

QUIZZES COLLECTED QUESTIONS OF ECS 018

Quiz 1

1-The signaling protein Gas is responsible for:

- a. Inhibition of adenylate cyclase.
- b. Activation of adenylate cyclase.
- c. Stimulation of CGMP phosphodiesterase.
- d. Activation of inositol-3-phosphate.
- e. Inhibition of inositol-3-phosphate.

2-This receptor is responsible for adipogenesis

- a. The peroxisome proliferator-activated receptor γ (PPAR γ).
- b. Estrogen receptor.
- c. Retinoid X receptors.
- d. The peroxisome proliferator-activated receptor α (PPAR α).
- e. The peroxisome proliferator-activated receptor β (PPAR β).

3-This nuclear receptor is always bound to DNA even in the absence of its ligand

- a. Progesterone receptor.
- b. Androgen receptor.
- c. Vitamin D receptor.
- d. Estrogen receptor.
- e. Thyroid receptor.

4-One of the following is a peptide hormone

- a. Mineralocorticoid
- b. Insulin
- c. Glucagon
- d. Thyroxine
- e. Vasopressin

5-One of the following is TRUE in regards to lipid-soluble hormones

- a. They need membrane carrier proteins.
- b. They act via intracellular receptors only.
- c. It is more important to measure free hormone than total hormone .
- d. Their half-lives are in the range of minutes .
- e. 50% of them are bound to plasma proteins.

6-Growth hormone excess causes all of the following EXCEPT:

- a. Exhaustion atrophy of the pancreatic B cells when the growth hormone excess has been present for a long time.
- b. Gigantism in children .
- c. Acromegaly in adults .
- d. Increased entry of glucose into muscles.
- e. Increased fat breakdown.

7-Most hormones of the body classified structurally as:

- a. Carbohydrates .
- b. Peptides and proteins.
- c. Amines .
- d. Steroids .
- e. Lipids.

8-Endocrine control (choose the INCORRECT answer):

- a. Is important in the regulation of the extracellular fluid volume .
- b. Always depends on exocytosis of a hormone by an endocrine cell.
- c. May be influenced by nervous controls .
- d. Of the anterior pituitary is an important hypothalamic function.
- e. Frequently involves negative feedback mechanisms.

9-All of the following stimulate GH secretion EXCEPT:

- a. Decreased blood free fatty acids .
- b. Decreased blood sugar .
- c. Exercise .
- d. Obesity .
- e. Fasting.

10-In one of the following conditions growth hormone and insulin secretion is increased:

- a. Carbohydrate intake .
- b. Fasting .
- c. Obesity .
- d. Aging .
- e. Protein intake.

11-Cholesterol gives rise to all of the following EXCEPT:

- a. Aldosterone .
- b. Estrogen .
- c. Progesterone.
- d. Catecholamines.
- e. Testosterone.

12-Which of the following hormones DOES NOT work mainly via cyclic adenosine monophosphate (CAMP) as a second messenger?

- a. Glucagon.
- b. TSH.
- c. ACTH.
- d. Adrenalin.
- e. Insulin.

13-Which of the following sites produces hormones through neurons?

- a. Stomach.
- b. Liver .
- c. Pancreas.
- d. Posterior pituitary.
- e. Adrenal medulla.

14-Which of the following is a neurohormone?

- a. Cortisol .
- b. Growth hormone.
- c. Vasopressin (ADH).
- d. Thyroid hormone .
- e. Luteinizing hormone.

15-Which one of the following is not part of the portal system?

- a. Hypophyseal portal veins.
- b. The primary capillary plexus.
- c. The secondary capillary plexus.
- d. Hypothalamohypophyseal tracts.
- e. Superior hypophyseal arteries.

16-The neurohypophysis contains one of the following?

- a. Acidophilic cells.
- b. Pituicytes.
- c. Basophilic cells.

- d. Cromophobes.
- e. Folliculostellate cells.

17-Which one of the following is secreted by acidophilic cells of the pituitary gland?

- a. FSH .
- b. Growth hormone .
- c. ACTH.
- d. LH.
- e. TSH.

18-Trauma to the hypothalamohypophyseal tracts may cause?

- a. Sheehan syndrome.
- b. Central diabetes insipidus.
- c. Craniopharyngioma.
- d. Bitemporal hemianopsia.
- e. Pituitary apoplexy.

19-The anterior lobe of the pituitary gland is derived from which one of the following?

- a. First pharyngeal arch.
- b. Rathke's pouch.
- c. First pharyngeal pouch.
- d. Neural crest.
- e. Neuroectoderm of the floor of the third ventricle.

20-Which one of the following is considered the most common sign that a pituitary tumor has extended beyond the confines of the sella turcica is?

- a. Binasal hemianopsia.
- b. Headache.
- c. Unilateral temporal hemianopsia.
- d. Unilateral nasal hemianopsia.
- e. Bitemporal hemianopsia.

21-Which of the following lies superior to the pituitary gland?

- a. The hypophyseal fossa.
- b. The sella turcica.
- c. The cavernous sinuses.
- d. The optic chiasma.
- e. The sphenoidal air sinus.

22-The following hormones have permissive effects :

- a. Insulin and glucagon.
- b. Testosterone and estrogen.
- c. Oxytocin and vasopressin.
- d. Thyroxine and epinephrine.
- e. Epinephrine and serotonin.

23-One of the following is NOT a second messenger :

- a. Protein kinase C.
- b. Calcium ion.
- c. Inositol 1,4,5-trisphosphate (IP3).
- d. Cyclic AMP.
- e. Diacylglycerol (DAG).

24-The immediate consequence of dimerization of receptor tyrosine kinases is :

- a. Internalization.
- b. Cleavage.
- c. Binding to secondary messengers.
- d. Ligand binding.
- e. Autophosphorylation.

25-one of the following about anterior pituitary gland is not true

- a. About 30%-40% of anterior pituitary cells are GH secreting cells
- b. 20% are ACTH secreting cells
- c. Usually there is one cell type for each major hormone
- d. Each of the other cell types accounts 3-5% and they secrete weak hormones.
- e. At least five cell types can be differentiated in the gland

ANSWERS

1	B	6	D	11	D	16	B	21	D
2	A	7	B	12	E	17	B	22	D
3	E	8	B	13	D	18	B	23	A
4	E	9	D	14	C	19	B	24	E
5	C	10	E	15	D	20	E	25	D

Quiz 2

1-The least common type of pituitary adenomas

- a. LH-Producing adenoma.
- b. Somatotroph adenoma.
- c. ACTH-producing adenoma.
- d. TSH secreting adenoma.
- e. Prolactinoma.

2-Atypical pituitary adenoma is characterized by mutations of

- a. P53 gene.
- b. RAS gene.
- c. RB gene.
- d. WT1 gene.
- e. PTEN gene.

3-Which of the following is NOT a feature of central diabetes insipidus?

- a. Characterized by polyuria.
- b. Characterized by ADH deficiency.
- c. Hyponatremia.
- d. Can be caused by chronic inflammation of the pituitary gland and hypothalamus.
- e. The urine shows inappropriate low specific gravity.

4-Which of the following is a cause of thyrotoxicosis NOT associated with hyperthyroidism (thyroid hyper function)

- a. Toxic follicular adenoma.
- b. TSH producing pituitary adenoma.
- c. Toxic multinodular goiter.
- d. Thyroiditis.
- e. Graves disease.

5-Which of the following types of thyroiditis is caused viral infection?

- a. Subacute granulomatous thyroiditis (de-Quervain thyroiditis).
- b. Palpable thyroiditis.
- c. Subacute lymphocytic thyroiditis (Painless thyroiditis).
- d. Chronic lymphocytic thyroiditis (Hashimoto thyroiditis).
- e. Riedel thyroiditis.

6-Which of the following characterizes type I but not type II diabetes mellitus?

- a. Lack of insulin.
- b. Polyuria and polydipsia.
- c. Can usually be successfully managed by dietary control.
- d. Hyperglycemia.

7-Which of the following exerts the greatest effect on parathyroid hormone secretion?

- a. The plasma phosphate concentration Calcitonin.
- b. 1,25 – dihydroxycholecalciferol.
- c. The plasma Ca^{+2} concentration.
- d. The total plasma calcium concentration.

8-Insulin: (choose the correct answer)

- a. Half-life is usually reduced in patients with diabetes mellitus.
- b. Requirements of night are similar to those during the day.
- c. It produces tyrosine kinase a second messenger only.
- d. Requirements are increased in obesity.
- e. Requirements are increased by exercise.

9-Which of the following hormones plays an important role in keeping the plasma concentration of potassium within normal limits?

- a. Parathyroid hormone.
- b. Insulin.
- c. Vasopressin.
- d. Calcitriol.

10-Which of the following plasma constituents is not regulated by the kidneys?

- a. Water.
- b. Phosphate.
- c. H^{+} .
- d. Glucose.
- e. Na^{+} .

11-Which one of the following is the most important hyperglycemic hormone?

- a. Adrenaline.
- b. Thyroxine.
- c. Growth hormone.
- d. Cortisol.
- e. Glucagon.

12-Inhibition of the production of one of the following will lead to hypotension (if severe enough, fatal):

- a. Angiotensin II.
- b. Cortisol.
- c. ACTH.
- d. Insulin.
- e. Thyroxin.

13-Which of the following hormones is the most essential to life?

- a. Epinephrine.
- b. Thyroid hormone.
- c. Calcitonin.
- d. Aldosterone.
- e. Vasopressin.

14-Which organ or tissue is primarily responsible for producing 1,25 – OH₂D:

- a. Bone.
- b. Intestines.
- c. Kidney.
- d. Skin.
- e. Liver.

15-Aldosterone secretion is stimulated by increase in each of the following EXCEPT:

- a. Sodium.
- b. Angiotensin – converting enzyme Potassium.
- c. Renin.
- d. ACTH.

16-Choose the INCORRECT answer regarding vitamin D:

- a. Requires hepatic modification for activation.
- b. Formation of D₂ structure is sufficient for the human.
- c. Is essential for normal calcification in childhood.
- d. Increases the intestinal absorption of calcium.
- e. Deficiency may result in hyperparathyroidism.

17-About the thyroid gland, choose the INCORRECT answer:

- a. Takes up iodine against its electrochemical gradient.
- b. Decreases in size when hormones production is deficient.
- c. Contains enzymes which oxidizes iodide to iodine.

- d. Contains enzymes which iodinate tyrosine.
- e. Is richly in blood supply.

18-Triiodothyronine (T3): choose the CORRECT answer

- a. Promotes growth.
- b. Is the only biologically active form of thyroid hormone.
- c. Binds to plasma membrane receptors.
- d. 90% is formed from thyroxine (T4).
- e. Is all protein bound in the circulation.

19-Which one of the followings about Na⁺ reabsorption is NOT TRUE?

- a. One of these two effects (In-d-) reduction peritubular fluid hydrostatic pressure and raising filtration fraction.
- b. Day to day regulation of Na⁺ balance can be maintained as long as maximal level of aldosterone present.
- c. Angiotensin II is perhaps the body's most powerful Na⁺ retaining hormone.
- d. Angiotensin II stimulates aldosterone secretion, which in turn increases Na⁺ reabsorption.
- e. Angiotensin II constricts efferent arterioles which has two effects.

20-Any increase in which of the following increases aldosterone secretion by a direct action on the adrenal cortex?

- a. Angiotensin.
- b. ACTH.
- c. Renin.
- d. Sodium.
- e. Diuretic drugs.

21-An abnormal enlargement of the thyroid gland that usually extends downward behind the sternum is called?

- a. Branchial Fistulas.
- b. Persistent thyroglossal.
- c. Duct Lingual.
- d. Thyroid.
- e. Thyroglossal Sinus.
- f. Plunging Goitre.

22-Thyroglossal cyst, choose the wrong statement:

- a. They may be anywhere along the migration pathway of the thyroid gland.
- b. They are midline in position.
- c. They are commonly found behind the arch of the hyoid bone.
- d. They are remnants of the thyroglossal duct.
- e. They occur when the second pharyngeal arch fails to grow caudally over the third and fourth arches.

23-Development of the thyroid gland, choose the wrong statement.

- a. It descends in front of the pharyngeal gut and remains connected to the tongue by a narrow canal, the thyroglossal duct.
- b. By the seventh week, it reaches its final position and thyroglossal duct disappears.
- c. The ultimobranchial bodies form the follicular cells.
- d. The Lingual thyroid is the most common form of incomplete descent.
- e. It is an endodermal thickening in the floor of the pharynx between the tuberculum impar and the copula.

24-Thyroid gland, choose the wrong statement.

- a. Its upward expansion is limited.
- b. Anteriorly, it is related to all infrahyoid muscles except the thyrohyoid muscle.
- c. Its false capsule is formed by the pretracheal layer fascia.
- d. It has a true capsule which is denser anteriorly.
- e. It is related posteriorly to the structure that originates from the ventral wing of the third pouch.

25-Superior thyroid artery descends to the superior pole of the thyroid gland. In its initial course, the artery accompanies ———and therefore it should be ligated ——— during thyroidectomy procedure.

- a. The external laryngeal nerve, near the gland.
- b. The recurrent laryngeal nerve, near the gland.
- c. The recurrent laryngeal nerve, away from the gland.
- d. The internal laryngeal nerve, away from the gland.
- e. The external laryngeal nerve, away from the gland.

ANSWERS

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4	D	9	B	14	C	19	B	24	E
5	A	10	D	15	A	20	B	25	A

وَكَمِ لِلَّهِ مِنْ لُطْفٍ خَفِيٍّ
يَدِقُّ خَفَاهُ عَنِ فَهْمِ الذَّكِيِّ
-علي بن أبي طالب.

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