

A+ agonist TEST BANK



- DONE BY:
- 1. ABDELRAHMAN HASSASNAH
- 2. SUHAIB ABWINI
- 3. MOHAMMED ZREKAT
- 4. YAHIA JAROSHA

- This test bank including:
 - 1.The first 4 lectures of anatomy
 - 2.The first 3 lectures of biochemistry
 - 3.The first 3 lectures of physiology

Physiology:

- 1) ALL of the following is true according to what you study in nervous and endocrine system EXCEPT:
 - A) The endocrine uses hormones while nervous system uses neurotransmitter
 - B) The endocrine regulates virtually all body cells while nervous system controls specific cells
 - C) The endocrine acts slowly in distant parts of the body but the nervous system acts more rapid
 - D) The endocrine system controls processes that require duration rather than speed such as integrate activity of digestive system
 - E) There are no false statement from the above

- 2) Which of the following is false match:
 - A) Autocrine hormones, local hormones that are secreted, and bind to the same cell.
 - B) Down regulation, less sensitive
 - C) Paracrine hormone, nitric oxide (NO)
 - D) Water soluble hormone, T3 & T4
 - E) Amine hormones, Histamine

- 3) All are correct regarding tropic hormones EXCEPT:
 - A) TSH is one of the tropic hormones
 - B) Absence of the tropic hormone cause abnormalities
 - C) Absence of the tropic hormones can sometimes produce very low levels of its hormone and sometimes very high levels of its hormone
 - D) It's a hormone that has as its primary function the regulation of hormone secretion of another endocrine gland
 - E) All are correct

- 4) Choose the correct answer
 - A) In a Negative feedback system the hormone output reverse a particular stimulus (such in childbirth)
 - B) In a positive feedback system the hormone reinforce or reverse the stimulus
 - C) The effective plasma concentration of a hormone is normally regulated by changes in the rate of its secretion
 - D) A+B
 - E) All of the above are correct answers

- 5) What anatomical feature connects the pituitary gland to the hypothalamus?
 - a) A dense network of blood vessels
 - b) A thick layer of connective tissue
 - c) A muscular attachment

- d) A thin connecting stalk
 - e) A series of nerve fibers
- 6) Which group of hormones collectively control the secretion of sex hormones by the gonads?
- A) Follicle-stimulating hormone (FSH) and luteinizing hormone (LH)
 - B) Growth hormone (GH) and thyroid-stimulating hormone (TSH)
 - C) Adrenocorticotrophic hormone (ACTH) and prolactin (PRL)
 - D) Thyroid-stimulating hormone (TSH) and luteinizing hormone (LH)
 - E) Follicle-stimulating hormone (FSH) and adrenocorticotrophic hormone (ACTH)
- 7) Which anterior pituitary hormones exert effects on nonendocrine target cells in addition to stimulating secretion of other hormones?
- A) Follicle-stimulating hormone (FSH) and luteinizing hormone (LH)
 - B) Growth hormone (GH) and adrenocorticotrophic hormone (ACTH)
 - C) Thyroid-stimulating hormone (TSH) and prolactin (PRL)
 - D) Adrenocorticotrophic hormone (ACTH) and luteinizing hormone (LH)
 - E) Follicle-stimulating hormone (FSH), luteinizing hormone (LH), and growth hormone (GH)
- 8) Which hormone among the anterior pituitary hormones directly acts on nonendocrine tissue to exert its effects?
- A) Follicle-stimulating hormone (FSH)
 - B) Luteinizing hormone (LH)
 - C) Growth hormone (GH)
 - D) Prolactin (PRL)
 - E) Adrenocorticotrophic hormone (ACTH)
- 9) What are the primary factors that regulate anterior pituitary hormone secretion?
- A) Blood glucose levels and insulin secretion
 - B) Hypothalamic hormones and feedback by target-gland hormones
 - C) Thyroid hormone levels and adrenal gland activity
 - D) Kidney function and electrolyte balance
 - E) Cortisol levels and growth hormone secretion
- 10) What is the primary purpose of the portal system in the context of hormone transport between the hypothalamus and the anterior pituitary?
- A) To increase the concentration of hormones in the systemic veins
 - B) To decrease the time required for hormone delivery to the anterior pituitary
 - C) To allow for direct secretion of hormones from the hypothalamus into the systemic arteries

- D) To prevent dilution of hypophysiotropic hormones before reaching the anterior pituitary
 - E) To facilitate the exchange of hormones between the systemic arteries and veins
- 11) What is the primary consequence of the absence of ADH in the body?
- A) Increased reabsorption of water in the collecting tubules and ducts
 - B) Decreased urine production and concentrated urine
 - C) Extreme loss of water into the urine and dilute urine
 - D) Increased permeability of the collecting ducts to water
 - E) Enhanced secretion of aldosterone to reduce water conservation
- 12) Which condition is associated with the presence of high levels of ADH in the body?
- A) Central diabetes insipidus
 - B) Increased urine production and dilute urine
 - C) Decreased reabsorption of water in the collecting tubules and ducts
 - D) Enhanced water conservation in the body and concentrated urine
 - E) all of the above are correct
- 13) Which statement about oxytocin is NOT true?
- A) Oxytocin stimulates uterine contractions during childbirth.
 - B) Oxytocin triggers milk letdown in the breasts in response to infant sucking.
 - C) Oxytocin secretion is increased by reflexes originating within the birth canal during childbirth and by infant suckling.
 - D) Oxytocin influences behaviors such as bonding or attachment.
 - E) Oxytocin targets smooth muscle in the uterus only.
- 14) What is the correct statement regarding growth hormone
- A) it causes growth of all tissues in the body not only that are capable of growing
 - B) weight gain is synonymous with growth
 - C) growth requires net synthesis of fats
 - D) GH does not function through a target gland but exerts its effects directly on all or almost all tissues of the body
 - E) all of the above are correct
- 15) What's wrong regarding growth hormone
- A) GH secretion typically starts to decline after middle age
 - B) GH I is the most abundant hormone produced by posterior pituitary
 - C) GH has metabolic effects
 - D) GH is not the only factor that determine the final magnitude of growth in a given individual
 - E) there are more the one answer
- 16) All of the following is true regarding the effect of GH on protein EXCEPT
- A) enhancement of amino acid transport through the cell membrane
 - B) enhancement of RNA translation cause protein depletion by the ribosome

- C) increase nuclear transcription of DNA to form RNA
 - D) GH promotes protein deposition in tissues
 - E) no false information in the answers
- 17) All of the following is true regarding the effect of GH on fats EXCEPT
- A) GH increases mobilization of fatty acids from adipose tissue
 - B) It increases free fatty acids an the blood
 - C) it increases use of fatty acids for energy
 - D) the ability of GH to promote fat utilization and protein anabolic effect cause an increase in lean body mass
 - E) No false information in the above answers
- 18) All of the following is true regarding the effect of GH on carbs EXCEPT
- A) decrease glucose uptake in all tissues except skeletal muscle and fat
 - B) increase glucose production by the liver
 - C) increase insulin secretion
 - D) cause insulin resistance
 - E) no false info from the above
- 19) The effect of growth hormone on glucose, amino acid and free fatty acid respectively:
- A)increase ,increase , decrease
 - B)decrease, increase, decrease
 - C)increase, decrease, increase
 - D)decrease, decrease, increase
 - E)increase, decrease, decrease
- 20) All of the following will stimulate the secretion of growth hormone EXCEPT:
- A) glucose decrease
 - B) arginine increase
 - C) fasting
 - D) stress
 - E) free fatty acid increase
- 21) All of the following about insulin-like growth factors (IGFs) is false EXCEPT :
- A) growth hormone exert its effect directly without stimulation of IGFs
 - B) the only source for IGFs is the liver
 - C) it is called like that because they are only structurally similar to insulin
 - D) its effect to increase all aspect of bone growth
 - E) more than one answer

answers for physiology :

- 1) D
- 2) D
- 3) C
- 4) C
- 5) D

- 6) A
- 7) E
- 8) D
- 9) B
- 10)D
- 11) C
- 12)D
- 13)E
- 14)D
- 15)B
- 16)B
- 17)E
- 18)A
- 19)C
- 20)E
- 21)A

Anatomy :

1) Which one of the following is secreted by acidophilic cells of the pituitary gland?

- A) LH
- B) ACTH
- C) TSH
- D) Growth hormone
- E) FSH

Answer : D

2) Which one of the following inhibit growth hormone secretion?

- A) Somatomedins
- B) Androgens
- C) Ghrelin
- D) Stress
- E) Exercise

Answer : A

3) Which one of the following cell types of the anterior pituitary gland has the second largest percentage of the total population of cells?

- A) Gonadotropes
- B) Somatotropes
- C) c.Lactotropes
- D) Corticotropes
- E) Thyrotropes

Answer : D

4) Which one of the following is not part of the portal system?

- A) The primary capillary plexus
- B) hypophyseal portal veins
- C) Superior hypophyseal arteries
- D) hypothalamohypophyseal tracts
- E) The secondary capillary plexus

Answer : D

5) Regarding Thyrotrophs, which is true ?

- A) they are the Site of TRH synthesis
- B) they are the Site of T3 synthesis
- C) they are the Site of prolactin synthesis
- D) they ore the Site of TSH synthesis
- E) they are the Site of growth hormone synthesis

Answer :D

6) True about herring bodies?

- A. Neurosecretory granules that secrete only 1 hormone
- B. Free-floating granules that can secrete 2 hormones
- C- appear as a chromphobe in the histological section

D- B+C

Answer: A

7) Optic chiasm is separated from the pituitary gland by:

A. Optic canal

B. Diaphragma sella

C- cavernous sinus

D- sphenoid sinus

E- C+D

Answer: B

8) Which of the following mainly supplies the median eminence and adenohypophysis:

A. Superior hypophyseal artery

B. Inferior hypophyseal artery

C- subclavian artery

D - internal carotid artery

Answer: A

9) Basophils don't secrete

A- ACTH

B- GH

C- PRL

D- TSH

E- b+c

Answer : e

10) Pars tuberalis is supplied by :

- A- Superior hypophyseal artery
- B- Lateral hypophyseal artery
- C- medial hypophyseal artery
- D- inferior hypophyseal artery

Answer : A

Extra questions

1) An organ which its primary function is Endocrine secretion

- A- hypothalamus
- B- thymus
- C- thyroid
- D- pancreas
- E- goands

Answer : C

2) The hormone that secreted from the anterior pituitary gland which act on goands:

- A- ACTH
- B- FSH
- C- TSH
- D- LH
- E- B+D

Answer : E

3) HYPOTHALMUS is a part of :

- A- pituitary gland
- B- diencephalon

Answer : B

4) The beginning of pituitary gland development during :

A- 6- 8 week

B- 5 week

C- 9 week

D- 4 week

Answer : D

5) The adenohypophysis originated from :

A- oral endoderm

B- neuroectoderm

C- neuroendocrine

D- oral ectoderm

Answer : D

6) What is the wrong statement about pars distalis :

A- contain chromophils and chromophobes

B- have a thick fibrous capsule with septa

C- biggest part -75%

D- non of those

Answer : B

7) The most lateral chromophils in adenohypophysis :

A- TSH

B- ACTH

C- PRL

D- GH

ANSWER :D

8) the hormone which inhibit the release of prolactin :

A- somatostatin

B- TRH

C- dopamine

D- GHRH

Answer: C

9) The name of carrier proteins in the pars nervosa:

A- axons

B- Herring bodies

C- pitucytes

D- neurophysin

Answer : D

10) The most common basophils in the pars intermedia

A- somatostatin

B- TSH

C- ACTH

D- PRL

Answer : C

Lec3 + 4 :

Q:1 Which one of the following structures lies posterior to the thyroid gland:

A. The carotid sheath

B. The trachea

C. The larynx

D. Sternohyoid muscle

E. Superior and inferior thyroid arteries

Answer: E

Q2: Regarding the thyroid gland which of the following is true:

- A. Cuboidal epithelium is the structural & functional units of the thyroid gland
- B. Thyroid hormones are mainly synthesized in cuboidal epithelium
- C. The simple cuboidal epithelium undertakes iodide production
- D. Thyroid hormones are mainly synthesized in colloid
- E. All of the above

Answer: D

Q3: Development of thyroid gland, choose the wrong statement:

- A. The Lingual thyroid is the most common form of incomplete descent
- B. The ultimobranchial bodies form the follicular cells
- C. It descends in front of the pharyngeal gut and remains connected to the tongue by the thyroglossal duct
- D. By the seventh week, it reaches its final position
- E. It is an endodermal thickening in the floor of the pharynx between the tuberculum impar and the copula

Answer: B

Q4: The superior thyroid artery is initially associated with the be ligated..... during thyroidectomy.

- A. External Laryngeal Nerve, away the gland
- B. Internal Laryngeal Nerve, away from the gland
- C. External Laryngeal Nerve, near from the gland
- D. Recurrent Laryngeal Nerve, near the gland
- E. Recurrent Laryngeal Nerve, away from the gland

Answer: C

Q5: Superior thyroid vein drains into:

A-SVC

B- brachiocephalic vein

C- anterior jugular vein

D- internal jugular vein

• Answer: D. internal jugular vein

Q6: Description of para follicular cells:

A. Larger and less stained than follicular.

B. Smaller and more stained than follicular.

C. Smaller and less stained than follicular.

D. Larger and more stained than follicular.

Answer : A

Q7: The correct statement about blood supply of the thyroid gland :

A- 3 arteries and 4th occasional.

B- 2 arteries and 3rd occasional.

C- 4 arteries and 5th occasional.

D- one artery and 2nd occasional.

E- none of the above.

Answer : B

Q8: Not related to the anterolateral of thyroid lobes:

A- sternohyoid.

B- sternothyroid.

C- superior belly of Omohyoid.

D- posterior Border of sternomastoid.

E- None of the above.

Answer :D (anterior border)

Q9: After the thyroidectomy, the surgeon noticed hoarseness in the patient's voice. Which of the following structure has been affected?

- A-superior thyroid artery
- B-Inferior thyroid artery
- C-external laryngeal nerve
- D-Parathyroid gland

Answer: C

Q10: A 4-year-old girl is admitted to the hospital because of a soft anterior midline cervical mass. When she is asked to protrude her tongue, the mass in the neck is observed to move upward. Which of the following is the most likely diagnosis?

- a.Defect in the sixth pharyngeal arch.
- b.Defect in first pharyngeal arch.
- c.A thyroglossal duct cyst.
- d.A branchial cyst.
- e.Lingual thyroid.

Answer: c. A thyroglossal duct cyst.

Q11: 10. Upper Limitation of thyroid gland:

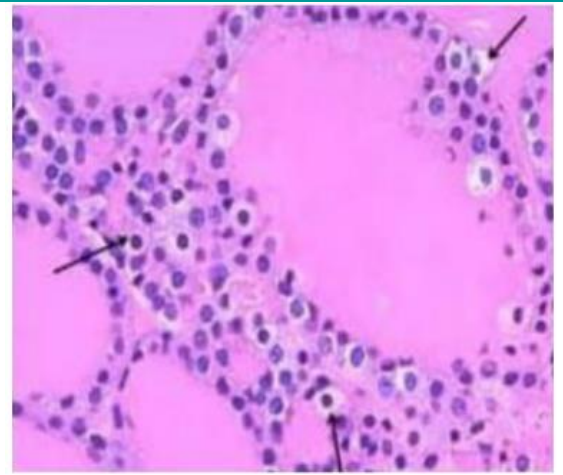
- A. Pretracheal fascia
- B.The superior belly of the omohyoid
- C. The capsule of thyroid

Ans: A. Pretracheal fascia

Q12: 15. Wrong about thyroid drainage

- A. All drain into internal jugular vein
- B. Superior thyroid vein drains into the internal jugular vein
- C. The inferior thyroid veins of the two sides anastomose with one another as they descend in front of the trachea.

Ans: A. All drain into internal jugular vein



Practical :

Q1: Which of the following is true for this tissue:

- a. It has been taken from old patient.
- b. It has been taken from inactive thyroid gland.
- c. It has been taken from active thyroid gland.

Ans: B

Q2: The pointed cells produce :

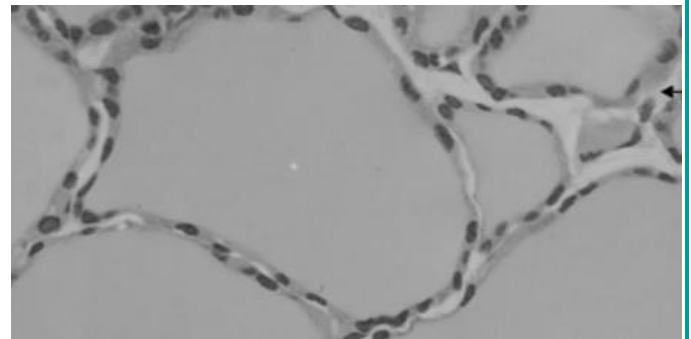
- A) Calcitonin
- B) Parathyroid hormone
- C) Thyrotropin
- D) Thyroxine
- E) Growth hormone

ANS: A

Q3: The pointed structure could be :

- A) Aberrant thyroid tissue
- B) Thyroglossal cyst
- C) Branchial fistula
- D) Lingual thyroid gland
- E) Parathyroid sinus

ANS: B



Biochemistry:

Q1: In autocrine signaling (choose the best answer that describes it):

- A) The messenger molecules are usually rapidly degraded and hence can only work over short distances.
- B) No answer describes it well.
- C) Messenger molecules travel only short distances through the extracellular space to different cell types that are in close proximity to the cell that is generating the message.
- D) Messenger molecules reach their target cells via passage through bloodstream.
- E) The cell producing the messenger expresses receptors on its surface that can respond to that messenger.

ANS: E

Q2: Where is the kinase catalytic domain of the receptor protein-tyrosine kinases found?

- A) On the extracellular surface of the receptor, immediately adjacent to the ligand-binding domain.
- B) Within the transmembrane spanning portion of the receptor.

- C) On the DNA binding domain.
- D) On the cytoplasmic domain of the receptor.
- E) On an independent protein that rapidly binds the receptor upon ligand binding.

ANS: D

Q3: Typically, what is the first reaction after most receptor protein tyrosine kinases bind their ligand?

- A) Receptor denaturation
- B) Receptor degradation
- C) Receptor dimerization
- D) Receptor dissociation
- E) Receptor trimerization

ANS: C

Q4: What happens to protein kinase A (PKA) following the binding of cAMP?

- A) The inhibitory regulatory subunits dissociate from the catalytic subunits, completely inactivating by the enzyme,
- B) PKA catalytic subunits then bind to two regulatory subunits, thereby activating the catalytic subunits.
- C) The stimulatory regulatory subunits dissociate from the catalytic subunits, inhibiting the enzyme.
- D) The regulatory subunits of PKA dissociate, thereby activating the catalytic subunits.
- E) Phosphodiesterase binds to the catalytic subunits, which results in enzyme inactivation.

ANS: D

Q5: Regarding the steps involved in Synthesis of thyroid hormones which is false?

- A) T4 and T3 are released into the circulation
- B) Iodide is taken up at the a basolateral cell membrane
- C) T4 and T3 are released into the Golgi bodies
- D) Polypeptide chains of Tg (thyroglobulin) are synthesized in the rough endoplasmic reticulum

E) Newly formed Tg is transported to the cell surface in small apical vesicles

ANS: C

Q6: 43. Considered as major challenge of endocrine biochemistry:

- A. One hormone can have several effect
- B. Desensitisation of hormones
- C. There are structurally similar compounds in LOW concentrations in plasma
- D. Number of cells exceeds number of hormones
- E. All of the above

Answer: E

Q7: Most common 2nd messenger:

- A. cAMP
- B. DAG
- C. IP3
- D. Ca ++
- E. PKC

Answer: A

Q8: FSH and estrogen affect on oocyte development, this is a type of:

- A. Permissive effect
- B. Synergistic effect
- C. Integrative effect
- D. Antagonistic effect
- E. A + B

Answer: B

Q9: True about hydrophilic hormones:

- A. Have intracellular receptors
- B. Need transport protein in plasma
- C. Short half life
- D. Slow action
- E. All of the above

Answer: C

Q10: Type of insulin receptor:

- A. Dimer
- B. Monomer
- C. Tetramer
- D. Pentamer
- E. Trimer

Answer: C

Q11: From noradrenaline to adrenaline we need:

- A. Hydroxylase
- B. Methyl transferase
- C. Decarboxylase
- D. MAO

Answer: B

Q12: One of these domains not found in protein kinase C:

- A. Catalytic domain
- B. G protein binding domain
- C. Pseudo substrate domain
- D. Membrane binding domain

Answer: B

Q13: Mechanism of cholera toxin:

- A. Increased cGMP
- B. Unregulated activity of adenylate cyclase
- C. Increased flow of Na^+ and water into mucosa

Answer: B

Q14: Calcium binds all of these and affect cellular activity except:

- A. Calmodulin
- B. Protein kinase C
- C. Troponin C
- D. Parvalbumin
- E. Ca^{++} ATPase pump

Answer: E

Q15: The enzyme which catalyze this reaction :



A. Tyrosine kinase

B. N-METHYL transfers

C. Dopa decarboxylase

D. Dopamine beta hydroxylase

Ans: C

Q16: True regard Adenylyl Cyclase:

A. Contains 10 helices

B. it contains Two small intracellular domains

C. it is Activated phospholipase C

D. It is a transmembrane protein

Ans: D