.**	(3)	**34.**	(1)	**35.**	(3)
36.	(4)	**37.**	(1)	**38.**	(1)	**39.**	(1)	**40.**	(3)	**41.**	(2)	**42.**	(3)
43.	(1)	**44.**	(1)	**45.**	(3)								