1) The hypothalamus: a) Secretes only releasing factors from its median eminence. b) Has no control on the suprarenal (adrenal) medulla. c) Releases the trophic hormones that control the gonadal functions. d) Controls the neurohypophysis through a direct nervous connection.	**D**
2) Oxytocin: a) Is released mainly from the supraoptic nucleus of the hypothalamus. b) Causes uterine contractions during normal pregnancy. c) Stimulates milk secretion by the acini of the mammary glands. d) Secretion during lactation results from a neuro-endocrinal reflex	D
3) **Oxytocin**: a) Is released from the anterior pituitary. b) Deficiency leads to polyuria and polydipsia. c) Receptors are upregulated by progesterone. d) Stimulates uterine contraction during labor.	D
4) The hypothalamo-hypophyseal portal circulation controls the: a. thyroid. b. pancreas. c. parathyroids. d. anterior pituitary. e. posterior pituitar	**D**
5) The volume of urine is markedly increased (may reach 25 liters/day) in: a. gigantism. b. acromegaly. c. Cushing's disease. d. diabetes mellitus. e. diabetes insipidus.	E

6) A decrease of 5% to 10% in total circulating blood volume increases: a. ADH. b. Oxytocin. c. FSH. d. LH. e. ACTH. A	A
7) A hormone secreted by hypothalamus is: a. Growth hormone. b. Prolactin hormone. c. Luteinizing hormone (LH). d. Thyrotropin releasing hormone (TRH). e. Follicle stimulating hormone (FSH).	**D**
8) Rise of plasma osmolality increases the following hormone: a) ADH. b) Oxytocin. c) FSH. d) LH. e) ACTH.	A
9) Which of the following hormones causes contractions of the uterus? a. Growth hormone. b. Oxytocin hormone. c. Prolactin hormone. d. Luteinizing hormone (LH). e. Follicle stimulating hormone (FSH).	B
10) Which one of the following hormones is secreted from the supraoptic nucleus of the hypothalamus and stored in the posterior pituitary gland? a) Antidiuretic hormone. b) Corticotrophin releasing hormone. c) Gonadotropin releasing hormone. d) oxytocin. e) Thyrotropin releasing hormone.	A

11) The following hypothalamic hormone reaches the pituitary gland by hypothalamic hypophyseal portal circulation a) Gonadotropin releasing hormone. b) Antidiuretic hormone. c) Oxytocin. d) Vasopressin. e) Pitocin.	**A**
12) Which of the following is correct as regard ADH: a) Reduces the permeability of renal tubules to water b) Its secretion is not affected by changes in plasma osmolality less than 10% c) Causes the osmolality of plasma to rise d) Its secretion increases when plasma volume falls e) Is secreted by the anterior pituitary gland	D
13) **Oxytocin hormone**: a) Has powerful pressor effect on the uterus during pregnancy. b) Has powerful antidiuretic effect. c) Its deficiency leads to diabetes insipidus. d) Is released by anterior pituitary. e) Non of the above.	E
14) The effect of antidiuretic hormone on the kidney is due to: a) Increased excretion of water. b) Increased excretion of Nat. c) Increased reabsorption of water. d) Increased excretion of phosphate. e) Increased reabsorption of K*.	C
15) One of the following hypophyseal hormones controls thyroid hormonesecretion: a) TSH b) ACTH c) FSH d) LH e) MSH	A

16) Oxytocin hormone: a) Has powerful pressor effect on the uterus at the end of pregnancy b) Has powerful antidiuretic effect C) Its deficiency leads to diabetes insipidus d) Is released by anterior pituitary e) Secreted mainly from supra optic nuclei of the hypothalamus	A
17) One of the following hormones reaches posterior pituitary gland byhypothalamic hypophyseal tract: a) Gonadotropin releasing hormone b) Thyrotropin releasing hormone C) Corticotrophin releasing hormone D) Oxytocin E) Somatostatin	D
18) The effect of antidiuretic hormone on the kidney is due to: a. Increased excretion of water. b. Increased the permeability of the distal nephron to water. c. Increased excretion of K+. d. Increased excretion of Na+. e. Increased the diameter of the renal artery.	**B**
19) Deficient secretion of ADH causes: a. Diabetes mellitus. b. Pituitary diabetes. c. Adrenal diabetes. d. Nephrogenic diabetes insipidus e. Neurogenic diabetes insipidus.	E
20) Which of the following hormones causes transport of the sperms into the uterus? a) Growth hormone b) Oxytocin hormone c) Prolactin hormone d) Luteinizing hormone (LH) e) Follicle stimulating hormone (FSH)	B

21) The hypothalamus doesn't produce release inhibiting hormone for one of the following anterior pituitary hormones: a) Growth hormone b) Gonadotropin c) Prolactin d) Melanotropin e) insulin	B
22) Which of the following is the basic function of Oxytocin ? a) Stimulate contraction of smooth muscle during birth and breast feeding b) Stimulate restriction of blood flow to the brain during sleep c) Inhibit the production of sweat during extreme temperatures d) Inhibit the production of saliva e) Stimulates milk production	**A**
23) Which of the following hormones is the main one involved in the milk let□down reflex? A) Estrogens B) Follicle Stimulating hormone (FSH) C) Oxytocin D) Progesterone E) Prolactin	C
24) Oxytocin is primarily used in which one of the Following situations A) Control antipartum hemorrhage B) Decreasing breast milk production C) Increasing sperm count D) Inducing labor contraction E) Treating hypotension.	**D**
25) The hypothalamus secretes the following hormones, except: a) Gonadotropin releasing hormone. b) Thyrotropin releasing hormone. c) Corticotrophin releasing hormone. d) Gonadotropin release-inhibiting hormone. e) Somatotropin release-inhibiting hormone.	D

26) The general features of hormones include the following except: a. Specific chemical substance b. Secreted by ductless glands, c. Secreted in very small amounts (catalytic) d. Transported by the blood stream e. Have non-specific receptors	E
27) The hypothalamo-hypophyseal tract controls the: a. Thyroid b. Pancreas c. Parathyroids d. Anterior pituitary e. Posterior pituitary	E
28) The hypothalamus affects the release of ADH in response to all the Following stimuli, except: a) Dehydration. b) Severe hemorrhage. c) Decreased blood osmolarity. d) Pain, anxiety, or surgical stress. e) Nicotine	C
29) Inability of the kidney to respond to ADH causes: a) Diabetes mellitus. b) Adrenal diabetes. c) Pituitary diabetes. d) Neurogenic diabetes insipidus. e) Nephrogenic diabetes insipidus	E
30) Oxytocin hormone: a) Plays an important role in breast development. b) Stimulates the formation of milk acini. c) Stimulates growth of duct system. d) Activates milk let down. e) Increase pigmentation of the areola.	D

31) Regarding oxytocin hormone, which of the following is incorrect? a) Stimulates milk secretion. b) Is a polypeptide hormone released by the paraventricular nuclei of the hypothalamus. c) Has a powerful contracting action on the uterus. d) Transports sperms into the uterus during intercourse. e) Activates milk let down.	A
32) **One of the following hormones is secreted from the paraventricular nucleus of the hypothalamus and stored in the posterior pituitary gland**: a) Gonadotropin releasing hormone. b) Oxytocin. c) Thyrotropin releasing hormone. d) Corticotrophin releasing hormone. e) Somatotropin release-inhibiting hormone	B
33) Release of which of the following hormones is an example of neuroendocrine secretion? a. Growth hormone b. Cortisol c. Oxytocin d. Prolactin e. Adrenocorticotropic hormone	C
34) A 30-year-old woman is breast-feeding her infant. During suckling, which of the following hormonal responses is expected? a. Decreased secretion of neurophysin. b. Increased plasma levels of both oxytocin and ADH c. Increased secretion of oxytocin from the paraventricular nuclei d. Increased secretion of antidiuretic hormone (ADH) from the supraoptic nuclei e. Increased secretion of antidiuretic hormone (ADH) from the paraventricular nuclei	C
35) Oxytocin: a- has powerful pressor & antidiuretic effect. b- induces myometrial contraction during pregnancy. c- requires the presence of progesterone to induce uterine contraction d- its deficiency leads to polyurea & polydipsia. e- is released by anterior pituitary.	B

36) A large dose of ADH causes: a- generalized V.D in the body. b- a marked increase of the BMR. c- an increased ECF volume. d- an excessive sensation of thirst. e- excretion of a large volume of urine having a low specific gravity	C
37) Diabetes insipidus is characterized by all the following except: a- severe polyuria which may reach 20 litres/day. b- colorless urine with a very low specific gravity and almost a neutral PH. c- loss of water-soluble vitamins in the urine. d- an increase in the amount of water intake due to excessive thirst sensation. e- a decrease in the BMR	E
38) Which of the following statements about antidiuretic hormone is true? a- it is synthesized in the posterior pituitary gland. b- it increases salt & water reabsorption in the collecting tubules and ducts. c- it stimulates thirst. d- it has opposite effects on urine & plasma osmolarity	D
39) A 28-year-old man who is receiving lithium treatment for bipolar disorder becomes polyuric. His urine osmolarity is 90 mOsm/L. it remains at that level when he is given a nasal spray of dDAVP. Which diagnosis is correct? a- primary polydipsia. b- central diabetes insipidus. c- nephrogenic diabetes insipidus. d- water deprivation. e- SIADH.	C
40) Anti diuretic hormone regulates: a) Acid base balance during acidosis. b) Blood glucose level during starvation. c) Blood pressure in the event of hemorrhage. d) Sodium plasma level. e) Hemoglobin content in anemic patient.	C

41) Anti-diuretic hormone: a) Helps water reabsorption from proximal convoluted tubules. b) Is released in response to decreased plasma osmolarity. c) Is released in response to increased arterial blood pressure. d) Helps Na+ reabsorption from distal convoluted tubule. e) Causes vasoconstriction of blood vessels.	E
42) Oxytocin: a) Inhibits uterine contraction. b) Helps milk formation. c) Is inhibited by suckling. d) Helps involution of the uterus after labor. e) Is secreted by anterior pituitary.	D

1) The hypothalamo-hypophyseal portal circulation controls the: a. thyroid. b. pancreas. c. parathyroids. d. anterior pituitary. e. posterior pituitary.	**D**
2) A hormone secreted by hypothalamus is: a. Growth hormone. b. Prolactin hormone. c. Luteinizing hormone (LH). d. Thyrotropin releasing hormone (TRH). e. Follicle stimulating hormone (FSH).	D
3) The following hypothalamic hormone reaches the pituitary gland by hypothalamic hypophyseal portal circulation a) Gonadotropin releasing hormone. b) Antidiuretic hormone. c) Oxytocin. d) Vasopressin. e) Pitocin.	**A**
4) Which one of the following hormone is Protein in nature? A. Growth hormone B. Glucocorticoids C. Mineralocorticoids D. Sex hormones E. D3	A
5) One of the following hypophseal hormones controls the adrenal cortexsecretion: a) TSH b) ACTH c) FSH d) LH e) MSH	B

6) One of the following hypophyseal hormones controls thyroid hormonesecretion: a) TSH b) ACTH c) FSH d) LH e) MS	A
7) The hypothalamus doesn't produce release inhibiting hormone for one of the anterior pituitary hormones: a) Growth hormone b) Gonadotropin c) Prolactin d) Melanotropin e) insulin	B
8) Effect of growth hormones on bulk soft tissue except: a) Thyroid b) Pituitary c) Breast d) Viscera e) skin	A
9) One of Anterior pituitary hormones is: a) Growth hormone b) Estrogen c) Prolactin d) ADH e) Oxytocin	A
10) inhibitors for growth hormone secretion include: a) Obesity b) starvation c) Hypoglycemia d) increase amino acids e) sleep	A

11) About Mechanism of growth hormone action: a) Growth hormone has direct anabolic effects. b) Its growth promoting actions are mediated by somatomedins. c) Somatomedins are formed in the kidney d) Somatomedins are structurally similar to TSH e) High Somatomedins induce GH secretion	B
12) The secretion of the growth hormone is: a) Increased in stress conditions and after an infusion of arginine. b) More in the morning than in the evening while going to sleep. c) Inhibited by hypoglycemia and stimulated by hyperglycemia. d) Stimulated by increased secretion of somatostatin from the hypothalamus.	A
13) The adenohypophyseal basophil cells: a) Belong to the chromophobe cells. b) Constitute about 35% of the total cells in the gland. c) Secrete glycoprotein and polypeptide hormones. d) Secrete mainly somatotropin and prolactin.	**C**
14) Growth hormone: a) Secretion is reduced during sleep. b) Levels in blood are higher in adults than children. c) Is a steroid hormone. d) Stimulates the liver to release somatomedins.	D
15) Somatostatin hormone is inhibitory for: a. Growth hormone. b. Prolactin hormone. c. Luteinizing hormone (LH). d. Thyrotropin releasing hormone (TRH). e. Follicle stimulating hormone (FSH)	A

16) About Mechanism of growth hormone action: a) High Somatomedins induce GH secretions b) Somatomedins are structurally similar to TSH. c) Somatomedins are formed in the kidney. d) Growth hormone has direct anabolic effects. e) Its growth promoting actions are mediated by somatomedins.	E
17) except: a. Parathyroids, gonads, Pancreas. b. Thyroid, Supra-renal medulla, Pancreas. c. Parathyroids, Supra-renal medulla, thyroid. d. Parathyroids, Supra-renal cortex, Pancreas. e. Parathyroids, Supra-renal medulla, Pancreas.	E
18) Acidophil somatotroph cells secrete the following hormone: a. Growth H. b. Prolactin H. c. Luteinizing H (LH). d. Thyrotropin releasing H (TRH). e. Follicle stimulating hormone (FSH).	A
19) **The adenohypophysis synthesizes and releases the following hormones except**: a. Growth H. b. Antidiuretic H. c. Luteinizing H (LH). d. Thyrotropin stimulating H (TSH). e. Follicle stimulating hormone (FSH)	B
20) Growth H increases weight and bulk of soft tissues except: a. Gonads, Adrenals, Thyroid b. Thyroid, Supra-renal medulla, Pancreas. c. Parathyroids, Supra-renal cortex, Pancreas. d. Parathyroids, Supra-renal medulla, thyroid. e. Parathyroids, Supra-renal medulla, Pancreas.	**A**

21) Which of the following hormones have a marked MSH activity? a. LH b. GH c. TSH d. FSH e. ACTH	E
22) Growth hormone: a) Induce negative nitrogen balance. b) Secretion is reduced during sleep. c) Stimulates the liver to release somatomedins which regulate body growth. d) Level in blood is higher in adults than children. e) Reduces absorption of Ca++ from intestine.	C
23) Which of the following statements about the action of somatomedins is true? a) They inhibit protein synthesis. b) They antagonize the effects of insulin. c) They promote growth of bone & cartilage. d) They mediate the local effects of somatostatin in the brain. e) They stimulate the secretion of hormones by pancreatic islet cells.	C
24) The basic effects of growth hormone on body metabolism include: a) Increasing the rate of protein synthesis. b) Increasing the rate of glucose uptake by tissue. c) Decreasing the mobilization of fat. d) Decreasing the rate of fat for energy. e) Non of the above.	A
25) The pituitary gland: a) Regulates the activity of all other endocrine glands. b) Secretes antidiuretic hormone when plasma osmolality falls. c) Prolactin secretion increases when bromocriptine (dopamine agonist) is administered. d) Its function is controlled by hypothalamic factors. e) Its anterior lobe releases the oxytocin hormone.	D

26) Which of the following peptides is synthesized by neurosecretory neurons? a) Epinephrine b) Norepinephrine c) Somatomedin d) Somatostatin e) Somatotropin	**D**
27) Which of the following is not a neuropeptide? a) ADH b) GHRH c) Oxytocin d) Somatomedin e) TRH	D
28) Somatostatin: a) Increases the formation of somatomedins by the liver. b) Increases the release of growth hormone from the adenohypophysis. c) Is released by hypothalamic neurons. d) Release is under a –ve feedback control by the blood growth hormone level. e) Reaches the adenohypophysis via a hypothalamic-hypophyseal nervous tract.	C
29) Which of the following hormones or physiological conditions would most likely increase growth hormone secretion? a. Aging. b. Somatostatin. c. Hypoglycemia d. Somatomedin C e. Growth hormone	C
30) Which of the following inhibits the secretion of growth hormone by the anterior pituitary? a) Sleep. b) Stress. c) Puberty. d) Somatomedins. e) Starvation.	D

31) One of the following stimulates growth hormone secretion: a) Obesity. b) Hyperglycemia. c) ↑ GH d) ↑ FFA e) Hypoglycemia.	E
32) Growth hormone & insulin exert opposite actions on all the following except: a- glucose uptake by the skeletal muscles. b- lipid synthesis. c- catabolism of fat. d- synthesis of protein and somatic growth.	D
33) Growth hormone secretion would most likely be suppressed under which of the following conditions? a- acromegaly. b- giantism. c- deep sleep. d- exercise. e- acute hyperglycemia	E
34) Which of the following conditions or hormones would most likely increase growth hormone secretion? a- hyperglycemia. b- exercise. c- somatomedin. d- somatostatin. e- aging.	B
35) GH: a) Is catabolic. b) Is diabetogenic. c) Decreases FFAs. d) Decreases milk formation. e) Decreases bone growth	B

36) Growth hormone is: a) A hypoglycemic hormone. b) An anabolic hormone. c) Lipogenic hormone. d) Secreted by hypothalamus. e) Responsible for ejection of milk.	B
37) ONE of the following is a Manifestation of acromegaly: a) Small feet and hand b) Protruded mandible c) Thinning of the skin d) Low BMR. e) Hypoglycemia	B
38) A pituitary tumor secreting excess growth hormone in an adult leads to: a) Loss of vision in one eye. b) Gigantism. c) Reduced level of somatomedins in blood. d) Reduced level of free fatty acids. e) Raised blood glucose level.	B
39) Decrease growth hormone secretion: a) In children, it only causes delayed puberty. b) In children leads to a long stature c) Is associated with normal mental functions. d) In children, it causes dwarfism e) Can be treated effectively by giving somatostatin.	**D**
40) Acromegaly : a) Is due to hyper secretion of growth hormone in adult. b) Is due to hyposecretion of growth hormone c) Muscles and viscera are atrophied d) Appears in children e) Reduced blood glucose level.	A

41) Prolactin secretion is inhibited by: a) The thyrotropin releasing hormone (TRH). b) Somatostatin and oxytocin. c) The drugs that increase dopamine formation e.g. L-dopa. d) A decreased blood prolactin level.	C
42) Somatostatin: a) Increases the formation of somatomedins by the liver. b) Increases the release of growth hormone from the adenohypophysis. c) Is released by hypothalamic neurons. d) Release is under a –ve feedback control by the blood growth hormone level. e) Reaches the adenohypophysis via a hypothalamic-hypophyseal nervous tract.	C
43) Which of the following hormones or physiological conditions would most likely increase growth hormone secretion? a. Aging. b. Somatostatin. c. Hypoglycemia d. Somatomedin C e. Growth hormone	C
44) An acidophil-cell tumor of the ant. pit. gland in a child 5 years old results in: a) A tendency to hypoglycemia and exaggerated sexual activities. b) Continued linear growth of long bones. c) A characteristic big size of the hands and feet. d) A lower free fatty acids (FFA) blood level than normal. e) Polyuria with a low specific gravity urine.	B
45) Dopamine is inhibitory for secretion of ; a. Growth hormone. b. Luteinizing hormone (LH). c. Thyroid stimulating hormone (TSH). d. Follicle stimulating hormone (FSH). e. Prolactin hormone.	E

46) Destruction of the anterior lobe of the pituitary gland causes atrophy of: a. Gonads. b. Thymus. c. Pancreas. d. Parathyroid. e. Supra-renal medulla	A
47) Which of the following hormones can inhibit ovulation when present in high concentration? a) FSH b) Prolactin. c) LH. d) Estrogen. e) Oxytocin	B
48) Thickening of the vertebrae in the acromegaly causes: a. Prognathism. b. Hirsutism. c. kyphosis. d. Visual disturbances. e. Headache	C
49) Inability to lactate is due to deficiency of: a. Prolactin. b. Vasopressin. c. FSH. d. LH. e. Growth hormone.	A
50) One of the following not a Manifestation of acromegaly: a) Prognathism. b) Retarded growth of soft tissue. c) Thickening of the skin. d) Raised BMR. e) Hyperglycemia.	B

51) One of the following stimulates growth hormone secretion: a) Obesity. b) Hyperglycemia. c) ↑ GH d) ↑ FFA e) Hypoglycemia.	E
52) Which of the following diseases is caused by excess secretion of growth hormone in adults after union of epiphysis? a. Cretinism b. Gigantism c. Acromegaly d. Cushing's disease e. Pituitary dwarfism	C
53) Which of the following diseases is caused by excess secretion of growth hormone before union of epiphysis? a. Gigantism b. Acromegaly c. Gynecomastia d. Cretinism e. Graves' disease	**A**
54) Panhypopituitarism in children causes: a. Infantilism b. Gigantism c. Acromegaly d. Graves' disease e. Cushing's disease	A
55) Skin color becomes lighter in panhypopituitarism in adults due to decreased a. LH b. GH c. TSH d. FSH e. ACTH	E

56) Acidophil mammatotrop cells secrete the following hormone: a. Growth H. b. Prolactin H. c. Luteinizing H (LH). d. Thyrotropin releasing H (TRH). e. Follicle stimulating hormone (FSH).	B
57) Suckling increases prolactin level due to inhibition of: a. PRIH release b. PRH release c. Growth H release d. Oxytocin H release e. Cortisol H release	**A**
58) Which of the following hormones causes development of the breast tissue and milk synthesis? a. Growth H. b. Oxytocin H. c. Prolactin H. d. Luteinizing H (LH). e. Follicle stimulating hormone (FSH).	C
59) Deficiency of the following hormone in women lead to inability to lactate a. Prolactin b. Vasopressin c. FSH d. LH e. Growth	A
60) During pregnancy, prolactin enlarges the breast by affecting: a) Ducts b) Alveoli c) Nipple d) Areola e) Fat	B

61) Which one of the following statements about prolactin is correct? a. Prolactin initiates ovulation b. Prolactin causes milk ejection during suckling c. Prolactin inhibits the growth of breast tissue d. Prolactin secretion is tonically inhibited by the hypothalamus	**D**
62) Prolactin secretion is tonically suppressed in nonpregnant women by which of the following hormones? a. Dopamine b. Estrogen c. FSH d. LH	**A**
63) A 45-year-old woman has a mass in the sella turcica that compresses the portal vessels, disrupting pituitary access to hypothalamic secretions. The secretion rate of which of the following hormones would most likely increase in this patient? a. Adrenocorticotropic hormone b. Growth hormone c. Prolactin d. Luteinizing hormone e. Thyroid-stimulating hormone	C
64) Pressure on the optic chiasm causes: a) prognathism. b) hirsutism. c) kyphosis. d) visual disturbances. e) headache.	**D**
65) Impaired growth hormone secretion: a- in children causes delayed puberty. b- in children leads short stature with stunting of the limbs than trunk. c- is associated with normal mental functions. d- in adults leads to a reduction in size of viscera e- can be treated effectively by giving somatostatin.	**C**

66) An acidophil adenoma of the anterior pituitary gland is associated with: a- short stature due to rapid fusion of the epiphysis. b- hypoglycemia. c- galactorrhea. d- dark pigmentation of the skin. e- delayed dentition and walking.	C
67) Acromegaly is: a- due to basophil adenoma in the adenohypophysis during infancy. b- the result of inability of the liver to produce somatomedin. c- accompanied by overgrowth of long bones and increased sensitivity to insulin. d- usually accompanied by depressed sexual functions and signs ofincreased intracranial tension. e- a main cause of hypoglycemia and decreased FFA blood level.	D
68) Enhanced growth hormone secretion occurs in all the following cases except: a- acromegaly and giantism. b- during starvation. c- during exercise. d- after insulin induced hypoglycemia. e- dwarfism& infantilism.	E
69) Pituitary dwarfism is characterized by: a) Dwarfism and normal mentality. b) Dwarfism and mental retardation. c) Mental retardation. d) Hypogonadism. e) Hyperglycemia.	A
70) Gigantism is: a) Due to increased GH in adults. b) Characterized by hypoglycemia. c) Due to decreased thyroid hormone. d) Characterized by kyphosis. e) Characterized by over growth in all bones.	E

71) <u>Acromegally is manifested by:</u> a) Hypoglycemia. b) Increased height. c) Broad and thick hands. d) Decreased size of viscera. e) Decreased size of hands and feet.	C

1) Which of the followings is an intracellular function of thyroxin: a) Increase the number of mitochondria. b) Decrease amino acid cellular uptake. c) Decrease Na/K ATPase activity. d) Decrease ATP synthesis. e) Decrease the activity of mitochondria	A
2) TSH affects the thyroid by increasing the: a) Proteolysis of thyroglobulin in the follicles. b) Activity of iodide pump. c) Size of thyroid cells. d) Number of thyroid cells. e) All of the above.	E
3) Thyroxin: a) Is stored in the follicular cells as goitrogens. b) Decreases the resting rate of CO, production. c) Is essential for normal development of the brain. d) Acts more rapidly than tri iodothyronine. e) Is not essential for red cell production.	C
4) **One of the following is not increased after thyroidectomy**: a) Blood TSH level b) Blood cholesterol level c) Blood glucose level d) Response time for tendon reflexes e) Skin thickness	C
5) Myxedema is characterized by all the following except: a) A low serum cholesterol level. b) Poor tolerance to cold and depressed memory. c) Slow thinking and puffiness of the face. d) Dryness of the skin and non-pitting edema.	A

6) Regarding iodine supply, which of the followings is not correct? a) The normal daily iodine requirement is about 100-150 µgm. b) Marked drop in iodine supply inhibits the synthesis of thyroid hormones. c) Marked increase in iodine supply increases the synthesis of thyroid hormones. d) Moderate increase in iodine supply does not increases the synthesis of thyroid hormones.	C
7) Failure of conversion of carotenes in the liver to vitamin A causes the skin to be: a) Warm. b) Moist. c) Sweaty. d) Yellowish. e) Thin.	**D**
8) The thyroid follicular cells have the following functions, except: a) Iodide uptake. b) Synthesis of thyroid hormones. c) Secretion of thyroid hormones. d) Synthesis of thyroglobulin and peroxidase.	B
9) Which of the following hormones has anabolic effects in muscle at physiological concentrations but is catabolic at very high levels? a) Insulin. b) Estrogen. c) Testosterone. d) Thyroxine (T4) e) Growth hormone.	D
10) Which of the following disease is caused by decreased secretion of thyroid hormone in infants? a) Gigantism. b) Acromegaly. c) Myxedema. d) Cretinism. e) Graves' disease	D

11) The primary effect of T3 and T4 is to: a. Decrease blood glucose. b. Promote the release of calcitonin. c. Promote heat generating metabolic reactions. d. Stimulate the uptake of iodine by the thyroid. e. Stimulate cholesterol synthesis by the hepatocytes	C
12) Concerning the thyroid stimulating hormone (TSH): a) It is always excessively secreted in Graves's disease. b) In its absence, the thyroid gland can secrete. c) It decreases the iodine uptake and synthesis of thyroxin by the thyroid gland. d) It acts on the thyroid cells by increasing the intracellular content of cyclic AMP. e) Its excess cannot produce goiter	D
13) Which of the following hormones is secreted by the parafollicular cells of thyroid glands? a) Thyroxin. b) Triiodothyronine. c) Calcitonin. d) Cortisol. e) TSH	**C**
14) Thyroidectomy leads to an increase in the following, except: a) Blood TSH level. b) Blood cholesterol level. c) Blood glucose level. d) Response time for tendon reflexes. e) Skin thickness.	C
15) Hyperthyroidism is associated with: a) Increased systolic pressure, increased diastolic pressure and increased pulse pressure. b) Increased systolic pressure, normal diastolic pressure and increased pulse pressure. c) Increased systolic pressure, decreased diastolic pressure and increased pulse pressure. d) Increased systolic pressure, increased diastolic pressure and decreased pulse pressure e) Decreased systolic pressure, decreased diastolic pressure and decreased pulse pressure	**B**

16) carotenes are converted to vitamin A in the liver by? a. Thyroxin. b. TSH. c. TRH. d. Growth hormone. e. Prolactin hormone	A
17) Blood levels of which of the following substances is expected to decrease in Graves' disease : a. Triiodothyronine (T3) b. Thyroxin (T4) c. Diiodotyrosine d. Thyroid stimulating hormone (TSH). e. Iodide	D
18) The action of thyroid stimulating immunoglobulin (TSI) on the thyroid is affected by the level of T3 and T4 in the blood in the following manner: a) Negative feed back. b) Positive feed back. c) Inhibition. d) Stimulation. e) No feed back	E
19) Disproportionate dwarfism occurs in the following disease: a. Gigantism. b. Acromegaly. c. Myxedema. d. Cretinism. e. Graves' disease	**D**
20) Lack of thyroid hormones in adults produces: a) Hashimoto disease. b) Graves' disease. c) Myxedema. d) Cretinism. e) Autoimmune thyroiditis	C

21) A middle-aged female presented with enlarged thyroid, increased basal metabolic rate , diffuse lymphoid hyperplasia and exomphalos. What is the most probable diagnosis a) Toxic multinodular goiter b) Toxic adenoma c) Hashimoto thyroiditis d) Grave's disease e) Pituitary thyrotropic adenoma	**D**
22) Slow thinking and speech occur in which of the following diseases? a) Acromegaly. b) Cushing's disease. c) Gigantism. d) Graves' disease. e) Myxedema.	E
23) A young woman has puffy skin and a hoarse voice. Her plasma TSH concentration is low but increases markedly when she is given TRH. She probably has a) hyperthyroidism due to a thyroid tumor. b) hypothyroidism due to a primary abnormality in the thyroid gland. c) hypothyroidism due to a primary abnormality in the pituitary gland. d) hypothyroidism due to a primary abnormality in the hypothalamus. e) hyperthyroidism due to a primary abnormality in the hypothalamus	D
24) Cabbage act as goitrogen because it : a) decreases I uptake by the thyroid gland b) Contains thyroid stimulating immunoglobulin c) Inhibits peroxidase enzyme d) Interferes with thyroid receptors. e) Contains excess iodine.	A
25) The thyroid gland: a. secretes only T3 and T4 in equal amounts. b. Decreases in size when dietary iodine is deficient. c. Takes up iodide against its electrochemical gradient. d. Is relatively avascular. e. Does not contain any enzymes	C

26) Regarding thyroxine, all the following are true except: a. Is essential for normal development of the brain. b. Acts more rapidly than triiodothyronine (T3). c. Increases the resting rate of carbon dioxide production. d. Is essential for normal red cell production.	B
27) Removal of the thyroid gland (without replacement therapy) leads to an increase all the following except: a. Blood cholesterol level. b. Tremor of the fingers. c. Response time for tendon reflexes. d. Blood TSH level.	B
28) Which of the following hormones binds to a receptor in the nucleus? a) TSH. b) TRH. c) Growth hormone. d) Prolactin hormone e) Thyroxin.	E
29) One of the following hypophyseal hormones controls thyroid hormone secretion: a) TSH b) ACTH c) FSH d) LH e) MSH	A
30) Thyroid hormone increase the following : a) Peripheral resistence b) Duration of reflex time c) Sleeping hours d) Thickness of skin e) Pulse pressure	E

31) Thyrocalcitonin : a) Produced by thyroid follicular cell b) Increases basal metabolic rate c) Reduce blood Ca d) Secretion occurs when blood phosphate rises e) Stimulate osteoclast activity	C
32) **.The thyroid hormones act through** : a) Binding to membrane receptor on target cells b) Reacting with cytoplasmic receptor c) Increasing CAMP in the target cell d) Increasing CGMP in the target cell e) Reacting with nuclear receptor leading to increased mRNA formation	E
33) All true about thyroxine except : a) Its formation require amino acid tyrosine b) It increases O2 consumption in adult brain c) Essential for formation for normal RBCs d) Its effect is slower but last longer than those of T3 e) Probably converted into T3 in the target tissue	B
34) Excessive secretion of thyroid hormone causes : a) Marked tachycardia b) Tendency to hypoglycemia c) Decreased appetite d) Decreased BMR e) A marked increase in body weight	A
35) Concerning T3 and T4: a) Their release is inhibited by TSH. b) They are bound mainly to albumin. c) The free form is the physiologically active form. d) They are secreted by the parafollicular cells of thyroid gland.	C

36) Regarding the thyroid hormones: a) Excess iodide intake stimulates T3 & T4 synthesis and release. b) They decrease the BMR. c) T3 is more abundant than T4. d) They decrease the GIT motility. e) T3 is more active than T4.	E
37) .Thyroxine hormone: a) Secreted from parafollicular cells of thyroid gland. b) Lipogenic. c) Catabolic at normal plasma levels. d) Anabolic at normal plasma levels. e) Not essential for physical growth.	D
38) Which of the following hormones is important for myelination of nerve fibers: a) Thyroid. b) Glucagon. c) FSH. d) Oxytocin.	A
39) Hyperthyroidism results in: a) Hypercholesterolemia. b) Protein catabolism. c) Increased body weight. d) Cold intolerance. e) Decreased appetite.	B
40) Hyperthyroidism is manifested by: a) Loss of weight inspite of increased appetite. b) Intolerance to cold weather. c) Bradycardia. d) Increased desire for sleep. e) Constipation.	A

41) Calcitonin is secreted by the: a) Para-follicular cells of the thyroid gland. b) Chief cells of the thyroid gland. c) Oxyphil cells of the thyroid gland. d) Chief cells of the parathyroid gland. e) Oxyphil cells of the parathyroid gland	A
42) .Mental retardation occurs in the following disease: a) Gigantism. b) Acromegaly. c) Myxedema. d) Cretinism. e) Graves' disease.	D
43) Physiological goiter is sometimes noticed in: a) Pregnancy. b) Grave's disease. c) Iodine deficiency. d) Iodine excess. e) Cretinism.	A
44) Tremors of the outstretched hands occur in the following disease: a) Gigantism. b) Acromegaly. c) Myxedema. d) Cushing's disease. e) Graves' disease.	E
45) Protruded tongue occurs in the following disease: a. Gigantism b. Acromegaly c. Myxedema d. Cretinism e. Graves' disease	D

46) **Intolerance to cold weather occurs in the following disease**: a. Gigantism b. Acromegaly c. Myxedema d. Cushing's disease e. Graves' disease	C
47) **Increased appetite but there is loss of weight occurs in the following disease**: a. Gigantism b. Acromegaly c. Myxedema d. Cushing's disease e. Graves' disease	E
48) Increased level of cholesterol & triglycerides occurs in the following disease: a. Gigantism b. Acromegaly c. Myxedema d. Cushing's disease e. Graves' disease	C
49) .Which of the following is inconsistent with the diagnosis of Graves' disease a. Increased heart rate b. Exophthalmos c. Increased plasma levels of triiodothyronine (T3) d. Increased plasma levels of thyroxine (T4) e. Increased plasma levels of thyroid-stimulating hormone (TSH)	E
50) A patient has a pituitary tumor that secretes large amounts of thyroid□stimulating hormone. Which of the following findings would most likely be reported for this patient a. Goiter b. Enophthalmos c. Decreased respiratory rate d. Normal plasma levels of thyroxine (T4) e. Normal plasma levels of triiodothyronine (T3)	D

51) Heat intolerance occurs in the following disease: a. Diabetes mellitus b. Cretinism c. Myxedema d. Diabetes insipidus e. Graves' disease	E
52) Which of the following would likely be reported in a patient with a deficiency in iodine intake a. Weight loss b. Tachycardia c. Nervousness d. Increased sweating e. Increased synthesis of thyroglobulin	E
53) A subject takes thyroxine (T4) for several weeks to lose 10 kilograms of his weight. Which of the following would be expected to occur as long as he continues the same dose of thyroxine (T4) a. Goiter b. Exophthalmos c. Myxedema d. Tachycardia e. Lethargy	D
54) **.A patient has hypothyroidism due to a primary abnormality in the thyroid gland. Increased plasma levels of which of the following would most likely be reported**? a. Iodide b. Cholesterol c. Diiodotyrosine d. Thyroxine-binding globulin e. Reverse triiodothyronine (RT3)	B
55) Which of the following physiological responses is greater for triiodothyronine (T3) than for thyroxine (T4)? a. Plasma half-life b. Plasma concentration c. Secretion rate from the thyroid d. Affinity for nuclear receptors in target tissues e. Latent period for onset of action in target tissues	D

56) TSH is secreted at a higher rate: a) In primary thyrotoxicosis. b) When the diet rich in iodine. c) After partial removal of thyroid gland. d) After removal of pituitary gland. e) Non of the above.	C
57) Which of the following is not essential for normal biosynthesis of thyroid hormones? a) Iodine b) Ferritin c) Thyroglobulin d) Protein synthesis e) TSH	B
58) Primary increase in thyroid gland activity leads to: a) The follicles enlarge and fill with colloid. b) The blood level of TSH increases. c) It takes up iodine at a slower rate. d) The follicular cells become more columnar. e) The patient develops myxedema.	D
59) Increase thyroid gland size can occur as a consequence of the following; except: a) Iodine deficiency. b) Pituitary adenoma. c) Grave's disease. d) Excessive intake of exogenous thyroxin. e) Excessive intake of cabbage.	D
60) Which of the following describes the effect of the level of T3 and T4 in the blood on the thyroid stimulating hormone (TSH) ? a. Positive feedback. b. Negative feedback. c. Synergistic effect. d. No affection. e. Stimulation.	B

61) Cabbage decreases I- uptake by the thyroid gland because it contains: a) antithyroid agents. b) Thyroid stimulating immunoglobulin (TSI). c) Thyroid stimulating hormone (TSH). d) Human chorionic gonadotropin (hCG). e) Excess iodine.	A
62) Infantile thyroid deficiency is characterized by all except : a) Retarded growth and delayed walking b) Protruded tongue and abdomen c) Moon face and bufflo hump d) A low BMR and inability to tolerate cold weather e) Short stature , mental retardation and bowl incontinence	C
63) Graves disease is associated with : a) High blood level of TSH b) Formation of TSI c) Reduction of BMR d) Marked bradycardia e) Increased peripheral resistence	B
64) Which of the following is consistent with diagnosis of gravis dse : a) Increased heart rate b) Exophthalamus c) Increased plasma level of T3 d) Increased plasma level of T4 e) Increased plasma level of TSI	E
65) **Patient has elevated T4 , low TSH , thyroid gland is smaller than normal, the explanation for that is** : a) Patient has lesion in ant pituitary that prevent TSH secretion b) Patient is taking propythiouracil c) Patient is taking thyroid extract d) Patient is consuming large amount of iodine e) Patient has graves disease	C

66) Patient has goiter associated with high plasma level of both TRH and TSH . her heart rate is elevated . this patient most likely has which of the following: a) Edemic goiter b) Hypothalamic tumor secreting TRH c) Pituitary tumor secreting large amounts of TSH d) Graves disease	B
67) Hypothyroidism (Myxedema) is characterized by: a) Normal arterial blood pressure. b) Exaggerated deep reflexes. c) Tachycardia. d) Dry and rough skin. e) Increased appetite.	**D**
68) TSH is secreted at a higher rate: a) In primary thyrotoxicosis. b) When the diet rich in iodine. c) After partial removal of thyroid gland. d) After removal of pituitary gland. e) Non of the above.	C
69) Which of the following is not essential for normal biosynthesis of thyroid hormones? a) Iodine b) Ferritin c) Thyroglobulin d) Protein synthesis e) TSH	B
70) Primary increase in thyroid gland activity leads to: a) The follicles enlarge and fill with colloid. b) The blood level of TSH increases. c) It takes up iodine at a slower rate. d) The follicular cells become more columnar. e) The patient develops myxedema	D

71) Increase thyroid gland size can occur as a consequence of the following; except: a) Iodine deficiency. b) Pituitary adenoma. c) Grave's disease. d) Excessive intake of exogenous thyroxin. e) Excessive intake of cabbage.	D
72) Which of the following describes the effect of the level of T3 and T4 in the blood on the thyroid stimulating hormone (TSH) ? a. Positive feedback. b. Negative feedback. c. Synergistic effect. d. No affection. e. Stimulation.	B
73) Inhibition of the iodide pump would be expected to cause which of the following changes a. Extreme nervousness b. Increased metabolic rate c. Increased synthesis of thyroglobulin d. Increased synthesis of Thyroxine (T4) e. Decreased thyroid-stimulating hormone secretion	**C**
74) Which of the following has no negative feedback? a. Thyroid stimulating hormone (TSH) b. Thyroid stimulating immunoglobulins (TSI) c. Thyrotropin releasing hormone (TRH) d. Growth hormone e. Prolactin hormone	B
75) Which step in the biosynthetic pathway for thyroid hormones produces thyroxine (T4)? a) Iodide (I−) pump b) I− □I2 c) I2 + tyrosine d) Diiodotyrosine (DIT) +DIT e) DIT + monoiodotyrosine (MIT)	D

76) **Regarding the Wolff–Chaikoff effect of excess intake of iodine on the thyroid, which of the following is correct** a. Decreases release of thyroid hormones. b. Increases the activity of thyroid enzymes. c. Increases TSH effect on the thyroid gland. d. Increases proteolysis of thyroid thyroglobulin. e. Increases binding of iodine in the thyroid gland.	A
77) **A young woman has puffy skin and a hoarse voice. Her plasma TSH concentration is low but increases markedly when she is given TRH. She probably has** a. Hyperthyroidism due to a thyroid tumor. b. Hypothyroidism due to a primary abnormality in the thyroid gland. c. Hypothyroidism due to a primary abnormality in the pituitary gland. d. Hypothyroidism due to a primary abnormality in the hypothalamus. e. Hyperthyroidism due to a primary abnormality in the hypothalamus.	D

1) Functions of Insulin include: A. transformation of fat into glucose B. gluconeogenesis C. glycogenolysis D. Glycogenesis E. proteolysis	**D**
2) Preproinsulin is synthesized on the: a) ribosomes. b) golgi apparatus. c) mitochondria. d) endoplasmic reticulum. e) nucleus.	**A**
3) Inhibitors of insulin secretion include: A. Somatostatin B. oral protein, C. Gastric inhibitory polypeptide (GIP) D. cholecystokinin E. gastrin	**A**
4) Diabetes is accompanied by: A. Hypoglycemia B. Increase body weight C. Acidosis D. Proteinuria E. Loss of thirst sensation	C
5) Insulin is secreted by: a) endocytosis. b) exocytosis. c) phagocytosis. d) receptor-mediated endocytosis. e) pinocytosis.	B

6) Which of the following hormones NOT have a lipolytic effect: a) Epinephrine. b) Cortisol. c) Glucagon. d) Insulin. e) Growth hormone.	D
7) Main action of glucagon is: A. activation of liver glycogenolysis B. glucogenolysis C. Inhibition of lipolysis D. decrease of cardiac output E. Increase hepatic cholesterol synthesis	A
8) Normal Fasting glucose is: A. 100-125 mg% B. > 125 mg% C. > 150 mg% D. < 100 mg% E. > 200 mg%	**D**
9) Diabetes mellitus is caused by decreased: a) antidiuretic hormone ADH. b) growth hormone. c) thyroxine. d) insulin. e) cortisol.	D
10) About Glucagon which of the following is NOT decreased: a) Conversion of glucose into fat. b) Glycogenesis. c) Glucose uptake by cells. d) Gluconeogenesis. e) The rate of protein synthesis.	D

11) In cases of diabetes mellitus: a) Lipogenesis is stimulated b) Glycogen synthesis in the liver is increased. c) There is increased lipolysis with increased blood level of FFA. d) There is marked increase in protein synthesis. e) The PH of the body fluids increases towards the alkaline side.	C
12) Insulin is secreted in equimolar amounts with: a) glucagon. b) somatostatin. c) pancreatic polypeptide. d) c-peptide. e) growth hormone.	D
13) **Glucagon increases**: a) Gluconeogenesis. b) Conversion of glucose into fat. c) Glycogenesis. d) Glucose uptake by cells. e) The rate of protein synthesis.	A
14) Which following is a stimulator to insulin secretion? a) Decrease plasma glucose level. b) Fasting. c) Somatostatin. d) Gastric inhibitory polypeptide. e) Decrease free fatty acids.	D
15) All the following are actions of insulin except: a) Lipogenesis b) Glycogenesis c) Anabolic action on protein d) Increases renal sodium and potassium secretion e) Increases muscle bulk	D

16) Regarding glucagon: a) Increases splenic contraction b) Increases lipogenesis c) Increases glucose uptake in cells d) Increases glycogenolysis e) Increases glycogenesis	**D**
17) Which following is inhibitor to insulin secretion? a) ↑ Plasma glucose level. b) Fasting. c) Glucagon. d) Gastric inhibitory polypeptide. e) Arginine.	B
18) As regard insulin which of the following is decreased: a) Conversion of glucose into fat. b) Glycogenesis. c) Glucose uptake by cells. d) The rate of protein synthesis. e) Lipolysis.	E
19) Manifestations of diabetes mellitus include the following except a) Polydipsia. b) Polyuria. c) Alkalosis. d) Glycosuria. e) Hyperglycemia.	C
20) Which of the following hormones decreases plasma glucose level? a) glucagon. b) growth hormone. c) glucocorticoids. d) thyroxine. e) insulin.	E

21) Which of the following is NOT stimulant for Glucagon release: a) Hypoglycaemia. b) Protein meal and by amino acids such as arginine and alanine. c) ↓ In plasma free fatty acids. d) Exercise. e) Somatostatin.	E
22) Insulin increases the following except a) gluconeogenesis. b) conversion of glucose into fat. c) glycogenesis. d) glucose uptake by cells. e) the rate of protein synthesis.	**A**
23) Insulin: a) Increases the rate of triglyceride synthesis in adipose tissues. b) Decreases both amino acid and glucose uptake by the cells. c) Stimulates hepatic gluconeogenesis. d) Exerts a protein catabolic effect and a marked lipolytic effect.	A
24) Which of the following are incorrectly paired? a. Aldosterone: increased plasma glucose level. b. Epinephrine: increased glycogenolysis in skeletal muscle. c. Insulin: increased protein synthesis. d. Glucagon: increased gluconeogenesis. e. Growth hormone: increased plasma glucose level.	A
25) Stimuli of glucagon secretion include the followings, except: a) Hyperglycemia. b) GIT hormones. c) Exercise. d) Infections	**A**

26) Which one of the followings is used by Insulin as a second messenger? a) Ca++ b) Cyclic adenosine monophosphate (cAMP) c) CP Cyclic guanosine monophosphate (cGMP) d) Phosphatidyl inositol e) Tyrosine kinase cascade	E
27) Main action of glucagon is : A. activation of liver glycogenolysis B. glucogenolysis C. Inhibition of lipolysis D. decrease of cardiac output E. Increase hepatic cholesterol synthesis	**A**
28) . Which one of the followings is a water-soluble hormone? A - Calcitriol B- Insulin C- Thyroid hormones D- Retinoids E- Steroids	B
29) One of the following is NOT a usual manifestation of DM: a) Delayed wound healing b) Loss of weight c) Mental retardation d) Hyperglycemia	C
30) About Glucagon which of the following NOT decrease a) Gluconeogenesis b) Conversion of glucose into fat c) Glycogenesis d) Glucose uptake by cells e) The rate of protein synthesis	**A**

31) Hyperglycemia is induced by all the following hormones except: a) Epinephrine b) Aldosterone c) Thyroxin d) ACTH e) Glucagon	B
32) As regard insulin which of the following is NOT increased: a) Gluconeogenesis b) Convers ion of glucose into fat c) Glycogenesis d) Glucose uptake by cells e) The rate of protein synthesis	**A**
33) Which type of the following cells represents the major quantity of cells present in the islet of Langerhans? a) Alpha cells b) Beta cells c) Delta cells d) F cells e) Gamma cells	B
34) Regarding glucagon: a) Increases splenic contraction b) Increases lipogenesis c) Increases glucose uptake in cells d) Increases glycogenolysis e) Increases glycogenesis	D
35) Somatostatin : a) Increase formation of somatomedin by liver b) Increase release of growth hormone from adenohypophysis c) Is released by hypothalamic neurons d) Reach the adenohypophysis by hypothalamo-hypophyseal nervous tract e) Release is under negative feedback control by blood growth hormone level	C

36) Insulin : a) Is secreted from pancreatic acinar cell b) Permit glucose transport against conc gradient c) Enhance glucose transport across cell membrane d) Enhance glucose transport in the brain interstitial mucosa and renal tubules e) Inhibit lipogenesis	C
37) What is the glucagon secreting cells? a) α cells b) F cells c) δ cells d) β cells e) Ganglion cells	**A**
38) Glucagon perform the following functions except : a) It increase glycogenolysis and gluconeogenesis by liver b) Decrease insulin secretion c) Increase lipolysis d) Has calorigenic action by increasing metabolic rate e) Increases cyclic AMP in the target cell	B
39) Concerning somatostatin , all the following are true except : a) It is the growth hormone inhibiting hormone b) Is secreted by hypothalamus c) Secreted by certain pancreatic islet cell d) Stimulate gastrin secretion as well as most other GIT activities e) Present in certain brain areas acting as chemical transmitter	D
40) Insulin : a) Produced by acinar cell of pancreas b) Stimulate the release of FFA from fat depots c) Inhibit protein synthesis d) Increase glucose uptake by skeletal ms cell e) Facilitate both glycogenolysis and gluconeogenesis	D

41) Insulin inhibits : a) Glycogen synthesis in liver b) Glycogen deposition in skeletal ms c) Lipolysis d) Protein synthesis e) Entry of K into the cell	C
42) About glucagon , all are true except : a) Its secretion is inhibited by somatostatin and stimulated by catecholamine b) It increases glycogenolysis in both liver and skeletal ms c) It increases myocardial contractility d) It elevates metabolic rate and produce lipolytic and ketogenic action e) It promotes gluconeogenesis in liver	B
43) . Concerning insulin, all are true except : a) Its secretion is inhibited by somatostatin b) Its secretion is stimulated by hyperglycemia and amino acid transfusion c) Its release from pancreatic islets is promoted by certain GIT hormones especially GIP d) It decrease protein synthesis and increase hepatic gluconeogenesis e) Its secretion is increased by stimulating the pancreatic parasympathetic nerve supply	D
44) Which of the following pairs of hormone and action is incorrect : a) Glucagon : increase glycogenolysis in liver b) Glucagon : increase glycogenolysis in skeletal ms c) Glucagon : increase gluconeogensis d) Cortisol : increase gluconeogenesis e) Cortisol : decrease glucose uptake in ms	B
45) Hypoglycemia induced by fasting , causes : a) Increased secretion of insulin b) Decreased secretion of glucagon c) Decreased secretion of growth hormone d) Increased secretion of cortisol	D

46) which of the following would be least likely to be seen 14 days after a rat is injected with a drug that kills all of its pancreatic beta cells : a) a rise in plasma H conc. b) A rise in plasma glucagon conc. c) A fall in plasma HCO3 conc. d) A fall in plasma amino acid conc. e) A rise in plasma osmolarity	D
47) Which of the following finding is most likely to occur in a patient who has uncontrolled type 1 diabetes mellitus : a) Decreased plasma osmolarity b) Increased plasma volume c) Increased plasma PH d) Increased release of glucose from liver e) Decreased rate of lipolysis	D
48) . Which of the following would produce greatest increase in insulin secretion: a) Amino acids b) Amino acids and glucose c) Amino acids and somatostatin d) Glucose and somatostatin	B
49) Insulin increase the entry of glucose into : a) All tissues b) Renal tubular cell c) The mucosa of small intestine d) Most neurons in cerebral cortex e) Skeletal ms	E
50) When plasma glucose conc . falls to low levels, a number of different hormones help combact hypoglycemia. After intravenous administration of large dose of insulin, the return of low blood sugar level to normal is delayed in : a) Adrenal medullary insufficiency b) Glucagon deficiency c) Combined adrenal medullary insufficiency and glucagon deficiency d) Thyrotoxicosis e) Acromegaly	C

51) Which of the following would most likely to occur in the earliest stage of type 2 diabetes a) Increased insulin sensitivity b) High circulatory level of C peptides c) Decreased hepatic glucose output d) Metabolic acidosis e) Hypovolemia	B
52) Insulin is: a) Secreted from alpha cells of the pancreas. b) Hyperglycemic hormone. c) Catabolic hormone. d) Anabolic hormone. e) Lipolytic hormone.	D
53) . Insulin hormone: a) Inhibits glycogen synthesis. b) Is catabolic. c) Is lipolytic. d) Decreases cellular uptake of K+. e) Helps normal growth.	E
54) Insulin act at all sites EXCEPT: a) Liver b) Brain. c) Adipose tissue. d) Muscle.	B
55) Which of the following is true for insulin: a) That is formed by smooth endoplasmic reticulum. b) That it is a glycoprotein. c) That in plasma it binds with globulins. d) That its half-life is about 2 hours. e) That it is a polypeptide.	E

56) Diabetes mellitus is characterized by: a) Weight gain. b) Hypoglycemia. c) Polyurea. d) Decrease thirst.	C
57) Pancreatic glucagon: a) Is produced by the beta cells of the islets of Langerhans. b) Is a steroid hormone. c) Secretion is inversely proportional to the blood glucose level. d) Decreases the breakdown of liver glycogen.	C
58) . **In cases of diabetes mellitus :** a) Lipogenesis is stimulated b) Glycogen synthesis in the liver is increased. c) There is increased lipolysis with increased blood level of FFA. d) There is marked increase in protein synthesis. e) The PH of the body fluids increases towards the alkaline side	C
59) Which of the following are incorrectly paired? a. B cells: insulin b. D cells: somatostatin c. A cells: glucagon d. Pancreatic exocrine cells: chymotrypsinogen e. F cells: gastrin	E
60) Which of the following islet cells and hormones are correctly paired: a) β cells : Glucagon. b) D cells : Pancreatic peptides. c) α cells : Insulin. d) F cells : Somatomedins. e) D cells : Somatostatin.	E
61) What are the largest cells of islets of Langerhans? a) F cells b) δ cells c) α cells d) Ganglion cells e) β cells	C

62) What is the insulin secreting cells? a) α cells b) F cells c) δ cells d) β cells e) Ganglion cells	D
63) . **What is the somatostatin secreting ?** a) α cells b) F cells c) δ cells d) β cells e) Ganglion cells	C

1) Which of the following is the only organ in which Cortisol increases the protein synthesis a) The blood b) The kidney c) The liver. d) The muscles. e) The skin	C
2) Which of the following is considered as one of Addison disease manifestations? a) Hypernatremia b) Hypervolemia c) Hypokalemia d) Increase basal metabolic rate e) Metabolic acidosis	E
3) Cushing syndrome is: a) Due to hypersecretion of aldosterone. b) Due to hypersecretion of thyroid hormone. c) Characterized by an increase in protein synthesis. d) Characterized by hyperglycemia. e) Characterized by lymphocytosis.	D
4) Cortisol has a permissive effect to: a) Catecholamines b) GH. c) somatomedins d) Insulin e) thyroxin	A
5) Cushing syndrome is characterized by all the following except: a) Hyperglycemia. b) Hyperkalemia. c) Hypertension and edema. d) Purplish abdominal stria. e) Muscle wasting and weakness.	B

6) As regard the effect of steroid hormones on protein metabolism, steroid causes: a) Muscle wasting and weakness. b) bones become stronger due to increased protein content c) formation of collagenous tissues d) Promotion of healing of wounds. e) Decrease Subcutaneous hemorrhage	A
7) Cortisol regulates the secretion of corticotrophin releasing hormone from the hypothalamus through which of the following? a) Long loop positive feedback. b) Long loop negative feedback c) Short loop positive feedback. d) Short loop negative feedback. e) Ultra-short loop feedback.	B
8) AS regard action of steroid: a) It stimulates gluconeogenesis b) it Stimulates active reabsorption of Na+ from urine in the distal nephron. c) steroid protein catabolism. d) It increases the capillary permeability. e) it Stimulates the immune system	A
9) Conn's syndrome Manifestations include a) Hyperkalemia b) hyperkalemic nephropathy c) Hypernatremia d) Hyponatremia e) Metabolic acidosis	C
10) AS regard metabolic action of cortisol; a) It inhibits gluconeogenesis b) it increases rate of glucose utilization c) steroid decreases plasma amino acids level. d) It increases the capillary permeability. e) it has lipolytic effect	E

11) ONE of the following not a Manifestation of Cushing a) Hypertension b) Osteoporosis c) purplish striae d) Muscle wasting. e) Hypoglycemia	E
12) Disorders of the Adrenocortical Function include: a) Acromegaly b) Addison's disease c) Myxedema d) Acromegaly e) cretinism	B
13) Cortisol increases blood glucose by: a) Increasing gluconeogenesis alone. b) Increasing gluconeogenesis and decreasing glucose utilization. c) Increasing gluconeogenesis and glucose utilization. d) Decreasing glucose utilization alone. e) Decreasing gluconeogenesis and glucose utilization.	B
14) Cushing's syndrome is characterized by: a) Delayed wound healing and a tendency to bruises. b) Accumulation of adipose tissue particularly in the limbs. c) Increased blood level of ACTH in all conditions. d) Anemia and lymphocytosis together with increased resistance to infection	A
15) Cushing's syndrome is characterized by all the following except: a) Excess plasma levels of both cortisol and glucose. b) Salt and water retention and commonly hypertension. c) Increased body weight associated with a moon face and buffalo obesity. d) A normal lymphocytic count in the blood.	D

16) The following causes can produce secondary aldosteronism, except: a) Nephrosis. b) Heart failure. c) Hepatic cirrhosis. d) Tumor or hyperplasia in the adrenal cortex.	**D**
17) Regarding adrenal androgens, which of the followings is not correct? a) Are synthesized and secreted by zona reticularis. b) Their secretion is controlled by pituitary gonadotropins. c) Have less than 20% of the androgenic activity of testosterone. d) Responsible for appearance and maintenance of pubic and axillary hair, and growth of clitoris in females.	**A**
18) Which of the following stimuli does not stimulate aldosterone secretion? a) Low serum Na+ b) Infusion of angiotensin II. c) Infusion of an excess concentration of K+ d) Infusion of a high concentration of Na+	D
19) Aldosterone deficiency results in: a) Increased blood glucose level. b) Increased Na+level and decreased K+level in the plasma. c) A low arterial blood pressure. d) Decreased urinary Na+ excretion.	C
20) The secretion of ACTH: a) Is mainly from the adrenal cortex. b) Is inhibited in stress conditions. c) Is controlled by a hypothalamic inhibitory hormone. d) In excessive amounts is the cause of skin pigmentation in Addison's disease	D

21) Glucocorticoids: a) Decrease blood glucose level. b) Are released mainly under the effect of angiotensin II. c) Increase protein synthesis. d) Are controlled by TSH. e) Decrease lymphocytes.	E
22) Which of the following are incorrectly paired? a. Aldosterone: increased plasma glucose level. b. Epinephrine: increased glycogenolysis in skeletal muscle. c. Insulin: increased protein synthesis. d. Glucagon: increased gluconeogenesis. e. Growth hormone: increased plasma glucose level.	**A**
23) Which of the following statements is true? a) Renin stimulates secretion of aldosterone. b) Primary hyperaldosteronism is usually accompanied by massive edema. c) Increased aldosterone secretion causes metabolic alkalosis and muscle weakness. d) In Conn's syndrome, the cardiac functions are depressed due to K+retention. e) Primary hyperaldosteronism occurs in cases of liver cirrhosis.	C
24) Aldosterone hormone: a) Is secreted from zona fasciculata of suprarenal cortex. b) Is secreted from the anterior pituitary gland. c) Increases plasma calcium level. d) Acts through cAMP. e) Increases K+ secretion by DCT.	E
25) Cortisol hormone is: a) Mainly a lipolytic hormone. b) Stimulated by angiotensin II. c) Inhibited by ACTH. d) Mainly an anabolic hormone. e) A hypoglycemic hormone	**A**

26) A decrease in cortisol secretion would produce: a) A fall of serum potassium level. b) Hyperglycemia. c) Increased secretion of ACTH. d) High systolic arterial blood pressure. e) Increased cellular protein catabolism in the live	C
27) The secretion of adrenal androgens is controlled by: a) ACTH. b) LH. c) FSH. d) Ketosteroids e) Estrogens	**A**
28) Glucocorticoids: a) Inhibit histamine release by mast cells and basophils. b) Stimulate ACTH secretion from anterior pituitary. c) Stimulate lipogenesis. d) Increase capillary permeability. e) Decrease the number of RBCs and neutrophils	**A**
29) One of the following is a manifestation of Cushing a) Purplish striae. b) Thickened bone. c) Hypoglcycemia. d) Hypotension e) Muscle hypertrophy	A
30) Adverse effects of hydrocortisone don't include: a) Hypertension b) Hyperglycemia c) Weight loss d) Peptic ulcer e) Weight gain	**C**

31) Hyperkalemia stimulates secretion of: a) Glucagon b) Cortisol c) Aldosterone d) Epinephrine e) Insulin	C
32) Which of the following are associated with adrenocortical hypofunction? a) Hyperglycemia. b) High BMR. c) Redistribution of body fat. d) Increased muscle bulk. e) Dark pigmentation.	E
33) Aldosterone secretion is increased by: a) Hypernatremia. b) Hypokalemia. c) Angiotensin II. d) hypercalcemia.	C
34) Regarding aldosterone: a) It is secreted from zona glomerulosa of suprarenal cortex. b) It decreases K+ and H+ secretion in the kidney. c) It decreases Na+ reabsorption in the kidney. d) It releases is stimulated mainly by ACTH. e) It decreases plasma Na+ concentration.	A
35) Aldosterone: a) Promotes excretion of K+ in distal renal tubules. b) Secretion is controlled by plasma free fatty acid level. c) Produces hair growth in females. d) Causes Na+ reabsorption in the PCT. e) Is secreted from the placenta.	A

36) Excess glucocorticoids (cortisol) lead to: a) Stimulation of lymphocytes. b) Increased allergy. c) Increased inflammatory response to allergic reaction. d) Osteoporosis. e) Decreased RBCs	**D**
37) Aldosterone hormone: a) Stimulates K+ reabsorption by renal tubules. b) Inhibits Na+ reabsorption by renal tubules. c) Stimulates Ca++ reabsorption by renal tubules. d) Is secreted by adrenal medulla. e) Is stimulated by angiotensin II.	E
38) Which of the following is not produced by hypersecretion of cortisol: a) Increased rate of protein breakdown in the skin. b) A major fall in plasma protein level. c) Atrophy of skeletal muscles. d) Increased tubular reabsorption of sodium. e) Decreased formation of antibodies.	B
39) A patient having addison's disease will have: a) Hypotension, hyperglycemia and skin pigmentation. b) Hypertension, hypoglycemia and skin pigmentation. c) Hypotension, hypoglycemia and skin pigmentation. d) Hypotension, hypoglycemia and hypernatremia. e) Hypotension, hyperglycemia and hyponatremia.	C
40) Hyper secretion of cortisone leads to: a) Hypoglycemia. b) Lipolysis. c) Increased muscle bulk. d) Increased BMR. e) Increased protein synthesis in most tissues.	D

41) Which of the following statements regarding the adrenal cortex are correct? a) the adrenal cortex secretes both peptide and steroid hormones b) the adrenal cortex will atrophy following removal of the anterior pituitary gland c) aldosterone plays a role in the regulation of plasma calcium d) cortisol is a hypoglycemic hormone e) Adrenal androgen is formed mainly of testosterone.	B
42) A 45-year-old male with cushingoid appearance, elevated serum and urinary cortisol, very low serum ACTH, no suppression of cortisol with small amount of Dexamethasone, the most likely diagnosis is: a) Pituitary adenoma. b) Hypothalamic tumor. c) pheochromocytoma. d) Adrenal tumor. e) Addison syndrome.	D
43) The cells secreting mineralocorticoids are present in: a) Zona interna b) Zona glomerulosa c) Zona reticularis d) Zona pellucida e) Zona fasciculata	B
44) The most inner zone of adrenal cortex is: a) Zona fasciculate b) Zona glomerulosa c) Zona interna d) Zona pellucida e) Zona reticularis	E
45) About aldosterone : a) Most important glucocorticoid b) Play a major role in regulating ECF volume c) Help Na secretion and K reabsorption from renal tubules d) Control the synthesis of 1,25 di-hydroxy-cholicaciferol e) Essential for milk ejection from mammary gland	B

46) About ACTH : a) Inhibit growth and secretion of adrenal cortex b) Stimulate catecholamine secretion from adrenal medulla c) Control release of vasopressin from neurohypophysis d) Its secretion increases by raised blood cortisol level e) Its secretion is increased by the effect of hypothalamic releasing factors	E
47) About glucocorticoid , the following are true except : a) Increase both protein catabolism and lipolysis b) Decrease number of lymphocyte in blood c) Increases during electro convulsive therapy and stress conditions d) Decrease working capacity e) Stimulate gluconeogensis in liver	D
48) ACTH perform all the following action except : a) Increases cholesterol uptake by zona fasculata leading to increased synthesis and secretion of glucocortcoid hormones b) Stimulate androgen secretion from zona reticularis cells c) Maximally stimulate aldosterone secretion d) Stimulate melanin formation from melanocyte e) Inhibit release of CRH from hypothalamus via short loop	C
49) Aldosterone is secreted in response to all the following except : a) Low plasma Na conc b) Increase secretion of ACTH c) Activation of rennin angiotensin system d) infusion of fluid having excess Na conc e) Infusion of fluid having excess K conc	**D**
50) About ACTH , all true except : a) Mainly control both zona fasculata and reticularis b) Its secretion shows diurnal variation c) Its secretion is increased by hypothalamic releasing factors d) Inhibit the secretion of catecholamine from adrenal medulla e) Its secretion is suppressed by high blood level of cortisol	D

51) Glucocorticoid : a) Increase the development of lymphoid tissue b) Decrease nitrogen excretion c) Decrease blood glucose level d) Increase amino acid uptake and glycogen deposition in liver e) Promote lipogenesis	**D**
52) Aldosterone : a) Secreted mainly from zona reticularis b) Mainly act on proximal tubule c) Promote Na secretion and K retention d) Secreted in response to ingestion of Nacl or increased blood volume e) Secretion markedly increased in case of trauma and hemorrhage	E
53) 30 year old woman is administrated cortisone for treatment auto immune dse , which of the following is most likely to occur : a) Increased ACTH hormone b) Increased cortisol secretion c) Increased insulin secretion d) Increased muscle mass e) Hypoglycemia between meals	C
54) Selective destruction of zona glomerulosa would produce deficiency of : a) Aldosterone b) Androstendiones c) Cortisol d) Dehydroepiadresterone e) Testosterone	A
55) Increased ACTH secretion would be expected in patient of : a) Addison disease b) Primary adrenocortical hyperplasia c) Who are receiving glucocorticoid after renal transplant d) With elevated level of angiotensin ll	A

56) 59 year old woman develop osteoporosis , hypertention , hirstism and hyperpigmentation . magnetic resonance imagining indicate that pituitary gland not enlarged , which of the following is most consistent with these finding : a) Pituitary ACTH secreting tumor b) Ectopic ACTH secreting tumor c) Inappropriate high secretion rate of CRH d) Adrenal adenoma e) Addison disease	B
57) Glucocorticoids decrease the number of circulating: a) Eosinophils. b) Neutrophils. c) Platelets. d) Red blood cells.	**A**
58) Excess cortisol has the following effects EXCEPT: a) Lymphocyte inhibitory effect. b) Anti-inflammatory effect. c) Anti-allergic effect. d) Immune response stimulatory effect.	D
59) Cushing syndrome is characterized by: a) Hypotension. b) Hypoglycemia. c) Tremors of the hand. d) Moon face.	**D**
60) Most of the glucocorticoid activity of the adrenocortical hormones results from: a) Corticosterone. b) Cortisol. c) Aldosterone. d) Deoxycorticosterone. e) Androstenedione.	B

61) Which of following is not synthesized in the adrenal cortex: a) Cortisol. b) Corticosterone. c) Androstenedione. d) Testosterone. e) Dehydroepiandrosterone	**D**
62) Which of the following hormones has a mineralocorticoid activity: a) Epinephrine. b) Insulin. c) Cortisol. d) Glucagon. e) Growth hormone.	C
63) Cortisol secretion from the adrenal cortex is stimulated by: a) Increased activity of rennin angiotensin system. b) Hyperkalemia. c) Hyponatremia. d) Stress condition e) Hyperglycemia.	D
64) As regarding adrenal androgens, which of the following is false: a) Not responsible for secondary sex organ growth in pubertal phase. b) Stimulate the appearance of pubic and axillary hair in females. c) It includes dehydroepiandrosterone and androstenedione. d) Their secretion is controlled by pituitary gonadotropins. e) Their androgenic activity is weaker than that of testosterone.	**D**
65) Which hormonal change is responsible for Virilism?** a) Low adrenal androgens b) Excessive adrenal androgens c) High estrogen levels d) Low progesterone levels	B

66) What is the definition of Virilism? a) Development of female secondary sex characteristics in males b) Development of male secondary sex characteristics in females c) Loss of sexual characteristics d) Excessive secretion of estrogen	B
67) What is a manifestation of Adrenogenital Syndrome in male children? a) Gynecomastia b) Precocious pseudo-puberty without spermatogenesis c) Loss of facial hair d) Decreased muscle mass	B
68) In a female fetus, excessive adrenal androgens lead to: a) Enlarged ovaries b) Female pseudo-hermaphroditism c) Delayed puberty d) Hypogonadism	B
69) Which psychological disturbance is associated with Virilism? a) Euphoria b) Homosexuality (due to hormonal influence) c) Increased maternal instincts d) Reduced aggression	B

1) Adrenaline is a hyperglycemic hormone because it: a- Stimulates glycogenesis in the liver. b- Stimulates glycogenolysis in muscle, c- inhibits glucagon secretion, d- inhibits ACTH secretion e- Directly stimulates glucose uptake	B
2) Manifestations of Pheochromocytoma include: a) Hypertension b) Hypoglycemia c) Dry skin d) red skin e) Bradycardia	**A**
3) As regarding the secretion of catecholamines from the adrenal medulla, which of the following is not true? a. The adrenal medulla secretes epinephrine more than norepinephrine. b. Conversion of norepinephrine to epinephrine needs high local concentration of cortisol. c. Catecholamine secretion is low in basal states. d. Catecholamine secretion is controlled by the adrenaline secreting center in mid brain. e. Catecholamine secretion is increased by stimulation of the peripheral chemoreceptors.	D
4) Hyposecretion of the Adrenomedullary Hormones is characterized by: a) Severe headache. b) No symptoms c) Pale skin d) Palpitations e) Hypertension	B
5) As regard the secretion of catecholamines from the adrenal medulla a) The adrenal medulla secretes norepinephrine more than epinephrine. b) Conversion of norepinephrine to epinephrine does not need high local concentration of cortisol. c) Catecholamine secretion is low in basal states. d) The adrenaline secreting center that control catecholamine secretion is located in mid brain. e) Catecholamine secretion is increased by stimulation of the arterial baroreceptors.	**C**

6) About catecholamines: a) They produce an inhibitory effect on the reticular activating system (RAS). b) They exert a direct inhibitory effect on the respiratory center. c) Their secretion is inhibited in cases of hypoglycemia and hypotension. d) At the beta receptors, they act by increasing the intracellular cyclic AMP	D
7) One of the following areas does not send impulses to the adrenaline secreting center: a) The Hypothalamus b) The baroreceptors in the aortic arch and carotid sinus c) The central chemoreceptors d) The peripheral chemoreceptors e) The volume receptors in the atria and pulmonary vessels	C
8) Effects of Catecholamine on metabolism include: a) It stimulates lipogenesis b) It Inhibits glycogenolysis in muscle, c) It stimulates glycogenolysis in the liver d) It Inhibits glucagon secretion e) It Inhibits lipolysis	C
9) Catecholamine secretion is stimulated by: a) Increased activity of rennin angiotensin system. b) Hyperkalemia. c) Hyponatremia. d) Stress condition. e) Hyperglycemia.	D
10) Effect of Catecholamine on smooth muscles: a) Bronchodilatation b) contraction of the walls (□2 action) in the gastro- intestinal tract c) Relaxation of sphincters (□ action) in the gastrointestinal tract. d) Relaxation of the internal urethral sphincter e) Constriction of the pupil	A

11) As regards effect of adrenaline on skeletal muscle, Orbelli phenomenon: a) Adrenaline increases the strength of skeletal muscle contraction b) Adrenaline facilitates muscle fatigue c) Adrenaline decreased blood flow to the muscles d) Adrenaline increases lactic acid in muscle e) Adrenaline decreases energy.	**A**
12) Physiological action of Catecholamine includes: a) Inhibits metabolic process b) Decreases O2 consumption c) Produces bronchoconstriction d) Produces Coronary vasoconstriction e) dilates the blood vessels in skeletal muscles	E
13) Which cells in the adrenal medulla are responsible for catecholamine synthesis? a) Glomerulosa cells b) Chromaffin cells c) Beta cells d) Alpha cells e) Parafollicular cells	B
14) Regarding the physiological action of catecholamine, which of the following is TRUE? a) It inhibits all the cardiac properties b) It decreases the O2 consumption c) It increases the glomerular filtration rate d) It increases the central nervous system excitability e) It constricts the blood vessels in the skeletal muscles and the liver	D
15) Which one of the following hormone (s) bind(s) to cell membrane receptor? a) catecholamines b) estrogen c) progesterone d) testosterone e) thyroxine	A

16) Adrenalin secretion from the adrenal glands decreases the: a) Blood free fatty acid level. b) Blood flow to skeletal muscles. c) Blood flow to the kidneys. d) Release of renin in the kidneys.	C
17) Epinephrine predominately causes: a) Glycogenolysis. b) Gluconeogenesis. c) Glycogenesis. d) Glycolysis.	**A**
18) Pheochromocytoma: a) Is a tumor of adrenal cortex. b) Is manifested by hypotension. c) Is manifested by hyperglycemia. d) a and c are correct.	C
19) Pheochromocytoma predominately secrets: a) Epinephrine. b) Nor Epinephrine. c) Serotonin. d) Dopamine.	A
20) Pheochromocytoma predominately secrets: a) Epinephrine. b) Nor Epinephrine. c) Serotonin. d) Dopamine.	**A**

21) Which enzyme is responsible for the inactivation of catecholamines in extra□neuronal tissues? a) Monoamine oxidase (MAO) b) Catechol-O-methyltransferase (COMT) c) Acetylcholinesterase d) Tyrosine hydroxylase e) Dopamine beta-hydroxylase	B
22) What is the major metabolic waste product of catecholamines found in urine? a) Homovanillic acid (HVA) b) Vanillyl mandelic acid (VMA) c) 5-HIAA d) Dopamine e) Serotonin	B
23) Where is the adrenaline-secreting center (A.S.C) located? a) Hypothalamus b) Medulla oblongata c) Pituitary gland d) Spinal cord e) Cerebral cortex	**B**

1) The parathormone is secreted by which of the following? a) Para-follicular cells of the thyroid gland. b) Chief cells of the thyroid gland. c) Oxyphil cells of the thyroid gland. d) Chief cells of the parathyroid gland. e) Oxyphil cells of the parathyroid gland	**D**
2) Which of the following hormones is secreted by the parafollicular cells of thyroid glands? a) Thyroxin. b) Triiodothyronine. c) Calcitonin. d) Cortisol. e) TSH	C
3) Which of the following is not Involved in regulating plasma Ca2+ levels? a. Kidneys b. Skin c. Liver d. Lungs e. Intestine	D
4) Calcitriol acts on target organs to regulate calcium metabolism; These organs are: a) Spleen, intestine and Bone. b) Bone, liver and lymph nodes. c) Liver, kidneys and spleen d) Kidneys, bone and intestine e) Lymph nodes and liver.	**D**
5) The primary physiological stimulus for parathyroid hormone parathormone secretion: a) Decrease vitamin b) Decrease in plasma calcium. c) Increase blood phosphate. d) Decrease thyroid secretion. e) Increase bone resorption	B

6) Parathyroid hormone: a) Helps in deposition of Ca++ in bones. b) Increases plasma phosphates. c) Decreases phosphate reabsorption from the PCT. d) Stimulates osteoblasts. e) Is stimulated by TSH.	C
7) Parathyroid hormone : a) Stimulates phosphate reabsorption in DCT. b) Inhibits osteoclasts. c) Increases synthesis of active vitamin D. d) Stimulates osteoblasts. e) Decreases calcium reabsorption from DCT.	C
8) The normal plasma calcium concentration is: a) 9 mg%. b) 9 gm%. c) 9 mg/ml. d) 9 ml%.	A
9) Which of the following would you expect to Find in a patient whose diet has been low In calcium for 2 months? a) Increased formation of 24,25-dlhydroxycholecalciferol. b) Decreased calcium-binding protein in intestinal epithelial cells c) Increased parathyroid hormone secretion. d) A high plasma calcitonin concentration e) Increased plasma phosphate.	C
10) Which of the following results from the action of parathyroid hormone (PTH) on the renal tubule? a) Inhibition of 1alpha-hydroxylase b) Stimulation of Ca2+ reabsorption in the distal tubule c) Stimulation of phosphate reabsorption in the proximal tubule d) Interaction with receptors on the luminal membrane of the proximal tubular cells e) Decreased urinary excretion of cyclic adenosine monophosphate (cAMP)	B

11) 1,25-Dihydroxycholecalciferol affects intestinal Ca2+ absorption by: a. Includes alterations in the activity of genes. b. activates adenylyl cyclase. c. decreases cell turnover. d. changes gastric acid secretion. e. involves degradation of apical calcium channels.	**A**
12) Which of the following is NOT correct for PTH: a) It is secreted from the parathyroid gland. b) It causes excretion of calcium in the renal tubules. c) It is secreted in response to hypocalcemia. d) It causes activation of vitamin D in the kidney. e) It helps in resorption of calcium from bones.	B
13) Parathyroid hormone (PTH): a) Inhibits osteoclasts. b) Stimulates osteoblasts. c) Stimulates phosphate reabsorption in DCT. d) Increases synthesis of active vit D. e) Decreases calcium reabsorption from DCT.	D
14) All the following statements regarding Parathormone (PTH) are correct EXCEPT: a) It stimulates bone resorption. b) It decreases phosphate reabsorption in PCT. c) It inhibits formation of 1,25 dihydroxy vitamin D. d) It inhibits osteoblasts.	C
15) Parathyroid hormone: a) Secretion is regulated by a pituitary feedback control system. b) Acts directly on bone to increase bone resorption. c) Decreases absorption of calcium from the intestines. d) Decreases phosphate excretion.	**B**

16) PTH produces one of the following actions? a) ↓ osteoclastic activity. b) ↑ urinary excretion of Ca^{2+} and PO_4^{3-}. c) ↓ intestinal absorption of Ca^{2+} and PO_4^{3-}. d) Formation of active vitamin D3 (calcitriol) in the kidneys.	**D**
17) Patient with parathyroid deficiency 10 days after thyroidectomy will show: a) Low plasma phosphate and Ca2+ levels and tetanus b) Low plasma Ca2+ levels, increased muscular excitability and Trousseau's sign c) High plasma phosphate and Ca2+ and bone demineralization d) Increased muscular excitability, high plasma Ca2+ and bone dimerization	B
18) All the following hormones increase plasma calcium level EXCEPT: a) 1,25 DHCC. b) PTH. c) Clacitonin. d) growth hormone	C
19) Calcitonin: a) Is secreted from follicular cells of thyroid gland. b) Is secreted from parathyroid gland. c) Increases plasma calcium level. d) Decreases plasma calcium level. e) Leads to lipolysis.	**D**
20) High levels of PTH are not consistent with one of the following: a) Parathyroid tumors. b) Recurrent formation of renal calculi. c) Frequent occurrence of spontaneous fractures. d) Osteoporosis. e) A low serum Ca^{++} level associated with muscle stiffness.	E

21) The intestine adapts to a low ..... in diet by increasing the absorbed proportion: a) Calcium. b) Phosphate. c) Magnesium. d) Cobalt. e) Cupper	A
22) Ca^{++} absorption is increased by: a) Hypercalcemia. b) Oxalate in diet. c) Iron overload. d) 1,25 dihydroxycholecalciferol. e) Increase Na^{+} absorption.	D
23) What is the effect of chronic renal failure on $Ca2^{+}$ metabolism? a) Decreased glomerular filtration rate leads to ↓ serum (phosphate) b) Decreased parathyroid hormone (PTH) levels. c) Decreased serum phosphate leads to increased ionized [$Ca2^{+}$]. d) Increased production of 1,25-dihydroxy cholecalciferol e) Results in renal osteodystrophy	E
24) In hyperparathyroidism, which of the following is correct? a) Low serum calcium b) High serum phosphorus c) Low serum calcium and high serum phosphorus d) High serum calcium and low serum phosphorus e) None of the above	**D**
25) A 3-year-old girl has been brought for consultation. She had multiple rachitic deformities.Which of the following vitamins recommended as apart of treatment a) Vitamin D b) Vitamin E c) Vitamin B1 d) Vitamin B6 e) Folic acid	**A**

26) Active form of vit. D is called: a) Calcitonin b) Calcitriol c) Calcidiol d) Calcitetrol e) None of the above	B
27) A 54-year-old patient complained of muscle weakness, fatigue and depression. She had a recent episode of renal stones and bone scan revealed osteopenia. She hadn't entered menopause. She had taken daily multivitamin tablets plus additional calcium supplementsBlood chemistry analysis:revealed elevated serum calcium level.Urine analysis:revealed phosphaturia Patient's symptoms are most likely caused by a) Excess synthesis of vit. D b) Excess synthesis of PTH c) Excess synthesis of calcitonin d) Excess synthesis of Ca e) Excess synthesis of phosphate A	B
28) The normal plasma calcium level is: a) 5-7 mg%. b) 7-9 mg%. c) 9-11 mg%. d) 11-13 mg%. e) 13-15 mg%.	C
29) As regard parathormone which of the following statements is false? a) Raise lowered Ca?* level b) Inc. absorption of Ca"* from the small intestine c) Inc. reabsorption of Ca'* from the kidney d) Inc. reabsorption of Pi from the kidney e) Stimulates a-1-hydroxylase enzyme	**D**
30) Active absorption of calcium occurs in: a) Duodenum. b) Ileum. c) Colon. d) Stomach. e) Jejunum.	A

31) In chronic renal failure : a) High PTH and high vit D b) High PTH , low vit D c) Low PTH and low vit D d)Low PTH and high vit D	B
32) Normal serum ionic calcium level is about: a) 10 mg%. b) 5 mg%. c) 2.5 mg%. d) 12 mg%. e) 20 mg%.	B
33) Which of the following does NOT promotes calcium deposition: a) Growth hormone. b) TSH. c) Vitamin D3. d) Testosterone. e) Estrogens.	B
34) Which of the following resorb bone? a) Osteoblasts. b) Osteocytes. c) Osteoclasts. d) Osteoid. e) Periosteum.	C
35) The parathyroid hormone (PTH) a) secreted by the thyroid parafollicular cells. b) Decreases the renal excretion of phosphates c) If increased, it depresses the activity of the anterior pituitary gland. d) Mobilizes Ca mainly from the bones e) Secretion is stimulated when the blood Ca level is increased	D

36) Concerning vitamin D. all the following is true except: a) it can be formed in the body. b) It increases the intestinal absorption of Ca c) It is essential for the calcification of cartilage at the epiphyses of bones d) It is activated in the kidney by conversion to 1,25 di-hydroxy-chole□calciferols. e) The formation of its active form is inhibited by the PTH	E
37) The serum calcium level: a) Is normally about 30 mg %. b) Influences the rate of PTH secretion by an action on the hypothalamus. c) Is approximately 10% ionized and 90% combined. d) Becomes less ionized when the blood PH falls. e) Greatly affects the neuromuscular excitability.	E
38) The serum Ca level falls in all the following conditions except: a) If sodium citrate is added b) In case of vitamin D deficiency. c) If the thyroid gland is perfused with a calcium rich solution. d) In cases of hyperventilation e) When the blood phosphate level falls	E
39) The PTH: a) Increases the serum phosphate level b) Decreases calcium absorption from the GIT c) Is Increases by the thyroid follicles cells d) Mobilizes calcium from bones	**D**
40) A 59-year-old woman has osteoporosis, hypertension, hirsutism, and hyperpigmentation. Magnetic resonance imaging indicates that the pituitary gland is not enlarged. Which of the following conditions is most consistent with these findings? A) Pituitary adrenocorticotropic hormone (ACTH)-secreting tumor B) Ectopic ACTH-secreting tumor C) Inappropriately high secretion rate of corticotropin-releasing hormone D) Adrenal adenoma E) Addison's disease	B

41) Parathyroid hormone: a. Stimulates renal tubular Ca2+ reabsorption in exchange with Mg2+ excretion b. stimulate osteoclast proliferation and activity c. Increases intestinal absorption of Ca2+ independent on 1, 25 (OH)2 Da d. Secretion is increased by the rise in plasma Ca2+ concentration e. Decreases the production of 1, 25 (OH)2 D3	B
42) **PTH increases the serum Ca by all the following mechanisms except**: a) Stimulating bone resorption by increasing the osteoclastic activity b) Increasing the bone cell permeability to Ca c) Interference with filtration of Ca in the renal glomeruli. d) Activation of the 1-hydroxylase enzyme in the kidney. e) Increasing Ca reabsorption in the distal renal tubules	C
43) All the following about calcitonin is true except: a) It is a calcium lowering hormone secreted by the C cells in the thyroid gland b) It is more active in young individuals than in adults. c) Its actions are mediated by increasing the intracellular cyclic AMP content. d) Its secretion is not affected by acetylcholine. e) It increases the number and activity of the osteoclasts in bones.	E
44) The parathormone: a) Increases the urinary output of phosphate b) Inhibits calcium mobilization from bones c) Secretion is regulated by the serum Na level d) Directly promotes Ca absorption from the intestine	A
45) Parathyroid hormone (PTH) is accurately described by which of the following statements? a. It is secreted in response to an increase in plasma Ca2+ concentration b. It acts directly on bone cells to increase Ca 2+ deposition. c. It acts directly on intestinal cells to decrease Ca 2+ absorption d. It causes a decrease in cAMP within renal proximal tubular cells e. It is secreted in response to an increase in plasma P04- concentration	**E**

46) How does estrogen protect against osteoporosis? A) By increasing osteoclast activity B) By inhibiting PTH-mediated bone resorption C) By decreasing calcium absorption D) By promoting phosphate retention E) By reducing vitamin D activation	B
47) Which hormone decreases plasma calcium levels by inhibiting osteoclast activity? A) Parathormone B) Calcitonin C) Aldosterone D) Growth hormone E) Estrogen	B
48) Which of the following conditions is caused by hypocalcemia? A) Osteoporosis B) Tetany C) Hyperparathyroidism D) Renal calculi E) Hyperthyroidism	B
49) **Which symptom is NOT associated with hyperparathyroidism**? A) Muscle weakness B) Bone pain C) Polyuria D) Hypotonia E) Carpopedal spasm	E
50) A patient with hyperparathyroidism is at risk for developing: A) Hypocalcemia B) Renal calculi C) Hypophosphatemia D) Muscle hypertonia E) Vitamin D deficiency	B

51) Which medication is used in hypoparathyroidism to mimic PTH effects without causing antibody formation? A) Calcium gluconate B) Vitamin D3 C) Dihydrotachysterol D) Ammonium chloride E) Calcitonin	C
52) **In latent tetany, plasma calcium levels are typically**: A) Below 7 mg% B) 7-9 mg% C) 9-11 mg% D) Above 11 mg% E) Normal range	B
53) Which of the following contributes to tetany in a patient with renal failure? A) Phosphate retention B) Hypercalcemia C) Excess Vitamin D D) Increased PTH secretion E) Alkalosis	**A**
54) Osteitis fibrosa cystica is a complication of which disorder? A) Hypoparathyroidism B) Hyperparathyroidism C) Tetany D) Vitamin D deficiency E) Hypothyroidism	B
55) A patient presents with carpopedal spasm and laryngeal stridor. Which condition is most likely? A) Hyperparathyroidism B) Tetany C) Osteoporosis D) Renal calculi E) Hyperthyroidism	B

56) What is the primary biochemical finding in hyperparathyroidism? A) Hypocalcemia B) Hypercalcemia C) Hypophosphatemia D) Hyperphosphatemia E) Hypermagnesemia	B

1) **Which option is most appropriate for a patient with newly diagnosed hyperthyroidism in the first trimester of pregnancy?** A. Methimazole B. Propylthiouracil (PTU) C. Radioactive iodine D. Surgical removal of the thyroid	B
2) **A 29-year-old female has a TSH of 13.5 mIU/L (normal 0.5 to 4.7 mIU/L). Which agent is most appropriate to treat the TSH abnormality?** A. Levothyroxine B. Liothyronine C. Liotrix D. Propylthiouracil	**A**
3) **A patient was recently placed on levothyroxine. Which of her medications may affect the levothyroxine dosage requirements?** A. Bromocriptine B. Calcium carbonate C. Metoprolol D. Vitamin D	B
4) **A 65-year-old man with multinodular goiter is scheduled for a near-total thyroidectomy. Which of the following drugs will be administered for 10-14 d before surgery to reduce the vascularity of his thyroid gland?** A.Levothyroxine B. Liothyronine C. Lugol's solution D. Prednisone E. Radioactive iodine	C
5) **When initiating T4 therapy for an elderly patient with longstanding hypothyroidism, it is important to begin with small doses to avoid which of the following?** A. A flare-up of exophthalmos B. Acute renal failure C. Hemolysis D. overstimulation of the heart E. Seizures	D

6) A 25-year-old woman presents with insomnia and fears she may have "something wrong with her heart." Lab tests confirm hyperthyroidism. Which of the following is a drug that produces a permanent reduction in thyroid activity? A. I131 B. Methimazole C. Propylthiouracil D. Thiocyanate E. Thyroglobulin	A
7) Though rare, a serious toxicity associated with the thioamides or PTU is which of the following? A. Agranulocytosis B. Lupus erythematosus-like syndrome C. Myopathy D. Torsades de pointes arrhythmia E. Thrombotic thrombocytic purpura (TP)	A
8) Methimazole reduces serum concentration of T3 primarily by which of the following mechanisms? A. Accelerating the peripheral metabolism of T3 B. Inhibiting the proteolysis of thyroid- binding globulin C. Inhibiting the secretion of TSH D. Inhibiting the uptake of iodide by cells in the thyroid E. Preventing the addition of iodine to tyrosine residues on Thyroglobulin	E
9) A 56-year-old woman presented to the emergency department with tachycardia, shortness of breath, and chest pain. She had had shortness of breath and diarrhea for the last 2 d and was sweating and anxious. The diagnosis of thyroid storm was made. Which of the following is a drug that is a useful adjuvant in the treatment of thyroid storm? a) Propranolol. b) Radioactive iodine. c) Epinephrine. d) Amiodarone e) misoprostol	A

10) **A 30-year-old woman who was 1 month pregnant complained to her physician of swelling of the eyelids. Subsequent blood tests gave the following results: free thyroxine (T4) 3.3 ng/dL (normal 0.9-2.0 ng/dL), (TSH) < 0.01 mU/L (normal 0.5-5.0 mU/L). Treatment with which of the following drugs would be appropriate for this patient?** a) Radioactive iodine b) Potassium iodide c) Methyldopa d) Propylthiouracil e) Esmolol	D
11) **A 2-year-old boy was brought to the emergency department because of fever, irritability, and diarrhea. The mother reported that she found her levothyroxine bottle empty. Vital signs were heart rate 180 bpm, respirations 26/min. Laboratory test showed high T4 level. An appropriate emergency therapy was planned. Which of the following drugs should be administered to control hormone-related symptoms that could be rapidly lethal in this patient?** A. Betamethasone B. Propranolol C. Levothyroxine D. Propylthiouracil E. Radioactive iodine	B
12) **A 33-year-old woman was admitted to the hospital because of anorexia, malaise, jaundice, and right upper quadrant abdominal pain for the past 2 days. The woman was diagnosed with hyperthyroidism 1 month ago and started an appropriate therapy. lab results showed high alanine amino□transferase. Which of following drugs most likely caused the disorder?** A. Methimazole B. Radioactive iodine C. Propylthiouracil D. Propranolol E. Potassium iodide	**C**

13) Which of the following is the treatment of choice for hypothyroidism? A. Iodide. B. Levothyroxine. C. Liothyronine. D. Liotrix. E. Propylthiouracil.	B
14) A 33-year-old woman presents to her primary care physician with tachycardia, heat intolerance, tremor, and unintentional weight loss. A thyroid scan shows multiple regions of thyroid taking _up excess iodine. She is prescribed with a drug that will decrease synthesis of thyroid hormones and decrease the peripheral conversion of T4 to T3. Which drug is this? (A) Lanreotide (B) Levothyroxine (C) Methimazole (D) Octreotide (E) Propylthiouracil	E
15) A 44-year-old woman with a long history of diarrhea, sweating, and weight loss is thought to have hyperthyroidism. This condition can be worsened with which of the following treatments? (A) Iodide (B) Methimazole (C) Propylthiouracil (D) Surgical removal of the thyroid gland (E) Triiodothyronine	E
16) Which of the following statements is accurate regarding drug management of hyperthyroidism? A. The actions of thyroid peroxidase are inhibited by I131 B. Propylthiouracil inhibits the conversion of thyroxine to triiodothyronine C. Methimazole is unable to cross the placental barrier D. Iodide salts can be used for long-term management E. The iodination of tyrosyl residues to form MIT and DIT are inhibited by beta blockers	B

17) Tri iodothyronine differs from thyroxine in that: A. It is more avidly bound to plasma proteins B. It has a shorter plasma half life C. It is less potent D. It has a longer latency of action.	B
18) Lugol's lodine is used in hyperthyroidism: A. As long term definitive monotherapy B. Preoperatively for 10-15 days C. Postoperatively for 10-15 days D. As adjuvant to carbimazole for long term therapy	B
19) A 60-year-old male presents with severe hyperthyroidism and multinodulargoiter. It was decided to treat him with 131I. The most appropriate course of treatment would be: a) Immediate 131I dosing with no other drug before or after b) Propranolol for 1 week followed by 131 I. c) Propranolol + methimazole till severe thyrotoxicosis is controlled-1 week gap 131I resume methimazole after 1 week for 2-3 months d) Propranolol + Lugol's jodine for 2 weeks 131I —continue Lugol's iodine for 2-3 months	C
20) 40 years old man presented to emergency with fever, restlessness &confusion. On examination severe tachycardia, BP 170/110 and ECG showed atrial fibrillation. Which of the followings is lifesaving drug should be giving immediately to him? a) Carbimazole b) Radioactive iodine c) Propranolol d) Liothyronine e) Insulin	C
21) The most important drawback of radioactive iodine treatment Grave's disease is: A. Subsequent hypothyroidism in many patients B. Marked side effect for 1-2 weeks after treatment C. High cost D. Permanent cure cannot be achieved	**A**

22) **A 27-year-old woman underwent near total thyroidectomy. She was started on levothyroxine. What hormone is produced in the peripheral tissues when levothyroxine is administered?** A. Methimazole B. T3 C. T4 D. TSH E. FSH	B
23) **Which of the following is a sign or symptom that would be expected to occur in the event of chronic overdose with exogenous T4?** A. Bradycardia B. Dry, puffy skin C. Large tongue and drooping of the eyelids D. Lethargy, sleepiness E. Weight loss	E
24) **Which of the following drugs inhibit 5'-deiodinase?** a. Radioactive iodine b. Lugol's iodine c. Propylthiouracil d. Methimazole	C
25) **The most reliable guide to adjust thyroxine dose in hypothyroidism:** A. Pulse rate B. Body weight C. Serum thyroxine level D. Serum TSH level	D
26) **The antithyroid drug with the most rapid onset of antithyroid action is:** a. Sodium iodide b. Propylthiouracil c. I131 d. Methimazole	A

27) The following thyroid inhibitor does not produce goiter when given in over dose: A. Propyl thiouracil B. Carbimazole C. Radioactive iodine D. Sodium thiocyanate	C
28) Agents that can be used to treat thyrotoxicosis don't include: a) Methimazole b) Potassium iodide c) Propylthiouracil d) Radioactive iodine e) Thyroglobulin	E
29) Which patient is most likely to be recommended for thyroidectomy as a treatment for Graves' disease? A) A patient with a small goiter and mild symptoms B) A patient with moderate Graves' eye disease C) A patient with a very large gland causing compressive symptoms D) A patient allergic to propranolol E) A patient with transient hypothyroidism	C
30) Which of the following is a contraindication for radioactive iodine (I131) therapy in Graves' disease? A) Mild hypertension B) Pregnancy or breastfeeding C) Asymptomatic thyroid nodules D) Age >60 years E) History of allergic reactions to iodine	B
31) What is the first-line therapy for hyperthyroidism due to Graves' disease in most cases? A) Radioactive iodine (I131) B) Subtotal thyroidectomy C) Antithyroid drugs (thioamides) D) Propranolol alone E) Corticosteroids	C

32) Which patient population with Graves' disease should avoid RAI therapy? A. Those with mild eye disease B. Those with moderate to severe eye disease C. Patients over 50 years old D. Patients allergic to thioamides E. Patients with transient hyperthyroidism	B
33) What is the route of administration for radioactive iodine (I-131)? A. Intravenous B. Intramuscular C. Subcutaneous D. Oral E. Inhalational	D
34) Over what period does RAI typically restore euthyroidism after administration? A. 1–2 days B. 1–2 weeks C. 4–8 weeks D. 3–6 months E. 1 year	C
35) Why should nonradioactive iodide (KI) be avoided before RAI administration? A. It causes severe nausea B. It competes with I-131 for thyroid uptake C. It increases radiation toxicity D. It worsens Graves' ophthalmopathy E. It induces hypothyroidism rapidly	B
36) When is potassium iodide (KI) typically administered in patients receiving RAI therapy? A. Before RAI to enhance thyroid uptake B. Concurrently with RAI to reduce side effects C. After RAI to limit radioactive hormone release D. Continuously throughout treatment E. Only in cases of thyroid storm	C

37) How long before radioactive iodine (RAI) therapy should thioamide drugs be discontinued? A. 1 day B. 3–7 days C. 10–14 days D. 1 month E. Continued until RAI administration	B
38) A 25-year-old woman has been treated with thyroxine for hypothyroidism. She has become pregnant. She complains now of being constantly fatigued. The proper course of action would be to a) do nothing, fatigue is normal during pregnancy. b) increase the iodine in her diet. c) measure her serum TSH, free T3 and free T4 levels during the first trimester and adjust her thyroxine dose based on the result. d) double her dose of thyroxine. e) decrease the dose of thyroxine as the need for thyroid replacement therapy decreases during pregnancy	**C**
39) Two months after starting treatment for hyperthyroidism with methimazole, your patient returns to your clinic complaining of chronic cough and sore throat that will not go away You recognize that because your patient is being treated with a thioamide,What condition should you be looking for that could be confirmed by ordering a blood test? a) Anemia b) angioedema c) eosinophilia d) leukopenia e) thrombocythemia	D
40) Effects of iodide salts given in large doses don't include: a) Decreased size of thyroid gland b) Decreased vascularity of thyroid gland c) Decreased iodination of tyrosine d) Increased uptake of I131	D

41) A 23-year-old woman presents to her primary care physician with an enlarging neck mass and weight loss. The large mass is seen in the midline of the neck. She has lost 15 Ib over the past month, feels like her heart is racing, and is always hot. The patient is diagnosed with Graves' disease and started on propylthiouracil. Which of the following is a side effect of propylthiouracil? (A) Agranulocytosis (B) Arrhythmias (C) Diabetes (D) Hypertension (E) Tachycardia	**A**

1) **Insulin causes reduction in blood sugar level by the following mechanisms, EXCEPT**: a) Increased glucose uptake in the peripheral tissue b) Reduction of breakdown of glycogen c) Diminished gluconeogenesis d) Decreased glucose absorption from the gut	**D**
2) **Insulin can not be administered by:** a) Oral route b) Intravenous route c) Subcutaneous route d) Intramuscular route.	**A**
3) **Correct statements about crystalline (regular) insulin include all of the following, EXCEPT:** a) It can serve as replacement therapy for juvenile□onset diabetes b) It can be administered intravenously c) It is a short-acting insulin d) It can be administered orally	D
4) **Diabetic coma is treated by the administration of:** a) Lente insulin b) Glucose c) Crystalline insulin d) Oral anti-diabetic drugs	B
5) **The following is peakless insulin preparation:** A. Regular insulin. B. NPH insulin. C. Zinc insulin. D. Insulin galrgine. E. Lispro insulin	D

6) Which of the following is an important effect of insulin? A. Increased conversion of amino acids into glucose B. Increased gluconeogenesis C. Increased glucose transport into cells D. Inhibition of lipoprotein lipase E. Stimulation of glycogenolysis	C
7) Which of the following agents should be administered to achieve rapid control of the severe ketoacidosis in a diabetic boy? A. Regular insulin B. Glyburide C. Insulin glargine D. NPH insulin E. Tolbutamide	A
8) Which of the following is the most likely complication of insulin therapy? A. Hypoglycemia B. Increased bleeding tendency C. Pancreatitis D. Severe hypertension	A
9) The following regimens is Most appropriate for tight control of diabetes mellitus: A. Morning injections of mixed insulin lispro and insulin aspart. B. Evening injections of mixed regular insulin glargine. C. Morning and evening injections of regular insulin, supplemented by small amounts of NPH insulin at mealtimes. D. Evening injections of insulin glargine, supplemented by small amounts of insulin lispro at meal times.	D
10) The following is a long acting insulin preparation: A. Regular insulin. B. NPH insulin. C. Insulin detemir D. Lispro insulin	**C**

11) Which of the following is not Adverse effects of insulin a) Hypokalemia b) Weight gain c) Hyperglycemia d) Allergy e) Lipodystrophy	C
12) Which of the following insulins would provide a patient diagnosed with type 1 diabetes mellitus a constant release of insulin over a 24-hour period? a) insulin aspart b) insulin glargine c) insulin lispro d) NPH Insulin e) regular insulin	B
13) The preparation of insulin for start of treatment of diabetic ketoacidosis is: a) Lente insulin b) N.P.H c) Soluble insulin d) Insulin glargine e) Ultra short insulin	**C**
14) A 13-year-old boy with type 1 diabetes is brought to the hospitalcomplaining of dizziness. Laboratory findings include severe hyperglycemia,ketoacidosis, and a blood pH of 7.15. Which of the following agents should be administered to achieve rapid control of the severe ketoacidosis in this diabetic boy? a) Crystalline insulin b) Glyburide c) Insulin glargine d) NPH insulin e) Tolbutamide	A

15) Which of the following statements is correct regarding insulin glargine? a) It is primarily used to control postprandial hyperglycemia. b) It is a "peakless" insulin. c) The prolonged duration of activity is due to slow dissociation from albumin. d) It should not be used in a regimen with insulin lispro or glulisine e) It may be administered intravenously in emergency cases	B
16) A 45-year-old man with insulin-dependent diabetes mellitus on insulin injection decides that he wants to "drink" the insulin instead of taking the injection form. He is tired of the pain he gets during the injections. Which of the following is the most likely sequelae of this action? a) Diarrhea b) Nausea c) Persistent hyperglycemia d) Transient ischemic attack e) Uremia	C
17) The primary route of administration of insulin is: a) Intradermal b) Subcutaneous c) Intramuscular d) Intravenous	**B**
18) There is no alternative to insulin therapy for: a) All type 1 diabetes mellitus patients b) All type 2 diabetes mellitus patients c) Type 2 diabetes patients not controlled by a sulfonylurea drug d) Type 2 diabetes patients not controlled by a biguanide drug	A
19) DW is a patient with type 2 diabetes who has a blood glucose of 400 mg/dL today at his office visit. The physician would like to give some insulin to bring the glucose down before he leaves the office. Which of the following would lower the glucose in the quickest manner in DW? a) Insulin aspart. b) Insulin glargine. c) NPH insulin. d) Regular insulin	**A**

20) A 28-year-old man who is obese is found to have a hemoglobin A1c of 9.5%. He has been unable to adequately control his blood sugar with diet and exercise alone. His physician wishes to prescribe an insulin product to help control his blood sugar level. Which of the following is the longest acting to provide this patient a low, baseline insulin dose that will last throughout the day? a) Insulin aspart b) Insulin glargine c) Insulin lispro d) Lente insulin e) NPH insulin	B
21) Insulin therapy is required for the following category/categories of type 2 diabetes mellitus patients: a) Patients with ketoacidosis b) Patients undergoing surgery c) Pregnant diabetic d) All of the above	D
22) Effects of insulin do not include: a) Decreased conversion of amino acids into glucose. b) Decreased gluconeogenesis. c) Increased glucose transport into cells. d) Induction of lipoprotein lipase. e) Stimulation of glycogenolysis.	E
23) Which of the following actions most likely mediated the therapeutic effect of insulin in the patient's disease? A. Inhibition of the activity of dipeptidyl peptidase-4 B. Incorporation of glucose transporters in thecell membrane C. Activation of enzymes of the gluconeogenesis pathway D. Inhibition of the tyrosine kinase activity of the insulin receptor	B

24) **A 13-year-old boy with type 1 diabetes received his morning injection of a mixture of insulin lispro and glargine. A few hours later, he was found unconscious in his room. His heart rate was 120 bpm and body temperature 34.8°C, and tetanic contractions of skeletal muscles were present. Which of the following would be the immediate appropriate treatment for this patient?** A. Regular insulin intravenous B. Oral glucose C. Glucagon intramuscular (IM) D.Oral metformin E. Exenatide IM	C
25) **A 42-year-old woman recently diagnosed with SLE started a treatment with a high daily dose of prednisone. The woman had a history of type 1 diabetes currently controlled with two daily administrations of premixed insulin, Which of the following changes in the patient's antidiabetic regimen should be made at this time?** A. Decrease the daily insulin dosage. B. Increase the daily insulin dosage. C. Add glyburide to the antidiabetic regimen. D. Add exenatide to the antidiabetic regimen. E. Add sitagliptin to the antidiabetic regimen.	B
26) **A 12-year-old boy presents with polyuria, polydipsia, and weight loss. Lab results:** - Fasting glucose: 210 mg/dL - HbA1c: 9.2% - Positive ketones in urine **: What is the most appropriate initial treatment?** a) Metformin + lifestyle changes b) Subcutaneous insulin glargine + mealtime insulin lispro c) Sulfonylureas + acarbose d) D) Diet control alone	B
27) **The boy's parents ask why oral antidiabetics are not used. Your response:** a) He needs rapid glucose control. b) Type 1 DM results from beta-cell destruction; insulin is mandatory. c) Oral drugs are toxic in children. d) D) He will develop resistance to pills.	**B**

28) He develops hypoglycemia at night. Which insulin adjustment is needed? - A) Reduce glargine dose - B) Switch to premixed insulin - C) Discontinue metformin - D) Add a glitazone	A
29) Which of the following is true in regard to insulin? a) It needs opening of K+ channels to be secreted from β -cells b) It needs closure of K+ channels to be secreted from β -cells c) It needs closure of Ca+2 channels to be secreted from β -cells d) The ADP is responsible for secretion of insulin	B
30) The primary reason for a physician to prescribe human insulin is: a) It has a faster onset of action than other insulins b) It has a shorter duration of action than other insulins. c) It can be given to patients who have an allergy to animal insulins d) It is more effective in preventing the complications of diabetes than animal insulins. e) It is cheaper than other insulins because it is produced by recombinant technology.	C

1) Treatment of DK include the following except: A. Regular insulin. B. Normal sodium. C. KCL. D. Sulphonylurea.	**D**
2) Sulphonylureas act by: a) Reducing the absorption of carbohydrate from the gut b) Increasing the uptake of glucose in peripheral tissues c) Reducing the hepatic gluconeogenesis d) Stimulating the beta islet cells of pancreas to produce insulin	D
3) True or False: Sulphonylureas are effective in totally insulin deficient patients. This consideration is: * a) True * b) False	B
4) Thiazolidinediones act by: a) Diminishing insulin resistance by increasing glucose uptake and metabolism in muscle and adipose tissues b) Reducing the absorption of carbohydrate from the gut c) Stimulating the beta islet cells of pancreas to produce insulin d) Stimulating the hepatic gluconeogenesis	A
5) Alpha-glucosidase inhibitors act by: a) Diminishing insulin resistance by increasing glucose uptake and metabolism in muscle and adipose tissues b) Competitive inhibiting of intestinal alpha-ghucosidases and modulating the postprandial digestion and absorption of starch and disaccharides c) Reducing the absorption of carbohydrate from the gut d) Stimulating the beta islet cells of pancreas to produce insulin	B

6) **Which of the following drugs is most likely to cause hypoglycemia when used in the treatment of type 2 diabetes?** A. Acarbose B. Glibenclamide C. Metformine D. Rosiglitazone	**B**
7) **Which one of the following drugs promotes the release of endogenous insulin?** A. Acarbose B. Pioglitazone C. Glimpride D. Metformin	C
8) **The combination of metformin and ethanol increases the risk of which of the following?** A. Serious hepatotoxicity B. Excessive weight gain C. Hypoglycemia D. Lactic acidosis	**D**
9) **Which of the following drugs is taken during the first part of a meal for the purpose of delaying the absorption of dietary carbohydrates?** A. Acarbose B. Repaglinide C. Glipizide D. Pioglitazone	A
10) **The PPAR-γ receptor that is activated by thiazolidinedionesincreases tissue sensitivity to insulin by which of the following mechanisms?** A. Activating adenylyl cyclase and increasing the intracellular concentration of cAMP B. Inactivating a cellular inhibitor of the GLUT2 glucose transporter C. Inhibiting acid glucosidase, a key enzyme in glycogen breakdown pathways D. Regulating transcription of genes involved in glucose utilization	D

11) A 55 years old obese lady discovered to have random blood glucose 260 mg/dl during screening at 100 million health and her fasting blood glucose later was 160 mg/dl. She was told that she has type 2 DM. What is the next step? A. Just follow up B. Metformin should be started C. She can be given a small dose sulphonyl urea D. Pioglitazone is given to improve insulin resistance E. Long acting insulin at bed time	B
12) The release of insulin from pancreatic beta cells would most likely be stimulated by which of the following? (A) Clonidine (B) Norepinephrine (C) Diazoxide (D) Glipizide	D
13) **To supplement other oral type 2 diabetes medication, a patient is prescribed a drug to inhibit the intestinal absorption of carbohydrates. What would be an appropriate drug**? (A) Metformin (B) Acarbose (C) Repaglinide (D) Pioglitazone	B
14) Sitagliptin acts by: a) Reducing the absorption of carbohydrate from the gut b) Increasing the uptake of glucose in peripheral tissues c) Reducing the hepatic gluconeogenesis d) Inhibits dipeptidyl peptidase 4 (DPP-4)	D
15) One the main advantages of Liraglutide over exenatide is that A. It is longer in duration. B. It is a synthetic amylin analogue. C. It increases glucagon secretion. D. It is used instead of insulin in type 1 diabetes	A

16) Dapagliflusin acts by: a) Reducing the absorption of carbohydrate from the gut b) Inhibits sodium-glucose cotransporter-2 (SGLT2) c) Reducing the hepatic gluconeogenesis d) Inhibits dipeptidyl peptidase 4 (DPP-4)	B
17) What is the first step in the management of diabetic ketoacidosis? a. To provide fluids intravenously b. To provide insulin c. To provide bicarbonate d. To initiate insulin and fluids simultaneously	**A**
18) In a patient with type 2 diabetes, which drug mimics the action of incretins to augment glucose-dependent insulin secretion? (A) Acarbose (B) Glucagon (C) Exenatide (D) Metformin	C
19) The hormone that is secreted by the alpha cells of the pancreas that raises blood glucose when levels are low is: A. glucagon B. epiniphrine C. insulin D. cortisol	A
20) Insulin promotes all but which of the following: A. lipolysis B. lipogenesis C. protein synthesis D. glucose entry into cells	**A**

21) **Which of the following tissues requires insulin for glucose entry into cells:** A. muscle B. liver C. kidney tissue D. nervous tissue	A
22) **Which of the following oral agents is categorized as a secretagogue?** a) Metformin b) Glipizide c) Sitagliptin d) Miglitol e) Acarbose	B
23) **Which of the following oral antidiabetic agents increases the incretin's duration of action?** a) Sitagliptin b) Acarbose c) Nateglinide d) Tolbutamide	A
24) **A 34-year-old male patient has a past medical history of Type 2 diabetes and hypertension. He has been experiencing profound swelling in his feet and lower legs for the past two weeks. Which diabetes medication is most likely responsible for his new edema?** A. Metformin 850 mg tablet 1 po three times daily B. Gliclazide tablet two po twice daily C. Pioglitazone 45 mg tablet 1 po once daily D. Insulin glargine inject 20 units subcutaneously every evening E. Lisinopril 10 mg tablet 1 po once daily	C
25) **A 55-year-old obese female who has had T2DM for 10 years. She is currently being treated with metformin, but her HbA1c is above goal. She has a history of heart failure and COPD. Her physician wants to adjust her medication that will not cause any weight gain. Which of the following would be most appropriate?** A. Add Canagliflozin B. Add Glimepiride C. Add Pioglitazone D. Add Acarbose E. Increasing the metformin dose to maximum	**A**

26) Which of following anti-diabetic drugs can cause vitamin B12 deficiency? a) Glipizide b) Acarbose c) Metformin d) Pioglitazone e) Nateglinide	C
27) A 78-year-old nursing home resident is admitted to the acute medical unit after being found collapsed in his room. A carer from the nursing home is present and reports that he has had regular 'hypos' recently. On admission he was drowsy, and the blood glucose was 45 mg/dl. Following intravenous dextrose the patient's condition significantly improved. Which drug is most likely responsible for this? A. Metformin 1g bd B. Glipizide 160mg od C. Pioglitazone 45mg od D. Aspirin 75mg od E. Simvastatin 40mg od	B
28) Which of the following when used together have complementary actions that increase insulin secretion? a) Regular human insulin and insulin glargine b) DPP-4 inhibitor sitagliptin and metformin c) Amylin and glucagon d) Glyburide and incretin mimetics e) Acarbose and sitagliptin	D
29) Oral antihyperglycemics that release insulin are: a) Biguanides. b) Meglitinides. c) Thiazolidinediones. d) Exenatide. e) a-glucosidase inhibitors.	B

30) The drug which tends to reverse to the insulin resistance by increasing cellular glucose transporters: a) Glibenclamide b) pioglitazone c) Acarbose d) Prednisolone	B
31) Metformin acts by: a) Releasing insulin from pancreas b) Suppressing gluconeogenesis and glucose output from liver c) Up regulating insulin receptors d) Inhibiting degradation of insulin	B
32) An oral agent help to control patient blood glucose by acting as starch blocker. which drug fits this description: a) Acarbose b) Thiazoldindiones c) Glipizide d) Metformin e) Tolbutamide	A
33) One of the following doesn't promote the release of endogenous insulin: a) Chloropropamide b) Glipizide c) Pioglitazone d) Repaglinide e) Tolbutamide	C
34) Drug used to control postprandial hyperglycemia is: a) Acarbose b) Biguanide c) Exenatide d) Repaglinide e) Sulfonylurea	D

35) Alpha-glucosidase inhibitor (Acarbose): a) Increase complex carbohydrate absorption from GIT. b) Inhibits lactase enzyme. c) Inhibits MAO-B selectively. d) Causes lactic acidosis. e) Causes flatulence as a common adverse effect.	E
36) Which of the following antidiabetic drugs acts by decreasing the amount ofglucose produced by the liver? a) Sulfonylureas. b) Meglitinides. c) Biguanides d) Gliptins. e) Exenatide.	C
37) Lactic acidosis is associated with which of the following drugs: a) Acarbose b) Glipizide c) Metformin d) Rosiglitazone e) Lovastatin	C
38) Which of the following is the mechanism by which sulfonylurea lowers blood glucose level? a) Decrease insulin resistance by lowering body weight b) Enhance renal excretion of glucose c) Increase insulin synthesis d) Release insulin from pancreas	D
39) The main reason metformin should not be used in patients with renal failure is that? a) It increases the risk of lactic acidosis b) It increases the risk of ketoacidosis c) It causes development of CHF d) It causes hepatic necrosis	**A**

40) A 54-year-old obese patient with type 2 diabetes has a history of alcoholism. In his patient, metformin should either be avoided or used with extreme caution because the combination of metformin and ethanol increases the risk of which of the following? a) A disulfiram-like reaction b) Excessive weight gain c) Hypoglycemia d) Lactic acidosis e) Serious hepatotoxicity	D
41) **A 27-year-old man was recently diagnosed with Type-2 diabetes mellitus and placed on a medication. As he was drinking with his friends, he became violently ill. What medication is he most likely taking?** a) Acarbose b) Glyburide c) Metformin d) Pioglitazone e) Tolbutamide	C
42) Which of the following statements is characteristic of metformin? a) Metformin is inappropriate for initial management of type 2 diabetes. b) Metformin decreases hepatic glucose production. c) Metformin undergoes significant metabolism via the cytochrome P450 system. d) Metformin should not be combined with sulfonylureas or insulin. e) Weight gain is a common adverse effect.	B
43) A 57-year-old man was recently diagnosed with Type-2 diabetes mellitus and placed on a medication. He began having myalgias and feeling sick and later developed respiratory distress, so he went to the hospital. His pH was 7.2, and he had elevated blood lactate levels. Which drug is likely causing his problem? a) Acarbose b) Glyburide c) Metformin d) Pioglitazone e) Tolbutamide	C

44) A 44-year-old man with Type-2 diabetes presents to the ambulatory care clinic for follow-up. He was diagnosed with diabetes 6 months ago and was started on oral medication then. His blood sugar has been under good control with a hemoglobin A1c of 6.7%. He has not had any hypoglycemic episodes. His only complaint is that despite daily exercise and eating healthier, he has gained 12 lb in the last 6 months. What medication is most likely to cause his weight gain? A. Acarbose B. Exenatide C. Glyburide D. Metformin E. Pioglitazone	A
45) What is benefit of SGLT2 inhibitor in HF treatment compared to diuretics? A) Blood pressure reduction B) Improved glycemic control C) Reduction in heart rate D) Prevention of cardiac remodeling E) Increase in sodium retention	B
46) Which of the following diabetes medications is most appropriately paired with an adverse effect associated with its use? A. Canagliflozin → urinary tract infections. B. Nateglinide → heart failure. C. Glipizide → weight loss. D. Liraglutide → lactic acidosis.	A
47) Which beneficial effect is achieved by SGLT2 inhibitors in HF and DM patients? A) Increased preload B) Increased sodium reabsorption C) Osmotic diuresis D) Increased heart rate E) Vasoconstriction	C

48) A 64-year-old woman with a history of type 2 diabetes is diagnosed with heart failure. Which of the following medications would be a poor choice for controlling her diabetes? a) Exenatide. b) Glyburide. c) Nateglinide. d) Pioglitazone. e) Sitagliptin.	D
49) Which of the following is not a sulfonylurea but acts by analogous mechanism to bring about quick and brief insulin release that is useful for normalizing meal time glycemic excursions in type 2 diabetes mellitus: a) Glimepiride b) Miglitol c) Repaglinide d) Rosiglitazone	C
50) Which of the following is the most appropriate initial oral agent for management of type 2 DM in patients with no other comorbid conditions? a) Glipizide. b) Insulin. c) Metformin. d) Pioglitazone	C
51) A 63-year-old female presents to clinic for a diabetes follow-up. She has been taking metformin for 3 years now, but her blood sugars have not been well controlled over the past year. Her average morning fasting blood sugar is 165 mg/dL, and her 2-h postprandial is 205 mg/dL. Glimepiride is added to her regimen. What is the mechanism of action of glimepiride? A. Decreased glucagon release B. Increased insulin release C. Increased insulin sensitivity in peripheral tissues D. Inhibits hepatic gluconeogenesis E. Inhibits intestinal brush border enzymes	B

52) The correct statement about nateglinide: a) It is long-acting oral hypoglycemic drug b) Taken just before a meal, it limits postprandial hyperglycemia in type 2 diabetes mellitus c) It lowers blood glucose in both type 1 and type 2 diabetes mellitus d) It acts by opening k channels in myocytes and adipocytes	B
53) What is a recognized adverse effect of SGLT2 inhibitors in diabetic patients? A) Hypocalcemia B) Genital fungal infections C) Hypernatremia D) Bradycardia E) Renal stones	B
54) Which of the following classes of oral diabetes drugs is paired most appropriately with its primary mechanism of action? a) DPP-4 inhibitor → inhibits breakdown of complex carbohydrates. b) Glinide → increases insulin sensitivity. c) Sulfonylurea → increases insulin secretion. d) Thiazolidinedione → decreases hepatic gluconeogenesis.	C

The pituitary gland is located in which part of the skull?

A) Ethmoid bone

B) Frontal bone

C) Sella turcica

D) Temporal bone

✅ C) Sella turcica

The pituitary gland is also known as the:

A) Pineal gland

B) Master gland

C) Hypothalamus

D) Thyroid

✅ B) Master gland

Which structure directly controls the pituitary gland?

A) Cerebellum

B) Hypothalamus

C) Medulla

D) Thalamus

✅ B) Hypothalamus

The pituitary gland is connected to the hypothalamus via the:

A) Corpus callosum

B) Infundibulum

C) Cerebral aqueduct

D) Chiasma

✅ B) Infundibulum

Which lobe of the pituitary gland produces more hormones?

A) Anterior

B) Posterior

C) Both equally

D) None

✅ A) Anterior

The anterior pituitary is also known as the:

A) Neurohypophysis

B) Adenohypophysis

C) Thalamus

D) Medulla

✅ B) Adenohypophysis

Which lobe of the pituitary stores hormones produced by the hypothalamus?

A) Anterior

B) Posterior

C) Intermediate

D) None

✅ B) Posterior

Oxytocin is stored in which part of the pituitary gland?

A) Anterior

B) Posterior

C) Intermediate

D) None

✅ B) Posterior

Growth hormone is secreted by:

A) Posterior pituitary

B) Anterior pituitary

C) Pineal gland

D) Adrenal cortex

✅ B) Anterior pituitary

ADH (Antidiuretic Hormone) is:

A) Produced in anterior pituitary

B) Stored in posterior pituitary

C) Produced in adrenal gland

D) Not related to pituitary

✅ B) Stored in posterior pituitary

Which hormone stimulates the thyroid gland?

A) ACTH

B) GH

C) TSH

D) FSH

✅ C) TSH

Which hormone is responsible for milk production?

A) Oxytocin

B) Prolactin

C) LH

D) ADH

✅ B) Prolactin

FSH is mainly involved in:

A) Blood pressure regulation

B) Glucose metabolism

C) Reproductive functions

D) Immune response

✅ C) Reproductive functions

The pituitary gland sits in the:

A) Optic chiasma

B) Sphenoid bone

C) Occipital bone

D) Mandible

✅ B) Sphenoid bone

The posterior pituitary is made up of:

A) Glandular tissue

B) Neural tissue

C) Cartilage

D) Muscle tissue

✅ B) Neural tissue

The infundibulum connects the pituitary to the:

A) Medulla

B) Hypothalamus

C) Pineal gland

D) Thalamus

✅ B) Hypothalamus

Where is the pituitary gland located relative to the hypothalamus?

A) Lateral

B) Above

C) Below

D) Posterior

✅ C) Below

The anterior pituitary originates from:

A) Neural tissue

B) Oral ectoderm

C) Mesoderm

D) Endoderm

✅ B) Oral ectoderm (Rathke's pouch)

The posterior pituitary develops from:

A) Oral ectoderm

B) Neural ectoderm"infundibulum"

C) Mesoderm

D) Endoderm

✅ B) Neural ectoderm

Which gland is known as the hypophysis?

A) Thyroid

B) Pituitary

C) Adrenal

D) Pineal

✅ B) Pituitary

The pituitary gland develops from how many embryonic sources?

A) One

B) Two

C) Three

D) Four

✅ B) Two (oral ectoderm & neural ectoderm)

Rathke's pouch gives rise to the:

A) Posterior pituitary

B) Infundibulum

C) Anterior pituitary

D) Pineal gland

✅ C) Anterior pituitary

The infundibulum develops into:

A) Pars distalis

B) Pars intermedia

C) Pars nervosa

D) Rathke's pouch

✅ C) Pars nervosa

The anterior lobe of the pituitary is also called:

A) Neurohypophysis

B) Adenohypophysis

C) Mesohypophysis

D) Diencephalon

✅ B) Adenohypophysis

The posterior lobe of the pituitary is called:

A) Adenohypophysis

B) Neurohypophysis

C) Epiphysis

D) Thalamus

✅ B) Neurohypophysis

Rathke's pouch originates from which part of the embryo?

A) Pharyngeal floor

B) Roof of the stomodeum

C) Midgut

D) Optic vesicle

✅ B) Roof of the stomodeum

Which structure degenerates during pituitary development?

A) Pars distalis

B) Pars intermedia

C) Stem connecting this vesicle to the roof of the stomodeum

D) Infundibulum

✅ C) Stem connecting this vesicle to the roof of the stomodeum

The neurohypophysis is derived from:

A) Diencephalon

B) Telencephalon

C) Metencephalon

D) Myelencephalon

✅ A) Diencephalon

Which week does Rathke's pouch first appear?

A) Week 2

B) Week 3

C) Week 4

D) Week 5

✅ C) Week 4

Which of the following is not part of the adenohypophysis?

A) Pars distalis

B) Pars intermedia

C) Pars nervosa

D) Pars tuberalis

✅ C) Pars nervosa

The pars nervosa contains:

A) Endocrine cells

B) Axons of hypothalamic neurons

C) Epithelial cells

D) Cartilage

✅ B) Axons of hypothalamic neurons

The hypophyseal portal system"vascular" connects the hypothalamus to:

A) Posterior pituitary

B) Pars intermedia

C) Anterior pituitary

D) Thalamus

✅ C) Anterior pituitary

The pituitary gland lies in which embryological brain region?

A) Telencephalon

B) Diencephalon

C) Metencephalon

D) Myelencephalon

✅ B) Diencephalon

The interaction between the oral ectoderm and neuroectoderm is crucial for the formation of the:

A) Pineal gland

B) Pituitary gland

C) Adrenal cortex

D) Thyroid gland

✅ B) Pituitary gland

Which structure forms the stalk of the posterior pituitary?

A) Rathke's pouch

B) Pars distalis

C) Infundibulum

D) Mammillary body

✅ C) Infundibulum

The lumen of Rathke's pouch becomes:

A) Pars intermedia

B) Pars nervosa

C) Infundibulum

D) Rathke's cleft

✅ D) Rathke's cleft

The anterior pituitary attaches to the hypothalamus via the:

A) Infundibulum

B) Portal vessels

C) Pituitary stalk

D) Median eminence

✅ B) Portal vessels

Which of the following structures is NOT derived from Rathke's pouch?

A) Pars distalis

B) Pars intermedia

C) Pars tuberalis

D) Pars nervosa

✅ D) Pars nervosa

Which of the following best describes the origin of the anterior pituitary?

A) Outgrowth from diencephalon

B) Neural crest derivative

C) Invagination of oral ectoderm

D) Endodermal thickening

✅ C) Invagination of oral ectoderm

Which embryonic brain region contributes to posterior pituitary formation?

A) Telencephalon

B) Diencephalon

C) Mesencephalon

D) Myelencephalon

✅ B) Diencephalon

Pituitary gland anomalies often result in dysfunction of which system?

A) Digestive

B) Respiratory

C) Endocrine

D) Immune

✅ C) Endocrine

A persistent craniopharyngeal canal is a remnant of:

A) Infundibulum

B) Rathke's pouch

C) Hypothalamus

D) Pineal diverticulum

✅ B) Rathke's pouch

Which pituitary lobe lacks secretory cells?

A) Pars distalis

B) Pars intermedia

C) Pars nervosa

D) Pars tuberalis

✅ C) Pars nervosa

The adenohypophysis is mainly involved in:

A) Neural conduction

B) Hormone storage

C) Hormone secretion

D) CSF production

✅ C) Hormone secretion

Enumerate parts of Adenohypophysis (anterior lobe) ??

▪ composed of:

✓ Pars tuberalis: upwards in front of the infundibulum???

✓ Pars intermedia: (at the back of the cleft)

✓ Pars distalis: (in front of the cleft)

What are the lateral relations to pituitary gland?

Cavernous sinus and its contents.	
lateral wall (Nerves)	Floor (Artery & nerve)
▪ oculomotor, trochlear. ▪ ophthalmic (V_1) , maxillary (V_2).	▪ internal carotid artery ▪ abducent nerve (x in squint

What are Derivatives Of Rathke's Pouch?

- ✓ Pars anterior (pars distalis): is derived from the anterior wall of the vesicle
- ✓ Pars intermedia: is derived from the posterior wall of the vesicle
- ✓ Pars tuberalis: is an upward extension of the wall of the vesicle to surround the stalk of the infundibulum which descends from the diencephalon.

Enumerate some congenital anomalies of pituitary gland

- ✓ Pharyngeal pituitary gland ”accessory pituitary gland”
- ✓ Aplasia & hypoplasia of pituitary gland

The pancreas is located in which region of the abdomen?

A) Right hypochondrium

B) Lower part of posterior abdominal wall

C) upper part of posterior abdominal wall

D) Umbilical Region

✅ C) upper part of posterior abdominal wall

The pancreas is both:

A) Exocrine only

B) Endocrine only

C) Endocrine and exocrine

D) Neither

✅ C) Endocrine and exocrine

Which part of the pancreas lies in the C-loop of the duodenum?

A) Head

B) Neck

C) Body

D) Tail

✅ A) Head

The tail of the pancreas is located near which organ?

A) Kidney

B) Spleen

C) Liver

D) Stomach

✅ B) Spleen

The endocrine part of the pancreas consists of:

A) Acini

B) Ducts

C) Islets of Langerhans

D) Villi

✅ C) Islets of Langerhans

Beta cells of the pancreas secrete:

A) Glucagon

B) Insulin

C) Somatostatin

D) Gastrin

✅ B) Insulin

Alpha cells of the pancreas secrete:

A) Insulin

B) Amylase

C) Glucagon

D) Lipase

✅ C) Glucagon

The exocrine part of the pancreas secretes enzymes into the:

A) Bloodstream

B) Bile duct

C) Duodenum

D) Stomach

✅ C) Duodenum

The uncinate process is part of the:

A) Tail

B) Head

C) Neck

D) Body

✅ B) Head

The head of the pancreas is related posteriorly to:

A) Splenic vein

B) Portal vein

C) Inferior vena cava

D) Splenic vein

✅ C) Inferior vena cava

The neck of the pancreas lies anterior to the beginning of :

A) Renal vein

B) Splenic vein

C) Portal vein

D) Superior mesenteric artery

✅ C) Portal vein

The main duct of the pancreas joins which structure to form the hepatopancreatic ampulla?

A) Common bile duct

B) Right hepatic duct

C) Left hepatic duct

D) Gallbladder

✅ A) Common bile duct

The hepatopancreatic ampulla opens into the duodenum at the:

A) Major duodenal papilla

B) Minor duodenal papilla

C) Pyloric sphincter

D) Ileocecal valve

✅ A) Major duodenal papilla

The pancreas develops from which embryonic structure?

A) Mesoderm

B) Endoderm

C) Ectoderm

D) Neural crest

✅ B) Endoderm

The pancreas arises from how many buds?

A) One

B) Two

C) Three

D) Four

✅ B) Two (dorsal and ventral)

The dorsal pancreatic bud forms which parts of the pancreas?

A) Head and uncinate process

B) Body and tail

C) Neck and head

D) Only uncinate process

✅ B) Body and tail

The ventral pancreatic bud gives rise to:

A) Tail

B) Body

C) Head and uncinate process

D) Duct only

✅ C) Head and uncinate process

The main pancreatic duct is primarily derived from the:

A) The whole Dorsal bud

B) The whole Ventral bud

C) Hepatic diverticulum

D) Midgut

✅ B) The whole Ventral bud

An annular pancreas is caused by abnormal rotation of the:

A) Dorsal bud

B) Ventral bud

C) Hepatic bud

D) Gastric tube

✅ B) Ventral bud

The pancreas becomes secondarily retroperitoneal during development. What does this mean?

A) It remains intraperitoneal

B) It is initially retroperitoneal

C) It fuses to the posterior abdominal wall

D) It becomes mesenteric

✅ C) It fuses to the posterior abdominal wall

Insulin secretion begins around:

A) Week 5

B) Week 10

C) Week 20

D) Birth

✅ C) Week 20

Which part of the pancreas is most often involved in congenital anomalies?

A) Tail

B) Body

C) Head

D) Uncinate process

✅ C) Head

Which part of the pancreas forms first during embryonic development?

A) Ventral bud

B) Dorsal bud

C) Uncinate process

D) Tail

✅ B) Dorsal bud

Which bud gives rise to the pancreatic tail?

A) Ventral

B) Dorsal

C) Both

D) Neither

✅ B) Dorsal

What causes annular pancreas?

A) Failure of dorsal bud to develop

B) Duplication of dorsal bud

C) Bifid ventral bud encircling the duodenum

D) Absence of PDX1 gene

✅ C) Bifid ventral bud encircling the duodenum

The ventral bud rotates around which structure?

A) Inferior vena cava

B) Aorta

C) Duodenum

D) Portal vein

✅ C) Duodenum

The exocrine pancreas develops from:

A) Mesoderm

B) Endoderm

C) Neural crest

D) Ectoderm

✅ B) Endoderm

Which structure develops into the hepatopancreatic ampulla?

A) Dorsal bud

B) Ventral bud

C) Fusion of main pancreatic duct and bile duct

D) Portal vein

✅ C) Fusion of main pancreatic duct and bile duct

The dorsal pancreatic bud arises from the:

A) Foregut endoderm

B) Hindgut endoderm

C) Midgut mesoderm

D) Neural tube

✅ A) Foregut endoderm

Pancreas divisum is due to failure of fusion between:

A) Left and right lobes

B) Endocrine and exocrine parts

C) Ventral and dorsal ducts

D) Islets and acini

✅ C) Ventral and dorsal ducts

Which part of the duodenum does the pancreatic duct open into?

A) First part

B) Second part

C) Third part

D) Fourth part

✅ B) Second part

Insulin can be detected in fetal blood by which week?

A) 8

B) 12

C) 20

D) 28

✅ C) 20

What is the anterior relation of head of pancreas?

TMJ

1) The transverse colon.

2) The superior mesenteric vessels: in front of the uncinate process.

3) The coils of the Jejunum.

What is the anterior relation of neck of pancreas?

3P

1) The pylorus.

2) 1st part of the duodenum.

3) The peritoneum of the lesser sac.

Where does pancreas develop from?

arise from the caudal part of the foregut.

▪ Most of the pancreas is derived from the larger dorsal pancreatic bud, which appears first.

▪ The smaller ventral pancreatic bud gives Uncinate process & part of the head of pancreas.

Enumerate some pancreatic anomalies

Annular pancreas

Accessory pancreatic tissue

Hyperplasia of pancreatic islets

Compare between RT& LT Suprarenal Gland

	Right Suprarenal Gland	Left Suprarenal Gland
Shape	Pyramidal	Semilunar
Anterior relations	IVC Bare area of the liver.	lesser sac (stomach bed) stomach.
Posterior relations	Right crus of diaphragm Right kidney.	Left crus of diaphragm Left kidney.
Hilum	Directed upwards	Directed downwards
Supra-renal	ends in the inferior vena cava.	veins ends in the left renal vein.
Supra-renal arteries	Superior suprarenal artery: from inferior phrenic artery. Middle suprarenal artery: from abdominal aorta Inferior suprarenal artery: from the renal artery	

Where is the thyroid gland located?

A. Behind the trachea

B. In lower part of front of neck

C. Above the larynx

D. Inside the thoracic cavity

Answer: B

The thyroid gland is made up of how many lobes?

A. One

B. Two

C. Three

D. Four

Answer: B

What connects the two lobes of the thyroid gland?

A. Thyroid cartilage

B. Parathyroid gland

C. Isthmus

D. Hyoid bone

Answer: C

Which of the following arteries supplies the thyroid gland?

A. Superior thyroid artery

B. Maxillary artery

C. Basilar artery

D. Internal carotid artery

Answer: A

Which nerve is most closely related to the inferior thyroid artery?

A. Vagus nerve

B. Phrenic nerve

C. Recurrent laryngeal nerve

D. Glossopharyngeal nerve

Answer: C

Which fascia encloses the thyroid gland?

A. Pre-tracheal fascia

B. Investing fascia

C. Buccopharyngeal fascia

D. Carotid sheath

Answer: A

The pyramidal lobe of the thyroid gland is a remnant of which structure?

A. Ductus venosus

B. Ductus arteriosus

C. Thyroglossal duct

D. Branchial arch

Answer: C

Which vein drains the thyroid gland?

A. Inferior thyroid vein

B. Facial vein

C. Maxillary vein

D. Occipital vein

Answer: A

The thyroid gland originates from which embryological structure?

A. 3rd pharyngeal pouch

B. 4th pharyngeal pouch

C. Floor of the primitive pharynx

D. Neural crest cells

Answer: C

Failure of thyroglossal duct regression can result in:

A. Goiter

B. Thyroglossal cyst

C. Branchial fistula

D. Laryngocele

Answer: B

Ectopic thyroid tissue is most commonly found:

A. In the mediastinum

B. At the base of the tongue

C. In the cervical vertebrae

D. In the adrenal glands

Answer: B

The thyroid gland reaches its final position by which week?

A. 4th week

B. 5th week

C. 7th week

D. 10th week

Answer: C

How many parathyroid glands are typically present in the human body?

A. Two

B. Four

C. Six

D. Eight

Answer: B

The parathyroid glands are usually located:

A. In front of the thyroid

B. Posterior border of thyroid gland

C. Inside the thyroid lobes

D. On the trachea

Answer: B

Which artery mainly supplies the parathyroid glands?

A. Internal carotid artery

B. Inferior thyroid artery

C. Facial artery

D. Lingual artery

Answer: B

Parathyroid hormone regulates:

A. Sodium levels

B. Potassium levels

C. Calcium levels

D. Magnesium levels

Answer: C

Superior parathyroid glands develop from which pharyngeal pouch?

A. 1st

B. 2nd

C. 3rd

D. 4th

Answer: D

Inferior parathyroid glands develop from which pharyngeal pouch?

A. 2nd

B. 3rd

C. 4th

D. 5th

Answer: B

The parathyroid glands are derived from which germ layer?

A. Ectoderm

B. Endoderm

C. Mesoderm

D. Neural crest

Answer: B

The 3rd pharyngeal pouch gives rise to the:

A. Inferior parathyroid

B. Thyroid and thymus

C. Larynx and epiglottis

D. Superior parathyroid and thyroid

Answer: A

Ectopic parathyroid tissue is most commonly found in the:

A. Mediastinum

B. Brain

C. Lungs

D. Kidneys

Answer: A

Which of the following best describes the anatomical position of the thyroid gland?

A. Between C2 and C5

B. Between C5 and T1

C. Behind the esophagus

D. Inferior to the clavicle

Answer: B

Which lymph nodes first receive lymphatic drainage from the thyroid gland?

A. Submental nodes

B. Deep cervical nodes

C. Axillary nodes

D. Preauricular nodes

Answer: B

The thyroid gland begins to develop during which week of gestation?

A. 2nd week

B. 3rd week

C. 4th week

D. 6th week

Answer: C

What is the embryological origin of the follicular cells of the thyroid?

A. Mesoderm

B. Endoderm

C. Ectoderm

D. Neural crest

Answer: B

The foramen cecum represents the origin of which structure?

A. Submandibular gland

B. Parotid gland

C. Thyroglossal duct

D. Palatine tonsil

Answer: C

What is a possible midline neck mass that moves with swallowing and tongue protrusion?

A. Dermoid cyst

B. Thyroglossal duct cyst

C. Lipoma

D. Goiter

Answer: B

Lingual thyroid occurs due to:

A. Thyroid agenesis

B. Overactive thyroid

C. Failure of thyroid migration

D. Thyroid carcinoma

Answer: C

Which part of the pharynx gives rise to the thyroid gland?

A. Dorsum of tongue

B. Second pharyngeal arch

C. Floor of primitive pharynx

D. Roof of nasal cavity

Answer: C

The thyroglossal duct extends from the foramen cecum to the:

A. Sternum

B. Cricoid cartilage

C. Final position of thyroid gland

D. Epiglottis

Answer: C

A thyroglossal duct cyst is located:

A. Laterally in the neck

B. Midline near hyoid bone

C. Behind sternum

D. In the axilla

Answer: B

Where are the parathyroid glands usually located?

A. On anterior surface of thyroid

B. On posterior surface of thyroid

C. Within adrenal gland

D. Inside the trachea

Answer: B

Parathyroid glands are supplied by branches of which artery?

A. Superior thyroid artery

B. Inferior thyroid artery

C. Subclavian artery

D. External carotid artery

Answer: B

Parathyroid glands develop from:

A. 1st and 2nd pharyngeal pouches

B. 2nd and 3rd pharyngeal pouches

C. 3rd and 4th pharyngeal pouches

D. 4th and 5th pharyngeal pouches

Answer: C

Mention relations to surfaces of thyroid gland

Lateral surface	Posterior surface	Medial surface
Superficial (lateral) surface, is full & rounded & is Covered by: ✓ Superior belly of omohyoid, at its upper part. ✓ Sternomastoid, at its lower part. ✓ Sternohyoid & Sternothyroid, at middle Not related to thyrohyoid	Carotid sheath: ✓ Common carotid artery ✓ Internal jugular vein ✓ Vagus in between	1. Upper part: ✓ Larynx ✓ Pharynx ✓ External laryngeal nerve in between 2. Lower part: ✓ Trachea ✓ Esophagus ✓ Recurrent laryngeal n. in between

Mention relations to borders of isthmus of thyroid gland

- ✓ Upper border: shows anastomosis between the two superior thyroid arteries
- ✓ Lower border: related to inferior thyroid veins, thyroidea ima, anastomosis between inferior thyroid arteries

Which arteries supply thyroid gland ?

Superior thyroid artery

Inferior thyroid artery

Thyroid ima artery

Accessory thyroid arteries: From the esophageal and tracheal branches

Continue :

- To avoid injury of external laryngeal n while ligating superior thyroid artery ligate it …….. the gland
  Answer→ **near to**
- To avoid injury of recurrent laryngeal n while ligating inferior thyroid artery ligate it …….. the gland
  Answer → **away from**

Histo ENR Important MCQ (Endocrine)

1. Which of the following is a component of pars nervosa:- a) Pituicytes b) Chromophobes c) Brain sand d) Mammotrophs e) Corticotrophs	**A**
2. Which of the following cells act as progenitor cells in the pituitary gland:- a) Thyrotrophs b) Corticotrophs c) Gonadotrophs d) Chromophobic cells e) Somatotrophs	**D**
3. Brain sand is present in:- a) Pars nervosa of pituitary gland b) Pineal gland c) Pars intermedia of pituitary gland d) Pars distalis of pituitary gland e) Pars tuberalis of pituitary gland	**B**
4. In the pituitary gland, Which cell has electron dense granules which increase in size during pregnancy:- a) Thyrotrophs b) Corticotrophs c) Gonadotrophs d) Chromophobic cells e) Mammotrophs	**E**
5. Prolactin hormone is released by the following cells of adenohypophysis:- a) Corticotrophs b) Gonadotrophs c) Mammotrophs d) Somatotrophs e) Thyrotrophs	**C**

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6. Which two hormones are released from the neurohypophysis:- a) Oxytocin and antidiuretic hormone b) Vasopressin and luteinizing hormone c) Growth hormone and prolactin d) ADH and melanocyte stimulating hormone e) Oxytocin and follicle stimulating hormone	**A**
7. The pars distalis of the adenohypophysis of pituitary gland is:- a) When stained with H& E appear pale in color b) Rich in nerve fibers and pituicytes c) Store secretions produced by the hypothalamus d) Connected to the hypothalamus by pituitary stalk e) Contain cells secreting growth hormone	**E**
Which part of the pituitary gland plays a role in the production of melanocyte-stimulating hormone (MSH):- a) Infundibulum b) Pars posterior c) Pars intermedia d) Pars anterior e) Pars tuberalis	**C**
Pinealocytes are cells which:- a) Have deep acidophilic cytoplasm b) Secrete growth hormone c) Secrete FSH & LH d) Secrete melatonin e) Are present in the Pars nervosa	**D**
10. Which cell secrete TSH:- a) Somatotrophs b) Corticotrophs c) Thyrotrophs d) Mammotrophs e) Chromophobes	**C**

11. Which one forms collar around the infundibulum of neurohypophysis:- a) Pars Tuberalis b) Pars Intermedia c) Pars Distalis d) Pars Nervosa e) Pineal body	**A**
12. Brain sand:- a) Found in diseased pineal gland b) Serves as landmark for radiologists c) Intensely acidophilic d) Decrease in size throughout life e) Secretes melatonin	**B**
13. Which of the following is a component of pars nervosa:- a) Brain sand b) Chromophobes c) Corticotrophs d) Mammotrophs e) Pituicytes	**E**
14. What is the most numerous cell in adenohypophysis:- a) Somatotrophs b) Lactotrophs c) Chromophobes d) Corticotrophs e) Thyrotrophs	**C**
15. Herring bodies are characteristic finding in:- a) Pars tuberalis b) Pars nervosa c) Pars intermedia d) Pars distalis e) Pineal body	**B**

16. Calcitonin hormone is secreted by which of the following:- a) Follicular cells b) Para follicular cells c) Chief cells d) Oxyphil cells e) Basophils N.B : Both B & D are correct ✅	**B**
17. Regarding chief cells of the parathyroid gland, which of the following is TRUE:- a) Less numerous with age b) Larger than oxyphil cells c) Polygonal cells with central rounded nuclei d) Deeply acidophilic cytoplasm & dark nucleus e) Secrete thyroxin hormone	**C**
18. Regarding hyperactive thyroid gland, which of the following is true:- a) Follicular cells are columnar b) Follicular cells are squamous c) Distention of colloid d) Follicular cells are cubical e) Increase phosphorus level	**A**
19. EM examination of oxyphil cells shows:- a) Numerous acidophilic granules b) Numerous alpha Glycogen granules c) Numerous ribosomes d) Numerous golgi saccules e) Numerous mitochondria Both A & E are correct ✅	**E**
20. A 35 years old female is diagnosed as hypothyroidism. Tissue biopsy from the thyroid gland of this case reveals:- a) Colloid is depleted and the follicular cells are flattened b) Colloid is depleted and the follicular cells are cubical c) Colloid is abundant and the follicular cells are tall columnar d) Follicles are distended with colloid and follicular cells are flattened e) Colloid is depleted and the follicular cells are tall columnar	**D**

21.Regarding hypoactive thyroid gland, which of the following is true:- a) Follicular cells are columnar b) Follicular cells are squamous c) Depletion of colloid d) Increased thyroid hormone secretion e) Follicular cells are cubical	**B**
22. Regarding parafollicular cell:- a) Smaller than follicular cells b) They reach the lumen of the follicle c) Pale cytoplasm d) Represent 20 % of lining epithelium of thyroid follicles e) Secrete thyroxine hormone	**C**
23. Which cell secrete calcitonin:- a) C-cell b) Follicular cells c) Oxyphil d) Chief cell e) Thyrocytes N.B : Both A & C are correct ✅	**A**
24. Which of the following is present in parenchyma of parathyroid gland:- a) Follicular cell b) C-cell c) Pituicytes d) Oxyphil cell e) Thyrotrophs	**D**
25. Which cell type is involved in the secretion of thyroglobulin:- a) Principal cell b) Oxyphil cell c) Follicular cell d) Parafollicular cell e) Chromaffin cell	**C**

26. Which gland secretes calcitonin:- a) Parathyroid b) Thyroid c) Pineal gland d) Suprarenal cortex e) Suprarenal medulla N.B : Both A & B are correct ✅	**B**
27. What is the most numerous cell in parathyroid gland:- a) Principal cell b) Oxyphil cell c) Parafollicular cell d) Follicular cell e) Chromaffin cell	**A**
28. L/M examination of a biopsy from hyperactive thyroid gland shows which of the following findings:- a) Lining epithelium is ciliated b) Lining epithelium is pseudostratified columnar c) Lining epithelium is simple columnar d) Lining epithelium is simple cuboidal e) Lining epithelium is squamous	**C**
29. L/M examination of a biopsy from hypoactive thyroid gland shows:- a) Lining epithelium is ciliated b) Lining epithelium is pseudostratified columnar c) Lining epithelium is simple columnar d) Lining epithelium is simple cuboidal e) Lining epithelium is squamous	**E**
30. Parafollicular cells:- a) Respond to TSH b) Involved in uptake of thyroglobulin c) Larger than follicular cell d) 10% of thyroid cells e) Deep basophilic	**C**

31.The most inner zone of adrenal cortex is:- a) Zona fasiculata b) Zona glomerulosa c) Zona interna d) Zona pellucida e) Zona reticularis	***E***
32. The cells secreting mineralo-corticoids are present in:- a) Zona fasiculata b) Zona glomerulosa c) Zona interna d) Zona pellucida e) Zona reticularis	***B***
33. Which of the following zones contains the cells secreting glucocorticoids:- a) Zona fasciculata b) Zona glomerulosa c) Zona interna d) Zona pellucida e) Zona reticularis	***A***
34. Spongiocytes are found in:- a) Zona fasciculata b) Zona glomerulosa c) Zona interna d) Zona pellucida e) Zona reticularis	***A***
35. What is the glucagon secreting cells:- a) α cells b) β cells c) δ cells d) F cells e) Ganglion cells	***A***

36. What are the most numerous cells of islets of Langerhans:- a) α cells b) β cells c) δ cells d) F cells e) Ganglion cells	**B**
37. Which is the widest zone of SR cortex:- a) Zona Fasciculata b) Zona Glomerulosa c) Zona Reticularis d) Zona Pellucida e) Zona interna	**A**
38. Which zone contains Lipofuscin pigment in its cells:- a) Zona Fasciculata b) Zona Glomerulosa c) Zona Reticularis d) Zona Pellucida e) Zona interna	**C**
39. Which cell secretes Somatostatin:- a) F cells b) Alpha cells c) Beta cells d) D cells e) Chromaffin cell	**D**
40. Where is insulin secreted from:- a) Alpha cells b) Beta cells c) Delta cells d) F cells e) Pancreatic acini	**B**

41. Which of the followings is a component of SR medulla:- a) Zona glomerulosa b) Zona fasiculata c) Zone reticularis d) Chromaffin cells e) Islets of Langerhans	**D**
42. Which cell type found in adrenal medulla:- a) C-cell b) Follicular cells c) Chromaffin cell d) Oxyphil cells e) Chief cell	**C**
43. Which of the followings is the middle layer of adrenal cortex:- a) Zona glomerulosa b) Zona fasiculata c) Zone reticularis d) Chromaffin cells e) Islets of Langerhans	**B**
44. What is the most outer layer of the suprarenal gland:- a) Zona fasciculata b) Zona glomerulosa c) Zona interna d) Zona pellucida e) Zone reticularis	**B**
45. Which type of the following cells represents the major quantity of cells present in the islet of Langerhans:- a) Alpha cells b) Beta cells c) Delta cells d) F cells e) Gamma cells	**B**

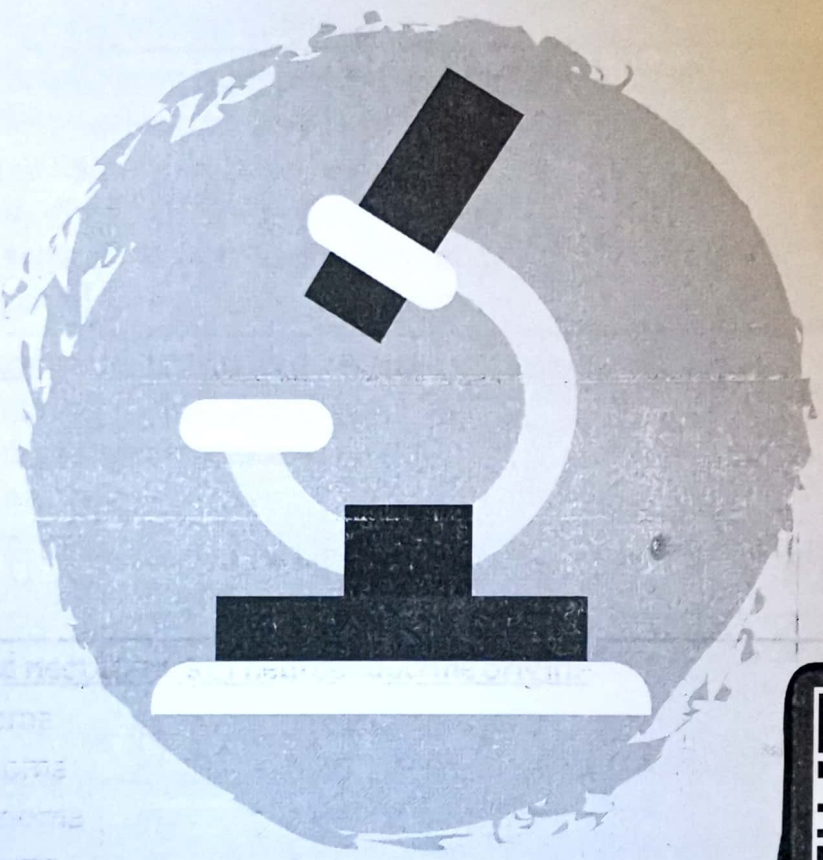
46. Where in the pancreas are islets of Langerhans are more numerous:- a) Head b) Body c) Tail d) Evenly distributed e) Depends on the individual	**C**
47. Cushing syndrome may be due to hyperfunction of which of the following: a) Zona fasciculata b) Zona glomerulosa c) Zona interna d) Zona pellucida e) Zone reticularis	**A**
How do you describe the action of neuro-endocrine cells:- a) Autocrine b) Paracrine c) Merocrine d) Holocrine e) Apocrine	**B**
49. Which of the following cells stains positive with chromium salts:- a) Alpha cells b) Beta cells c) Argentaffin cells d) Enter-chromaffin cells e) F cells	**D**
Which of the following cells stains positive with silver nitrate:- a) Alpha cells b) Beta cells c) Argentaffin cells d) Enter-chromaffin cells e) F cells	**C**

FILTERED FILE

Level-2 Semester-4

Pathology - ENR

BERLIN



6L.E

MCQ Lecture 1

MCQ Thyroid Diseases

DR M. YUSUF

MCQ on Thyroid Diseases

1. **A middle aged female presented with enlarged thyroid, increased basal metabolic rate, diffuse lymphoid hyperplasia and exophthalmos. What is the most probable diagnosis:-** a) Toxic multinodular goiter b) Toxic adenoma c) Hashimoto's thyroiditis d) Grave's disease e) Pituitary thyrotropic adenoma	**D**
2. **Which of the following statements about multinodular goiter is correct:-** a) Usually transform to Grave's disease b) Marked hemorrhage and necrosis c) Usually due to infiltrating lymphocytes d) May occur in areas of iodine deficiency e) Associated with pretibial myxedema	**D**
3. **Primary toxic goiter is usually associated with:-** a) Functioning thyroid adenomas b) Decreased basal metabolic rate c) Exophthalmos d) Pituitary adenoma e) Weight gain	**C**
4. **Which of the following types of thyroiditis is associated with granuloma formation:-** a) Lymphocytic thyroiditis b) Subacute thyroiditis c) Reidel thyroiditis d) Acute thyroiditis e) Hashimoto's thyroiditis	**B**
5. **Which of the following statements is false about Hashimoto's thyroiditis:-** a) It is autoimmune in origin b) It is more common in males than females c) It ends by atrophy of thyroid gland d) E/M shows both atrophied and regenerating acini e) Associated with hypothyroidism	**B**

6. 45-year old female has a feeling of fullness in her neck but no other complaints. Physical examination confirms diffuse enlargement of thyroid gland without any apparent masses. This enlargement has been gradual & painless for more than a year. Tests for thyroid function reveal a normal Free T4 and slightly increased TSH. The most likely cause of this finding is:- a) Toxic multinodular goiter b) Papillary carcinoma c) Subacute granulomatous thyroiditis d) Hashimoto thyroiditis e) Diffuse nontoxic goiter	E
7. The following type of thyroiditis is an auto-immune process:- a) Infectious thyroiditis b) Riedel's thyroiditis c) Hashimoto's thyroiditis d) Granulomatous thyroiditis e) Subacute thyroiditis	C
8. Hashimoto's thyroiditis is characterized by:- a) Atrophic acini b) Lymphocytic infiltrate c) Hurthle cell metaplasia d) Fibrosis e) All of the above	E
9. Concerning N/E appearance of autoimmune thyroiditis, which of the followings is false:- a) The affected areas are pale grey b) The gland is firm in consistency c) The gland show glistening appearance d) Enlarged then atrophied e) All of the above	C
10. The following type of thyroiditis is characterized by marked fibrosis:- a) Infectious thyroiditis b) Riedel's thyroiditis c) Hashimoto's thyroiditis d) Viral thyroiditis e) Subacute thyroiditis	B

11. **A middle aged man has experienced diarrhea, nervousness, palpitations, and increased irritability for the past 5 months. Proptosis and lid lag are among physical examination findings. Which of the following laboratory findings is most likely:-** a) Increased plasma insulin level b) Increased serum T4 level c) Increased serum TSH level d) Increased serum cortisol level e) Increased serum corticotropin level	**B**
12. **A 30 year old female recovering from influenza suddenly develops painful, enlarged thyroid. The most likely diagnosis is:-** a) Autoimmune thyroiditis b) Riedel's thyroiditis c) Thyroid abscess d) Subacute granulomatous thyroiditis e) Hashimoto's thyroiditis	**D**
13. **Differential diagnosis of hard thyroid fixed to the surroundings includes:-** a) Autoimmune thyroiditis b) Subacute granulomatous thyroiditis c) Riedel's thyroiditis d) Infectious thyroiditis e) Thyroid adenoma	**C**
14. **Goiter means:-** a) Inflammatory enlargement of the thyroid gland b) Neoplastic enlargement of the thyroid gland c) Atrophy of the thyroid gland d) Toxic manifestations of thyroid disease e) None of the above	**E**
15. **Simple goiter is associated with all of the followings except:-** a) Intake of goitrogenous agent b) Puberty c) Androgenic steroid therapy d) Dietary iodine deficiency e) Pregnancy	**C**

16. The following is true about multinodular goiter except:- a) Symmetrical enlargement b) Firm and soft areas on cut section c) Outer surface is nodular d) Secondary changes are common e) Papillary structures may be seen	**A**
17. The followings are complications of multinodular goiter:- a) Dysphagia b) Dyspnea c) Hoarseness of voice d) Malignancy e) All of the above	**E**
18. Concerning complications of multinodular goiter, all are true except:- a) Pressure on esophagus causing dysphagia b) Pressure on trachea causing dyspnea c) Malignancy is a common complication d) Toxic manifestations with tachycardia e) Pressure on recurrent laryngeal nerve	**C**
19. Primary toxic goiter is characterized by the following:- a) Symmetrical enlargement of thyroid b) Hyperplastic acini lined by columnar cells with peripheral scalloping c) Stroma is highly vascular d) Reactive lymphoid follicles e) All of the above	**E**
20. About Gravis disease, all are true except:- a) It's organ specific autoimmune disease b) The thyroid is symmetrically enlarged c) Associated with exophthalmos d) BMR is decreased e) Pretibial myxedema	**D**

21. A surgeon explores the thyroid because of a "cold" nodule of the left upper pole. The nodule is firm, non-encapsulated, and has a granular cut surface. There is an enlarged, hard lymph node in the adjacent internal jugular chain. The most likely diagnosis is:- a) Anaplastic carcinoma b) Follicular adenoma c) Follicular carcinoma d) Lymphoma e) Papillary carcinoma	E
22. Concerning follicular adenoma, which of the following is not true:- a) Arise from C-cells b) Solitary mass c) May be macrofollicular or microfollicular d) Capsulated tumor e) Benign tumor	A
23. Tumors of the thyroid gland include all of the followings except:- a) Papillary carcinoma b) Anaplastic carcinoma c) Gravis disease d) Medullary carcinoma e) Follicular carcinoma	C
24. Psammoma bodies are present in which of the following thyroid tumors:- a) Follicular carcinoma b) Anaplastic carcinoma c) Medullary carcinoma d) Papillary carcinoma e) Follicular adenoma	D
25. Cancer thyroid with the best prognosis is:- a) Papillary carcinoma b) Follicular carcinoma c) Medullary carcinoma d) Anaplastic carcinoma e) Lymphoma	A

26. 40-year old female has a multicentric thyroid neoplasm that is composed of polygonal to spindle-shaped cells forming nests and trabeculae. There is prominent pink amyloid stroma that stains positively with Congo red. What is the most probable diagnosis:- a) Papillary carcinoma b) Follicular carcinoma c) Medullary carcinoma d) Anaplastic carcinoma e) Grave's disease	C
27. Amyloid stroma is characteristic of:- a) Papillary carcinoma b) Follicular carcinoma c) Medullary carcinoma d) Anaplastic carcinoma e) Grave's disease	C
28. The material characteristic for medullary thyroid carcinoma is called:- a) Amyloid b) Colloid c) Psammoma bodies d) Hyalinosis e) Fibrosis	A
29. The following thyroid neoplasm is of neuroendocrine origin:- a) Follicular adenoma b) Follicular carcinoma c) Medullary carcinoma d) Papillary carcinoma e) Lymphoma	C
30. Which of the following is not a feature of thyroid adenoma:- a) Solitary nodule b) Compression on surrounding c) Vascular invasion d) Complete capsule e) Contain colloid	C

31. A 45 year old male feels a small lump on the left side of his neck. His physician palpates a firm painless 1.5 cm cervical LN. The thyroid gland is not enlarged. What is the most probable diagnosis:- a) Papillary carcinoma b) Metastatic adenocarcinoma c) Medullary carcinoma d) Follicular carcinoma e) Anaplastic carcinoma	A
32. The following is a feature of thyroid follicular carcinoma:- a) Amyloid stroma b) Papillary formation c) Vascular invasion d) LN spread e) Psammoma bodies	C
33. Nuclear pseudo-inclusions occur in which thyroid neoplasm:- a) Follicular adenoma b) Papillary thyroid carcinoma c) Medullary carcinoma d) Anaplastic carcinoma e) Follicular carcinoma	B
34. Diagnosis of follicular thyroid carcinoma is based mainly on:- a) Formation of atypical follicles b) Absent colloid from the follicles c) Absent capsule d) Capsular and vascular invasion e) Presence of psammoma bodies	D
35. Female patient has a thyroid neoplasm composed of polygonal to spindle shaped cells forming nests and trabeculae. Which of the followings is produced by this neoplasm:- a) Calcitriol b) Cathepsin c) Calcitonin d) Thyroxin e) Parathormone	C

36. Which of the following types of thyroiditis is due to auto-antibodies:- a) Granulomatous thyroiditis b) Hashimoto thyroiditis c) Infectious thyroiditis d) Reidel's thyroiditis e) Subacute thyroiditis	**B**
37. What is the most common cause of hypothyroidism:- a) Iodine deficiency b) Hashimoto thyroiditis c) Thyroid dyshormonogenesis d) Thyroid hormone resistance e) Genetic defect in thyroid development	**A**
38. Anti-thyroglobulin & anti-thyroid peroxidase Abs are characteristic for:- a) Grave's disease b) Hashimoto thyroiditis c) Infectious thyroiditis d) Reidel's thyroiditis e) Subacute thyroiditis	**B**
39. Hurthle cells lining thyroid follicles are characteristic for:- a) Medullary carcinoma b) Hashimoto thyroiditis c) Infectious thyroiditis d) Reidel's thyroiditis e) Subacute thyroiditis	**B**
40. Which of the following types of thyroiditis may be complicated by thyroid lymphoma:- a) Granulomatous thyroiditis b) Reidel's thyroiditis c) Infectious thyroiditis d) Hashimoto thyroiditis e) Subacute thyroiditis	**D**

41. Which of the following thyroid disorders has a viral etiology:- a) Grave's disease b) Reidel's thyroiditis c) Infectious thyroiditis d) Hashimoto thyroiditis e) Subacute thyroiditis	**E**
42. Which of the following thyroid disorders is self-limited with tender gland: a) Grave's disease b) Reidel's thyroiditis c) Infectious thyroiditis d) Hashimoto thyroiditis e) Subacute thyroiditis	**E**
43. Which of the following thyroid disorders may be a part of multifocal idiopathic fibrosclerosis:- a) Grave's disease b) Reidel's thyroiditis c) Infectious thyroiditis d) Hashimoto thyroiditis e) Subacute thyroiditis	**B**
44. Palpation thyroiditis is morphologically similar to:- a) Grave's disease b) Reidel's thyroiditis c) Infectious thyroiditis d) Hashimoto thyroiditis e) De Quervain thyroiditis	**E**
45. Which of the following thyroid diseases is characterized by the presence of large colloid cysts:- a) Grave's disease b) Reidel's thyroiditis c) Hashimoto thyroiditis d) Multi-nodular goiter e) Infectious thyroiditis	**D**

46. Which of the following thyroid disorders is characterized by the presence of Thyroid Stimulating Immunoglobulins "TSI":- a) Grave's disease b) Reidel's thyroiditis c) Infectious thyroiditis d) Hashimoto thyroiditis e) Subacute thyroiditis	**A**
47. Peripheral scalloping "Moth-eaten" colloid is characteristic finding in:- a) Infectious thyroiditis b) Reidel's thyroiditis c) Hashimoto thyroiditis d) Grave's disease e) Subacute thyroiditis	**D**
48. Exophthalmos & pretibial myxedema are characteristic finding in:- a) Infectious thyroiditis b) Hashimoto thyroiditis c) Grave's disease d) Reidel's thyroiditis e) Subacute thyroiditis	**C**
49. Nuclear grooving & Overlapping are characteristic findings is:- a) Medullary carcinoma b) Anaplastic carcinoma c) Follicular carcinoma d) Grave's disease e) Papillary carcinoma	**E**
50. Which of the following thyroid diseases shows clear "ground glass" nuclei:- a) Medullary carcinoma b) Papillary carcinoma c) Grave's disease d) Follicular carcinoma e) Anaplastic carcinoma	**B**

27. Stage of chronic hepatitis means:-

a) Assessment of fibrosis in the liver biopsy
b) Assessment of fatty deposition in the liver biopsy
c) Assessment of portal inflammation in the liver biopsy
d) Assessment of viral load in the liver biopsy
e) Assessment of piecemeal necrosis in the liver biopsy

28. Which of the followings is not a feature of cirrhosis:-

a) Gross nodularity of the liver
b) Loss of the normal hepatic architecture
c) Regenerating nodules
d) Congestion of hepatic blood vessels
e) Presence of chronic inflammatory cells

29. Which of the following statements is false about Hashimoto's thyroiditis:-

a) It is autoimmune in origin
b) It is more common in males than females
c) It ends by atrophy of thyroid gland
d) E/M shows both atrophied and regenerating acini
e) Associated with hypothyroidism

30. A middle aged female presented with enlarged thyroid, increased basal metabolic rate, diffuse lymphoid hyperplasia and exophthalmos. What is the most probable diagnosis:-

a) Toxic multinodular goiter
b) Toxic adenoma
c) Hashimoto's thyroiditis
d) Grave's disease
e) Pituitary thyrotropic adenoma

31. Which of the following statements concerning multinodular goiter is correct:-

a) Usually transform to Gravis disease
b) Marked hemorrhage and necrosis
c) Usually due to infiltrating lymphocytes
d) May occur in areas of iodine deficiency
e) Associated with pretibial myxedema

32. Primary toxic goiter is usually associated with:-

a) Functioning thyroid adenomas
b) Decreased basal metabolic rate
c) Exophthalmos
d) Hypocalcaemia
e) Reidel's thyroiditis

33. ***A 45-year old female has a feeling of fullness in her neck but no other complaints. Physical examination confirms diffuse enlargement of the thyroid gland without any apparent masses. This enlargement has been gradual and painless for more than a year. Tests for thyroid function reveal a normal free thyroxin (Free T4) and a slightly increased level of TSH. The most likely cause for these findings is:-***

a) Toxic multinodular goiter
b) Papillary carcinoma
c) Subacute granulomatous thyroiditis
d) Hashimoto thyroiditis
e) Diffuse nontoxic goiter

34. ***A 37-year old woman complains that she has had difficulty swallowing for about a week, accompanied by a feeling of fullness in the anterior neck. She has a slight fever. Palpation of the thyroid elicits pain. Her serum free t4 level is increased. When seen by an endocrinologist 2 months later, after waiting for an appointment, she no longer has these complaints, and the free T4 level is normal. The condition that best explains these findings is:-***

a) Medullary carcinoma
b) Subacute thyroiditis
c) Toxic multinodular goiter
d) Toxic follicular adenoma
e) Hashimoto's thyroiditis

35. ***A middle aged man has experienced diarrhea, nervousness, palpitations, and increased irritability for the past 5 months. Proptosis and lid lag are among physical examination findings. Which of the following laboratory findings is most likely:-***

a) Increased plasma insulin level
b) Increased serum T4 level
c) Increased serum TSH level
d) Increased serum cortisol level
e) Increased serum corticotropin level

36. ***A surgeon explores the thyroid because of a "cold" nodule of the left upper pole. The nodule is firm, non-encapsulated, and has a granular cut surface. There is an enlarged, hard lymph node in the adjacent internal jugular chain. The most likely diagnosis is:-***

a) Anaplastic carcinoma
b) Follicular adenoma
c) Follicular carcinoma
d) Lymphoma
e) Papillary carcinoma

37. A 40-year old female has a metacentric thyroid neoplasm that is composed of polygonal to spindle-shaped cells forming nests and trabeculae. There is a prominent pink hyaline stroma that stains positively with Congo red. Electron microscopy reveals variable numbers of intracytoplasmic, membrane-bound, electron dense granules. Which of the following immune-histo-chemical stains is most likely to be useful in corroborating the diagnosis of this neoplasm:-

a) Calcitonin
b) Cathepsin D
c) Parathormone
d) Vimentin
e) Cytokeratin

38. A 45 year old male feels a small lump on the left side of his neck. He feels fine and has no other complaints. His physician palpates a firm painless 1.5 cm cervical LN. The thyroid gland is not enlarged. A chest radiograph is unremarkable. Laboratory test findings including thyroid function tests are normal. A fine needle aspirate of the thyroid gland is most likely to show findings consistent with:-

a) Papillary carcinoma
b) Metastatic adenocarcinoma
c) Medullary carcinoma
d) Follicular carcinoma
e) Anaplastic carcinoma

39. A female patient has a thyroid neoplasm composed of polygonal to spindle shaped cells forming nests and trabeculae. Which of the followings is produced by this neoplasm:-

a) Calcitriol
b) Cathepsin
c) Calcitonin
d) Thyroxin
e) Parathormone

40. The thyroid tumor with a neuroendocrine origin is:-

a) Papillary carcinoma
b) Follicular carcinoma
c) Medullary carcinoma
d) Undifferentiated carcinoma
e) Lymphoma

41. Psammoma bodies are present in which of the following thyroid tumors:-

a) Papillary carcinoma
b) Follicular carcinoma
c) Medullary carcinoma
d) Adenoma
e) Lymphoma

42. The material characteristic for medullary thyroid carcinoma is called:-

a) Amyloid
b) Colloid
c) Psammoma bodies
d) Hyalinosis
e) Fibrosis

43. The following type of thyroiditis is characterized by marked fibrosis:-

a) Viral thyroiditis
b) Infectious thyroiditis
c) Grave's disease
d) Hashimoto thyroiditis
e) Riedel thyroiditis

44. The premalignant change in chronic gastritis is:-

a) Superficial inflammation
b) Intestinal metaplasia
c) Atrophy of the gland
d) Presence of the helicobacter
e) Cancer stomach

45. Traction esophageal diverticulum is:-

a) True diverticulum
b) Usually associated with compression symptoms
c) Formed of mucosa and submucosa only
d) Projecting from the posterior esophageal wall
e) None of the above

46. Cholestasis is defined as:-

a) Apoptosis of peripheral hepatocytes resulting in irregular appearance of the limiting plate
b) Intracytoplasmic bile droplets that accumulate in hepatocytes and Von-Kupffer cells
c) Necrosis of small groups of hepatocytes within the lobule
d) Necrosis of large groups of hepatocytes in more than one lobule resulting in collapse of reticulin framework of the affected lobules
e) An extensive necrosis of all hepatocytes and their supporting framework in a simple acinus

47. Barrett's esophagus predisposes to the development of:-

a) Squamous cell carcinoma
b) Reflux esophagitis
c) Adenocarcinoma
d) Normal esophagus
e) Esophageal varices

48. The commonest site of peptic ulcer is:-

a) Esophagus
b) Stomach
c) Meckel's diverticulum
d) Duodenum
e) Large intestine

49. Lack of thyroid hormones in adults produces:-

a) Myxedema
b) Cretinism
c) Grave's disease
d) Autoimmune thyroiditis
e) Hashimoto thyroiditis

50. Skip lesions are found in:-

a) Intestinal TB
b) Crohn's disease
c) Ulcerative colitis
d) Intestinal obstruction
e) Colon adenocarcinoma

51. The following type of thyroiditis is autoimmune process:-

a) Reidel thyroiditis
b) Subacute thyroiditis
c) Infectious thyroiditis
d) Granulomatous thyroiditis
e) Hashimoto thyroiditis

52. Piecemeal necrosis is defined as:-

a) Apoptosis of peripheral hepatocytes resulting in irregular appearance of the limiting plate
b) Intracytoplasmic bile droplets that accumulate in hepatocytes and Von-Kupffer cells
c) Necrosis of small groups of hepatocytes within the lobule
d) Necrosis of large groups of hepatocytes in more than one lobule resulting in collapse of reticulin framework of the affected lobules
e) An extensive necrosis of all hepatocytes and their supporting framework in a simple acinus

53. The term Cheilitis means:-

a) Inflammation of salivary glands
b) Inflammation of esophagus
c) Inflammation of the tongue
d) Inflammation of lips
e) Inflammation of oropharynx

61. Regarding Crohn's disease, the most common area affected in the colon is:-

a) Terminal ileum and Right colon
b) Descending colon
c) Sigmoid colon
d) Transverse colon
e) Rectum

62. Which of the following is not a feature of thyroid adenoma:-

a) Solitary nodule
b) Papillary formation
c) Vascular invasion
d) Hemorrhage
e) Contain colloid

63. The commonest site of peptic ulcer is:-

a) Esophagus
b) Duodenum
c) Stomach
d) Ileum
e) Large intestine

64. Which of the following is not a microscopic feature of chronic hepatitis:-

a) Piecemeal necrosis
b) Fatty infiltration of hepatocytes
c) Lobular necrosis
d) Portal inflammation
e) Fibrosis

65. Regarding inflammatory bowel disease. The risk of malignancy is present in:-

a) Ulcerative colitis
b) Intestinal obstruction
c) Colonic volvulus
d) Crohn's disease
e) Diverticular disease

66. The following is a feature of thyroid follicular carcinoma:-

a) Multiple nodules
b) Papillary formation
c) Vascular invasion
d) Hemorrhage
e) Psammoma bodies

67. Nuclear pseudo inclusions occur in which thyroid neoplasm:-

a) Follicular adenoma
b) Papillary thyroid carcinoma
c) Medullary carcinoma
d) Anaplastic carcinoma
e) Follicular carcinoma

68. Which of the following types of thyroiditis is associated with granuloma formation:-

a) Hashimoto thyroiditis
b) Lymphocytic thyroiditis
c) Reidel thyroiditis
d) Subacute thyroiditis
e) Acute thyroiditis

69. Which of the followings is the cause of achalasia of the esophagus:-

a) Absence of myenteric ganglion in lower esophagus
b) Esophageal diverticulum
c) Mechanical obstruction by foreign body
d) Metaplasia of the lower third of esophagus
e) Reflux of the gastric contents into the lower part of esophagus

70. Which of the followings is the cause of pulsion diverticulum in the esophagus:-

a) Reflux of the gastric contents into the lower part of esophagus
b) Absence of myenteric ganglion in lower esophagus
c) Congenital weakness of inferior constrictor muscle
d) Fibrosed mediastinal LNs
e) Metaplasia of the lower third of esophagus

71. Duodenal ulcer is mainly caused by:-

a) Cigarette smoking
b) Deficiency of mucosal cytoprotectives
c) Local ischemia
d) Increased gastric acid secretion
e) Chronic gastritis

72. 23-year old male patient with abdominal colic and diarrhea. By colonoscopy, there are colonic lineal deep penetrating ulcers (fissures) and cobble stone appearance. What is the diagnosis of this case:-

a) Crohn's disease
b) Infectious colitis
c) Intestinal obstruction
d) Intestinal tuberculosis
e) Ulcerative colitis

Answers of Important MCQ GIT + Endo

1	A	27	A	53	D
2	C	28	D	54	D
3	E	29	B	55	B
4	E	30	D	56	D
5	B	31	D	57	E
6	D	32	C	58	A
7	C	33	E	59	C
8	A	34	B	60	D
9	C	35	B	61	A
10	A	36	E	62	C
11	E	37	A	63	B
12	B	38	A	64	B
13	C	39	C	65	A
14	C	40	C	66	C
15	B	41	A	67	B
16	D	42	A	68	D
17	B	43	E	69	A
18	C	44	B	70	C
19	C	45	A	71	D
20	A	46	B	72	A
21	C	47	C	73	E
22	A	48	D	74	B
23	D	49	A	75	B
24	E	50	B	76	C
25	B	51	E	77	D
26	D	52	A	78	C

Important Pathology ENDO

1. The following is not a manifestation of hyperthyroidism

a) Tremors
b) Arrhythmia
c) Constipation
d) Lid lag
e) Osteoporosis

2. Hypothyroidism may be manifested by all of the following except

a) Deepened voice
b) Heat intolerance
c) Constipation
d) Slow pulse
e) Myxedema

3. Types of thyroiditis doesn't include

a) Crohn's thyroiditis
b) Autoimmune thyroiditis
c) Subacute granulomatous (De Quervain) thyroditis
d) Reidel thyroiditis
e) Infectious thyroiditis

4. Regarding Hashimoto thyroiditis , the following is not true

a) More common in females
b) Its cause is autoimmunity
c) Both T-cell mediated and antibody mediated are involved in pathogenesis
c) Thyroid is symmetrically inflamed
d) Complicated by hyperthyroidism and lymphoma

5. 34 years old female came to hospital complaining from thyroiditis that was diagnosed as Hashimoto thyroiditis . Her investigations may show

a) Regenerative follicles lined by Hurthle cells
b) Loss of glistening appearance of thyroid
c) Symmetrical enlargement of thyroid followed by atrophy
d) All of the above
e) Non of the above

6. Not true about subacute granulomatous thyroiditis

a) Self limiting inflammation
b) Tender thyroid
c) Neutrophils and monocytes infiltrate thyroid
d) May has viral etiology
e) May follow Mumps

7. The following is characteristic for Reidel thyroiditis
a) More common in males
b) Thyroid is soft and smooth
c) It is a common types of thyroiditis
d) Its cause is unknown
e) Thyroid shows delicate fibrosis

8. Non inflammatory non neoplastic enlargement of thyroid is called
a) Reidel thyroiditis
b) Hashimoto thyroiditis
c) De Quervain disease
d) Thyroid adenoma
e) Goiter

9. Diffuse simple goiter may be characterized by all of the following except
a) It represents the late stages of goiter
b) Thyroid is symmetrically enlarged
c) Outer surface of thyroid is regular
d) Thyroid is firm and less glistening
e) Non of the above

10. 35 years old female with neck swelling has performed neck ultrasound that showed multinodular enlargement of thyroid . The biopsy taken and examined under the microscope may reveal all except
a) Nodules variable in size and shape
b) All follicles contain little colloid
c) Epithelial lining follicles is flat to cuboidal
d) Follicles are separated by dense fibrosis
e) Non of the above

11. Complications of simple goiter doesn't include
a) Pressure on surrounding structures
b) Hyperthyroidism due to hyperfunctioning noduels
c) Malignancy in 90% of cases
d) All of the above
e) Non of the above

12. The Type of goiter occurring due to long acting thyroid stimulants is
a) Simple diffuse goiter
b) Primary toxic goiter (Grave's disease)
c) Simple multinodular goiter
d) Secondary toxic goiter
e) Non of the above

Question book

13. Regarding grave's disease , the following is not true

a) Thyroid is symmetrically atrophied
b) Thyroid is dark red in color
c) Thyroid is fleshy
d) Loss of normal translucence of stored colloid
e) Peripheral scalloping of colloid

14. All of the following are present in Grave's disease except

a) Exophthalmos
b) Pretibial myxedema
c) Left ventricular hypertrophy
d) Diffuse lymphoid hyperplasia
e) Decreased basal metabolic rate

15. Which of the following is not a type of thyroid adenoma

a) Macrofollicular adenoma
b) Microfollicular adenoma
c) Hurthle cell adenoma
d) Adenolymphoma
e) Non of the above

16. The commonest type of cancer thyroid is

a) Papillary type
b) Follicular type
c) Undifferentiated type
d) Medullary type
e) Non of the above

17. Carcinoma of thyroid which arises from parafollicular cells is

a) Papillary type
b) Follicular type
c) Undifferentiated type
d) Medullary type
e) Non of the above

18. The following is not a characteristic feature for papillary carcinoma of thyroid

a) 80% of cases of cancer thyroid
b) Early blood spread
c) Washed out nuclei of cells
d) Psammoma bodies may be present
e) All of the above

DR/ A.H.

19. Which of the following is a the main difference between thyroid adenoma and thyroid follicular carcinoma

a) Adenoma is larger
b) Adenoma is grayish
c) Follicular carcinoma occur at younger age
d) Follicular carcinoma shows extracpasular extensions
e) Follicular carcinoma arise form parafollicular cells

ANSWERS					
1.	C	8.	E	15.	D
2.	B	9.	A	16.	A
3.	A	10.	B	17.	D
4.	E	11.	C	18.	B
5.	D	12.	B	19.	D
6.	C	13.	A		
7.	D	14.	E		

Formative Pathology MCQ

1. Which of the following statements is false about Hashimoto's thyroiditis:-

a) It is autoimmune in origin
b) It is more common in males than females
c) It ends by atrophy of thyroid gland
d) E/M shows both atrophied and regenerating acini
e) Associated with hypothyroidism

2. A middle aged female presented with enlarged thyroid, increased basal metabolic rate, diffuse lymphoid hyperplasia and exophthalmos. What is the most probable diagnosis:-

a) Toxic multinodular goiter
b) Toxic adenoma.
c) Hashimoto's thyroiditis
d) Grave's disease
e) Pituitary thyrotropic adenoma

3. Which of the following statements concerning multinodular goiter is correct:-

a) Usually transform to Gravis disease
b) Marked hemorrhage and necrosis
c) Usually due to infiltrating lymphocytes
d) May occur in areas of iodine deficiency
e) Associated with pretibial myxedema

4. Primary toxic goiter is usually associated with:-

a) Functioning thyroid adenomas
b) Decreased basal metabolic rate
c) Exophthalmos
d) Hypocalcaemia
e) Reidel's thyroiditis

5. A 45-year old female has a feeling of fullness in her neck but no other complaints. Physical examination confirms diffuse enlargement of the thyroid gland without any apparent masses. This enlargement has been gradual and painless for more than a year. Tests for thyroid function reveal a normal free thyroxin (Free T4) and a slightly increased level of TSH. The most likely cause for these findings is:-

a) Toxic multinodular goiter
b) Papillary carcinoma.
c) Subacute granulomatous thyroiditis
d) Hashimoto thyroiditis.
e) Diffuse nontoxic goiter

DR/ A.H.

6. **A 37-year old woman complains that she has had difficulty swallowing for about a week, accompanied by a feeling of fullness in the anterior neck. She has a slight fever. Palpation of the thyroid elicits pain. Her serum free t4 level is increased. When seen by an endocrinologist 2 months later, after waiting for an appointment, she no longer has these complaints, and the free T4 level is normal. The condition that best explains these findings is:-**
a) Medullary carcinoma
b) Subacute thyroiditis.
c) Toxic multinodular goiter
d) Toxic follicular adenoma
e) Hashimoto's thyroiditis

7. **A middle aged man has experienced diarrhea, nervousness, palpitations, and increased irritability for the past 5 months. Proptosis and lid lag are among physical examination findings. Which of the following laboratory findings is most likely:-**
a) Increased plasma insulin level
b) Increased serum T4 level
c) Increased serum TSH level
d) Increased serum cortisol level
e) Increased serum corticotropin level

8. **A surgeon explores the thyroid because of a "cold" nodule of the left upper pole. The nodule is firm, non-encapsulated, and has a granular cut surface. There is an enlarged, hard lymph node in the adjacent internal jugular chain. The most likely diagnosis is:-**
a) Anaplastic carcinoma
b) Follicular adenoma
c) Follicular carcinoma
d) Lymphoma
e) Papillary carcinoma

9. **A 40-year old female has a metacentric thyroid neoplasm that is composed of spindle-shaped cells forming nests and trabeculae. There is a prominent pink hyalin stroma that stains positively with Congo red. Electron microscopy reveals variable numbers of intracytoplasmic, membrane-bound, electron dense granules. Which of the following immune-histo-chemical stains is most likely to be useful in corroborating the diagnosis of this neoplasm:-**
a) Calcitonin
b) Cathepsin D
c) Parathormone
d) Vimentin
e) Cytokeratin

10. A 45 year old male feels a small lump on the left side of his neck. He feels fine and has no other complaints. His physician palpates a firm painless 1.5 cm cervical LN. The thyroid gland is not enlarged. A chest radiograph is unremarkable. Laboratory test findings including thyroid function tests are normal. A fine needle aspirate of the thyroid gland is most likely to show findings consistent with:-

a) Papillary carcinoma
b) Metastatic adenocarcinoma
c) Medullary carcinoma
d) Follicular carcinoma
e) Anaplastic carcinoma

11. A female patient has a thyroid neoplasm composed of polygonal to spindle shaped cells forming nests and trabeculae. Which of the followings is produced by this neoplasm:-

a) Calcitriol
b) Cathepsin
c) Calcitonin
d) Thyroxin
e) Parathormone

12. The thyroid tumor with a neuroendocrine origin is:-

a) Papillary carcinoma
b) Follicular carcinoma
c) Medullary carcinoma
d) Undifferentiated carcinoma
e) Lymphoma

13. Psammoma bodies are present in which of the following thyroid tumors:-

a) Papillary carcinoma.
b) Follicular carcinoma
c) Medullary carcinoma
d) Adenoma
e) Lymphoma

14. The material characteristic for medullary thyroid carcinoma is called:-

a) Amyloid
b] Colloid
c) Psammoma bodies
d) Hyalinosis
e) Fibrosis

15. The following type of thyroiditis is characterized by marked fibrosis:-
a) Viral thyroiditis
b) Infectious thyroiditis
c) Grave's disease
d) Hashimoto thyroiditis
e) Riedel thyroiditis

16. Lack of thyroid hormones in adults produces:-
a) Myxedema
b) Cretinism
c) Grave's disease
d) Autoimmune thyroiditis
e) Hashimoto thyroiditis

17. The following type of thyroiditis is autoimmune process:-
a) Reidel thyroiditis
b) Subacute thyroiditis
c) Infectious thyroiditis
d) Granulomatous thyroiditis
e) Hashimoto thyroiditis

18. Which of the following is not a feature of thyroid adenoma:-
a) Solitary nodule
b) Papillary formation
c) Vascular invasion
d) Hemorrhage
e) Contain colloid

19. The following is a feature of thyroid follicular carcinoma:-
a) Multiple nodules
b) Papillary formation
c) Vascular invasion
d) Hemorrhage
e) Psammoma bodies

20. Nuclear pseudo inclusions occur in which thyroid neoplasm:-
a) Follicular adenoma
b) Papillary thyroid carcinoma
c) Medullary carcinoma.
d) Anaplastic carcinoma
e) Follicular carcinoma

Question book

21. Which of the following types of thyroiditis is associated with granuloma formation:-

a) Hashimoto thyroiditis
b) Lymphocytic thyroiditis
c) Reidel thyroiditis
d) Subacute thyroiditis
e) Acute thyroiditis

ANSWERS					
1.	B	8.	E	15.	E
2.	D	9.	A	16.	A
3.	D	10.	A	17.	E
4.	C	11.	C	18.	C
5.	E	12.	C	19.	C
6.	B	13.	A	20.	B
7.	B	14.	A	21.	D