

# Athar

## Endocrine Mid

Done By:

Mohammad Al faqeeh

Designed By :

Raneem Dmour



1. All of the following have the same reaction except :

- A- Tolbutamide.
- B- Chlorpropamide.
- C- Repaglinide.
- D- Gliclazide.
- E- Pioglitazone.

Answer: E

2. One of the following is incorrect regarding metformin :

- A- Modest weight loss.
- B- Decrease glucose absorption from git.
- C- Not protein bounded, excreted unchanged.
- D- Can be given in hepatic and renal failure.
- E- Decrease cardiovascular complications of diabetes mellitus.

Answer: D

3. Which of the following eicosanoids cause vasoconstriction :

- A- LTD4 , LTE4.
- B- PGE2 , LTD4.
- C- PGI2 , PGE2.
- D- LTB4 , TXA2.

Answer: A

4. Most regulatory and rate limiting step in glycolysis mediated by :

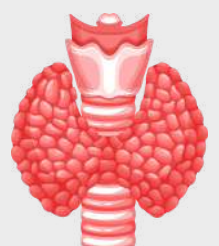
- A- Hexokinase.
- B- Pyruvate kinase.
- C- PFK-1.
- D- PFK-2.

Answer: C

5. Nuclear localization signal domain important for :

- A- Recognition of HRE.
- B- Link between LBD and DBD.
- C- Coactivators to E domain.
- D- Directing the hormone/receptor complex to HRE.

Answer: D



6. The enzyme that allosterically inhibited by accumulation of its own product is :

- A- Hexokinase.
- B- Glucokinase.
- C- PFK-1.
- D- Pyruvate kinase.
- E- PFK-2.

Answer: A

7. Which of the following contain 19 carbon atoms :

- A- Testosterone.
- B- Estrogen.
- C- Progesterone.
- D- Mineralocorticoid.
- E- Cortisol.

Answer: A

8. Steroid hormone that response for regulate blood glucose :

- A- Aldosterone.
- B- Estradiol.
- C- Cortisol.
- D- Testosterone.
- E- Progesterone.

Answer: C

9. Which of the following inhibit growth hormone secretion from hypothalamus :

- A- Stress.
- B- Starvation.
- C- Hypoglycemia.
- D- Sleep.
- E- Somatomedin.

Answer: E

10. All of the following are symptoms due to hyperprolactinemia in male except :

- A- Increase libido.
- B- Impotence.
- C- Erectile dysfunction.
- D- Oligozoospermia.
- E- Galactorrhea.

Answer: A



11. The most potent mineralocorticoid is :

- A- Betamethasone.
- B- Cortisone.
- C- Triamcinolone.
- D- Fludrocortisone.

Answer: D

12. All of the following is associated with hyperthyroidism except :

- A- Granulomatous thyroiditis.
- B- Thyroxin intake.
- C- Ovarian teratoma with thyroid.
- D- Pituitary adenoma.

Answer: D

13. Which of these response to convert dopa to norepinephrine respectively :

- A- Tyrosine hydroxylase , aromatic amino acid decarboxylase.
- B- Tyrosine hydroxylase , dopamine beta hydroxylase.
- C- Aromatic amino acid decarboxylase , dopamine beta hydroxylase.
- D- Dopamine beta hydroxylase , N-methyltransferase.
- E- Aromatic amino acid decarboxylase , N-methyltransferase.

Answer: C

14. One of the following is not a therapeutic use of octreotide :

- A- Acromegaly.
- B- Diabetic diarrhea.
- C- Hyperkalemia.
- D- Carcinoid syndrome.
- E- Gastrinoma.

Answer: C

15. One of the following will inhibit prolactin secretion :

- A- Bromocriptine.
- B- Ganirelix.
- C- Gonadorelin.
- D- Growth hormone.
- E- Leuprolide.

Answer: A





16. One of the following could be found in post menopausal urine :

- A- Goserelin.
- B- Nafarelin.
- C- Pregolid.
- D- Urofollitropin.

Answer: D

17. One of the following is incorrect about anti thyroid drugs :

- A- Carbimazole prevent binding of iodine to tyrosine to form iodotyrosines.
- B- Carbimazole prevents coupling of iodotyrosines to form H.
- C- Agranulocytosis & thrombocytopenia is common idiosyncratic adverse effect to carbimazole.
- D- Propylthiouracil is preferable in pregnancy.
- E- Propylthiouracil only inhibits peripheral metabolism of T4 to T3.

Answer: E

18. One of the following mineralocorticoids receptor blocker will not cause menstrual abnormalities :

- A- Spironolactone.
- B- Eplerenone.
- C- Aldosterone.
- D- Amiloride.
- E- Triamterene.

Answer: B

19. One of the following is not a pharmacological effect of glucocorticoid in blood :

- A- Decrease lymphocytes.
- B- Increase erythrocytes.
- C- Decrease neutrophils.
- D- Increase plasma lipids.
- E- Increase coagulation factors.

Answer: C



20. A woman visits her doctor due to severe inflammation and is prescribed prednisolone to manage her condition. After a few days of taking the medication, she falls and break her hip bone. What is the most likely cause of her fracture :

- A- Increased muscle strength.
- B- Enhanced bone density.
- C- Inhibit bone formation.
- D- Improved balance.
- E- Enhanced calcium absorption.

Answer: C

21. Blood supply of upper parathyroid gland from :

- A- Superior thyroid artery.
- B- Inferior thyroid artery.
- C- External carotid artery.
- D- Internal carotid artery.

Answer: B

22. Posterior relation of left adrenal gland, one of the following is correct :

- A- Liver.
- B- lesser sac of stomach.
- C- Pancreas.
- D- Splenic vessels.
- E- Left crus of diaphragm.

Answer: E

23. Which of these is an APUD cell :

- A- Parafollicular.
- B- Gonadotroph.
- C- Oxyphil.
- D- Corticotroph.

Answer: A



24. One of the following statement is correct regarding melatonin :

- A- Secreted from anterior pituitary.
- B- Increase in darkness.
- C- Inhibited by adrenaline from sympathetic nervous system.
- D- Suppresses neuromuscular activity.
- E- Stimulate the onset of puberty.

Answer: B

25. One of the following is incorrect regarding herring bodies :

- A- Stored in dilated terminal ends.
- B- Transmit supraoptic and paraventricular nuclei secretion.
- C- Transmitted through myelinated axons.
- D- Transmit secretion through hypothalamo-hypophyseal tract.

Answer: C

26. What is the origin of parafollicular cells :

- A- 1st pharyngeal arch.
- B- Mesoderm.
- C- Neural crest.
- D- Ultimobranchial bodies.

Answer: D

27. All of the following increase after taking glucocorticoid except :

- A- Histamine.
- B- Blood pressure.
- C- Glucose.
- D- Plasma lipids.

Answer: A

28. One of the following is incorrect regarding criteria for the diagnosis of diabetes mellitus :

- A- Fasting glucose more than 126.
- B- 2h plasma glucose more than 200.
- C- Classic diabetes symptoms and random plasma glucose more than 200.
- D- Diagnosed at glucose cut-off points that are higher than those for diabetes mellitus.

Answer: D



29. Which of these enzymes is stereospecific :

- A- Isocitrate dehydrogenase.
- B- G6P Dehydrogenase.
- C- Fumarase.
- D- Pyruvate carboxylase.

Answer: C

30. The biomarkers which used in acute pancreatitis, cholestasis and urinary bladder cancer :

- A- Amylase, ALP and beta glucorindase.
- B- Streptokinase, ALP and beta glucorindase.
- C- Amylase, beta glucorindase and ALP.
- D- Lipase, AST and beta glucorindase.
- E- Streptokinase, AST and beta glucorindase.

Answer: A

31. To differentiate the diagnosis of biliary obstruction from bone disease, ALP used with :

- A- AST.
- B- CK.
- C- LDH.
- D- GGT.

Answer: D

32. Maple syrup urine disease result from defect in :

- A- Tyrosinase.
- B- Alpha keto acid dehydrogenase.
- C- Arginase.
- D- Methylmalonyl CoA mutase.

Answer: B

33. Which of the following inhibits insulin release :

- A- Glucagon.
- B- Epinephrine.
- C- Thyroxine.
- D- Testosterone.
- E- Melatonin.

Answer: B





34. Which of the following stimulate release of ADH :

- A- Decrease osmolarity which stimulate osmoreceptor.
- B- Increase osmolarity which Inhibit osmoreceptor.
- C- Hemorrhage is the most potent stimulus.
- D- Alcohol consumption.

Answer: C

35. All of the following affect by Inhibitory and stimulatory hormones of hypothalamus except :

- A- Prolactin.
- B- TSH.
- C- MSH.
- D- LH.
- E- FSH.

Answer: C

36. Which of the following statement is correct about tyrosine kinase receptors :

- A- GRB2 binds to SOS with in turn interacts with the active ras.
- B- The first level of termination signals is degradation of the 2nd messenger.
- C- Ras is connected to the membrane by lipid anchor.
- D- SOS dissociation of GDP from adapter protein.
- E- Dimerization is not necessary to activate the receptor.

Answer: C

37. Which is correct about connection between hypothalamus and pituitary gland :

- A- Vascular connection between hypothalamus and anterior pituitary in the form of hypothalamo-hypophyseal tract.
- B- Vascular connection between hypothalamus and anterior pituitary in the form of hypothalamo-hypophyseal portal circulation.
- C- Nervous connection between hypothalamus and anterior pituitary in the form of hypothalamo-hypophyseal portal circulation.
- D- Vascular connection between hypothalamus and posterior pituitary in the form of hypothalamo-hypophyseal tract.
- E- Nervous connection between hypothalamus and posterior pituitary in the form of Hypothalamo-hypophyseal portal circulation.

Answer: B

38. All of the following are link between carbohydrate and fatty acid except :

- A- DHAP.
- B- GAP.
- C- Acetyl CoA.
- D- Phosphoenolpyruvate

Answer: D

39. Which of the following mineralocorticoid drugs does not cause menstrual irregularities :

- A- Spironolactone.
- B- Eplerenone.
- C- Finerenone.
- D- Amiloride.
- E- Triamterene.

Answer: B

40. One of the following is correct about function of parathyroid hormone :

- A- Increase calcium reabsorbtion from distal renal tubule.
- B- Decrease phosphate reabsorbtion from distal renal tubule.

Answer: A

41. Deficiency in 11-beta hydroxylase can lead to :

- A- Decrease in aldosterone and cortisol.
- B- Salt wasting hypotension.
- C- Decrease renin.
- D- Decrease in aldosterone only.

Answer: D

42. The effector protein of diacylglycerol is :

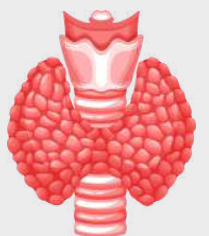
- A- Phospholipase C.
- B- Guanyly cyclase.
- C- Phosphatidylinositol.
- D- Protein kinase C.

Answer: A



43. Function of thiolase enzyme is :

- Cleavage of the bond between alpha acyl Co-A and beta acyl Co-A.



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## Endocrine Final

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Raneem Dmour



1. Which of these amino acids are essential for infants :

- A- Lysine and Leucine.
- B- Tryptophan.
- C- Methionine.
- D- Arginine and Histidine.
- E- Valine.

Answer: D

2. Which of the following statement is correct :

- A- Short loop feedback means physiological effect itself inhibits the secretion of the gland itself.
- B- Long loop feedback means control by the hormones of the effector organ.
- C- Long loop feedback means physiological effect itself inhibits the secretion of the gland itself.
- D- Short loop feedback means control by the hormones of the effector organ.
- E- Ultra short feedback means control by the pituitary hormones themselves.

Answer: B

3. All off the following related to oxytocin is incorrect except :

- A- Milk ejection is the most important function.
- B- Helps the process of normal labor.
- C- Helps involution of the uterus after delivery.
- D- Has antidiuretic effect.
- E- Increase uterus sensitivity to progesterone.

Answer: E

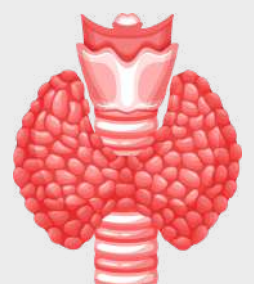
4. Origin of suprarenal medulla :

- A- Mesoderm.
- B- Endoderm.
- C- Coelomic epithelium.
- D- Neural crest.
- E- Ultimobranchial bodies.

Answer: D

5. The correct statement regarding criteria of diabetes mellitus :

- Fasting blood glucose > 120 mg/dl.





6. The allosteric regulator of acetyl CoA carboxylase :

- A- Citrate.
- B- Fatty acids.
- C- Acetyl CoA.
- D- Malonyl CoA.
- E- PDH.

Answer: A

7. How many ATP result from anaerobic metabolism in the brain :

- A- 32.
- B- 30.
- C- 28.
- D- 8.
- E- 2.

Answer: B

8. One of the following statement is incorrect regarding steroid hormones :

- A- Play important in carbohydrate regulation.
- B- Fewer different type than peptide hormones.
- C- Enzymes responsible for synthesis of it.
- D- Synthesized in mitochondria and ribosome.
- E- All are lipid soluble and not stored in cells.

Answer: D

9. Thyroxin responsible for :

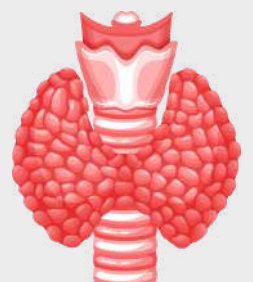
- A- Increase peripheral resistance.
- B- Increase number of beta receptor.
- C- Decrease pulse pressure.
- D- Causes diuresis and decrease excretion of potassium in urine.
- E- Inhibit conversion of B-carotens to vitamin A.

Answer: B

10. Which of these muscles in medial surface of thyroid gland :

- A- Cricothyroid.
- B- Sternohyoid.
- C- Omohyoid.
- D- Sternomastoid.

Answer: A



11. Superior adrenal artery originated from :

- A- Abdominal aorta.
- B- Renal artery.
- C- Inferior phrenic artery.
- D- Internal carotid artery.
- E- External carotid artery.

Answer: C

12. One of the following statement is correct :

- A- The predominant cause of hyperpituitarism is pituitary tumors.
- B- Craniopharyngioma derived from remnants of Rathke's pouch.
- C- ACTH deficiency leads to hypogonadism.
- D- Corticotroph cell adenoma has little chance to become malignant.

Answer: B

13. All of the following are clinical features of pituitary adenoma in adult except :

- A- Cushing syndrome.
- B- Gigantism.
- C- Acromegaly.
- D- Hyperthyroidism.
- E- Hyperprolactinemia.

Answer: B

14. Conn's syndrome :

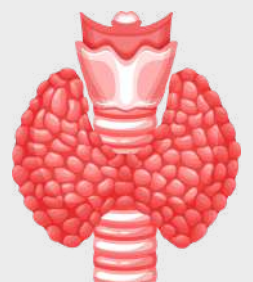
- A- Hypertension.
- B- Hypotension.
- C- Low aldosterone and low renin.
- D- High aldosterone and high renin.
- E- High aldosterone and low renin.

Answer: E

15. All of the following are related to pituitary apoplexy except :

- A- Necrosis.
- B- Hemorrhage.
- C- Sudden headache.
- D- Micropituitary adenoma.
- E- Visual disturbances.

Answer: D



16. Thiazolidinediones leads to these adverse effects except :

- A- Mild anemia.
- B- Weight gain.
- C- Disulfiram like reaction.
- D- Hypoglycemia.

Answer: C

17. Which of the following is the primary action of sulfonylureas on pancreatic B-cells :

- A- They directly stimulate the fusion of insulin granules with the cell membrane.
- B- They open voltage-gated  $\text{Ca}^{2+}$  channels in the cell membrane.
- C- They inhibit a hyperpolarizing outflux of  $\text{K}^{+}$  by binding to ATP-dependent  $\text{K}^{+}$  channels.
- D- They cause the cell membrane to become more negative, leading to depolarization.
- E- They directly increase the synthesis of insulin in pancreatic  $\beta$ -cells.

Answer: C

18. One of the following is correct regarding mecasermin :

- A- Inhibiting release of glucagon.
- B- Useful for treatment of acromegaly.
- C- Absorbed rapidly after subcutaneous injection.
- D- Hypoglycemia is an important side effect.

Answer: D

19. One of the following is correct :

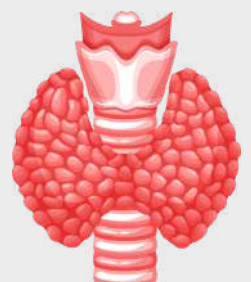
- A- Pegvisomant is growth hormone receptor antagonist for treating acromegaly.
- B- Somatostatin is higher efficacy than octreotide.
- C- Bromocriptine is active as subcutaneous injection.
- D- Growth hormone has catabolic effect in lipids.

Answer: A

20. All of the following is adverse effect of anti thyroid drugs except :

- A- Rash.
- B- Agranulocytosis.
- C- Thrombocytopenia.
- D- Myalgia.
- E- Liver damage.

Answer: D



21. Congenital anomaly of craniopharyngial canal due to :

- A- Absent of buccal pituitary.
- B- Agenesis of the gland.
- C- Remnants of Rathke's pouch that developed into tumor.
- D- Excess ACTH secretion.
- E- Failure of degeneration of Rathke's pouch.

Answer: E

22. One of the following is incorrect about Waterhouse-Friderichsen syndrome :

- A- Hemorrhage in adrenal gland.
- B- Cause by acute bacterial infection.
- C- Disseminated Intravascular coagulation.
- D- Stops producing hormone by adrenal gland.
- E- Treated by adrenalectomy.

Answer: E

23. Secretin hormone :

- A- Stimulate pancreatic duct secretions.
- B- Increase glucagon secretion.
- C- Stimulate the secretion of gastric acid in stomach.
- D- Inhibiting contraction of gall bladder.
- E- Enhancing the absorption of nutrients in small intestine.

Answer: A

24. All of the following act by same mechanism except :

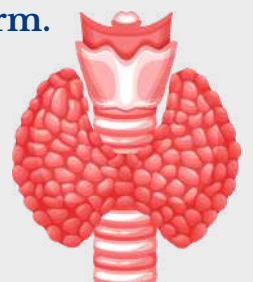
- A- Glucagon.
- B- GH.
- C- IGH.
- D- Cortisol.
- E- Epinephrine.

Answer: C

25. All of the following are correct regarding G-protein coupled receptors except :

- A- Most activity comes from alpha subunit.
- B- Alpha and beta subunits are anchored to cell membrane.
- C- Alpha subunit interact with effector protein.
- D- Beta and gamma subunits are tightly associated complex in active form.
- E- G-alpha divided into four families.

Answer: B



26. Absence of peroxidase enzyme leads to :

- Zellweger's syndrome.

27. All of the following are high energy molecules except :

A- NADH.

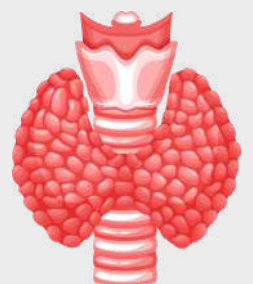
B- FADH<sub>2</sub>.

C- Dihydroxyacetone phosphate.

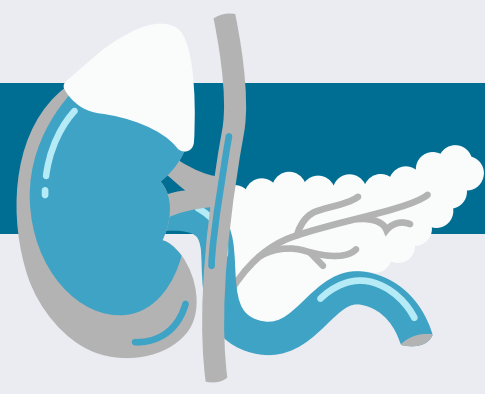
D- 1-3 bisphosphoglycerate.

E- Phosphoenolpyruvate.

Answer: C







# Endocrine Archive

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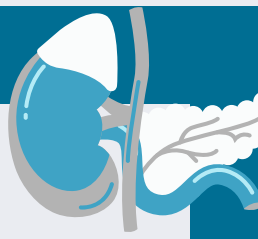
Done by:

Laila Al Nusirat

Raghad Abu Khalaf

Emran Younis





**1) Nerve related to medial surface of thyroid gland :**

- A- external laryngeal nerve**
- B- internal laryngeal**
- C- recurrent laryngeal**
- D- a&b**
- E- a& c**

**Answer:E**

**2) One of the following is not effector protein :**

- A- ion calcium channel**
- B- adenylate cyclase**
- C- phosphatidyl serin**
- D- guanylyl cyclase**
- E- phosphodiesterase**

**Answer: C**

**3) Patient has pain & swelling in thyroid gland and he takes glucocorticoid ,what do you think the mechanism of glucocorticoid?**

- A-increase the immune system effect**
- B-inhibition the PLA2**
- C- Decrease blood pressure**
- D- Lypogenesis**

**Answer:B**

**4) Calcitonin is important in all of the following except :**

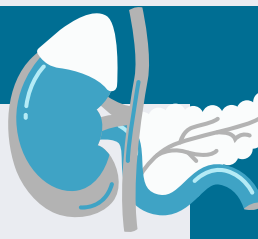
- A-hypercalcemia**
- B-Paget's disease of bone**
- C-metastatic bone cancer**
- D- post menopausal osteoporosis**
- E- hypocalcemia**

**Answer:E**

**5) About oxidative phase of PPP, the true statement is :**

- A) will produce NADP+**
- B) mediated by NADPH / NADH**
- C) will produce energy that can be utilized in ETC**
- D) Glucose 6-phosphate dehydrogenase is the regulatory enzyme**

**Answer: D**



**6) D2 ( a variant of iodothyronine deiodinase) can found mostly in:**

- A) Liver
- B) kidney & Thyroid
- C) Brain
- D) Central nervous system

**Answer: D**

**7) The site for iodination of thyroglobulin is:**

- A) parafollicular cells
- B) cortex
- C) follicular cells
- D) thyroid lumen
- E) blood

**Answer: D**

**8) One of the following is difference between turner & prader - willi syndrome?**

- A) prader willi cause diarrhea
- B) prader willi affect males only
- C) Turner affect females only

**Answer: C**

**9) All of the following is features of diabetic retinopathy except:**

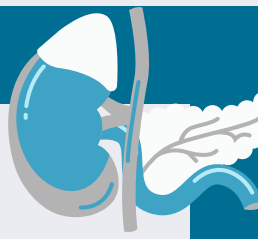
- A) advanced proliferative retinopathy.
- B) retinal hemorrhages.
- C) neovascularization.
- D) tractional retinal detachment
- E) Transudate

**Answer: E**

**10) G6PDH deficiency associated with all the following, except :**

- A) Kidney failure
- B) Fasting hypoglycemia
- C) Hyperlipidemia
- D) muscle weakness

**Answer: A**



**11) All of the following are essential amino acid except:**

- A) Serine
- B) Lysine
- C) Valine
- D) Threonine
- E) Leucine

**Answer: A**

**12) The origin of neurohypophysis :**

- A- roof of the mouth
- B- diencephalon
- C- roof of the nasopharynx

**Answer : B**

**13) All of the following are features of papillary carcinoma except:**

- A- pseudoinclusion
- B- coffee nucleus
- C- vascular invasion
- D- fibrovascular core

**Answer: C**

**14) All of the following associated with hypothyroidism except :**

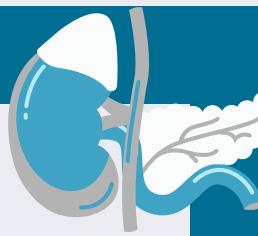
- A) weight gain
- B) cold intolerance
- C) slow heartbeat
- D) nervousness

**Answer : D**

**15) Adult Refsum disease caused by defect in which enzyme:**

- A) peroxisome
- B) alcohol dehydrogenase
- C) Phytanic acid oxidase
- D) keto thiolase

**Answer: C**



**16) Which of the following contains 19 carbon atom :**

- A- testosterone**
- B- estrogen**
- C- progesterone**
- D- mineralocorticoid**

**Answer: A**

**17) A sign that is diagnostic to pituitary Adenoma :**

- A) muscle weakness**
- B) bitemporal hemianopia**
- C) cold sensitivity**

**Answer: B**

**18) Which of the following cause decrease insulin secretion:**

- A- epinephrine**
- B- ip3**
- C- fatty acid**
- D- amino acid**

**Answer: A**

**19) Which of the following Eicosanoids can do vasoconstriction & bronchoconstriction :**

- A) LTD4, LTE4**
- B) PGE2, LTD4**
- C) PGI2, PGE2**
- D) LTB4, TXA2**

**Answer: A**

**20) Which of the following statements about antidiuretic hormone is true ?**

- A) It is synthesized in the posterior pituitary gland**
- B) It increases salt and water reabsorption in the collecting tubules and ducts**
- C) It stimulates thirst**
- D) It has opposite effects on urine and plasma osmolarity**

**Answer: D**





**21) A 46-year-old man has "puffy" skin and is lethargic. His plasma thyroid-stimulating hormone concentration is low and increases markedly when he is given thyrotropin-releasing hormone. Which of the following is the most likely diagnosis?**

- A) Hyperthyroidism due to a thyroid tumor**
- B) Hyperthyroidism due to an abnormality in the hypothalamus**
- C) Hypothyroidism due to an abnormality in the thyroid**
- D) Hypothyroidism due to an abnormality in the hypothalamus**
- E) Hypothyroidism due to an abnormality in the pituitary**

**Answer: D**

**22) One of the following is true about cushing syndrome:**

- A) Hypertension**
- B) Virilization in female**
- C) strong muscle and bone**
- D) peripheral fat accumulation**

**Answer: A**

**23) Urea contains 2 nitrogen atoms, what are the sources of these atoms?  
Select one:**

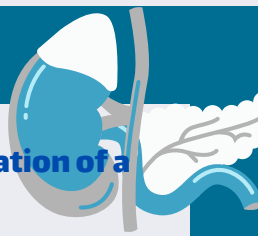
- A) Both are derived from aspartate**
- B) One from ammonia and one from arginine**
- C) Both are derived from ammonia**
- D) One from ammonia and one from aspartate**

**Answer: D**

**24) In case of liver cirrhosis, ammonia is not detoxified and can cause brain encephalopathy. Which of the following amino acids can covalently bind ammonia, transport and store in a non-toxic form?**

- A) Serine**
- B) Aspartate**
- C) Cysteine**
- D) Glutamate**

**Answer: D**



**25) Which of the following anterior pituitary hormones plays a major role in the regulation of a nonendocrine target gland?**

- A) Adrenocorticotrophic hormone
- B) Thyroid-stimulating hormone
- C) Prolactin
- D) Follicle-stimulating hormone
- E) Luteinizing hormone

**Answer: C**

**26) During gluconeogenesis, the conversion of glucose 6-P to glucose is catalyzed by glucose-6-phosphatase. Which of the following statement is true about this reaction?**

- A) The reaction occurs in mitochondria
- B) Abnormal glycogen accumulation in liver is a result of this enzyme deficiency
- C) Conversion of glucose 6-phosphate to glucose releases a molecule of ATP
- D) It is a highly active enzyme in skeletal muscles
- E) It can be reversed also by hexokinase and /or glucokinase

**Answer: E**

**27) A patient has been exposed to a compound that increases the protons permeability across the inner mitochondrial membrane.**

**What would be expected to happen?**

**Select one:**

- a. Increased oxygen utilization
- b. Decreased pyruvate dehydrogenase activity
- c. Decreased malate-aspartate shuttle activity
- d. Increased ATP levels
- e. Increased FO/F1 ATP synthase activity

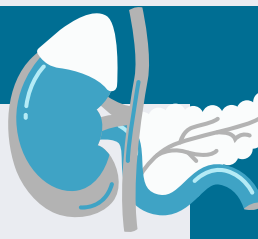
**Answer: A**

**Explanation: increasing the permeability means that there is less energy produced, as a compensation mechanism the cell does more and more ETC utilizing more oxygen**

**28) Steroid is?**

- A) sterol nucleus with alkyl group of cholesterol
- B) sterol nucleus without alkyl group
- C) sterol nucleus with methyl group in ring c and d of cholesterol
- D) sterol nucleus with methyl in D ring

**Answer: C**



**29) One of the following doesn't match correctly :**

- A) cortical atrophy – exogenous glucocorticoids**
- B) diffuse hyperplasia – ACTH dependent Cushing syndrome**
- C) macronodular hyperplasia – primary cortical hyperplasia**
- D) adenoma – large necrotic mass & hemorrhage**

**Answer : D**

**30) All of the following are correct manifestations of type I diabetes , except ?**

- A) Polyuria**
- B) Dehydration**
- C) Weight loss**
- D) ketoacidosis**
- E) Hypoglycemia**

**Answer: E**

**31) All of the following are Goals of therapy of diabetes , except ?**

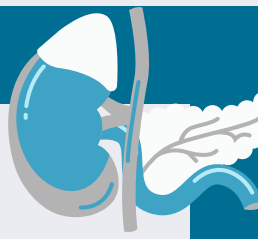
- A) HbA1C < 7.0 %**
- B) Type 1 can be controlled by diet and lifestyle modification**
- C) patients with diabetes should receive influenza vaccinations annually**
- D) Metformin is the recommended first-line oral agent for newly diagnosed type 2 diabetes**

**Answer: B**

**32) Super high energy molecules stored energy in which of the following:**

- A) bond**
- B) electrons**
- C) atoms**

**Answer: A**



**33) All true about surgical anatomy of thyroid , except ?**

- A) The venous supply parallels to the arterial supply**
- B) Parathyroid gland may be inside the thyroid**
- C) the back of thyroid fixed by Berry ligament to the trachea**

**Answer: A**

**Explanation: not parallel**

**34) All of the following are stress hormones , except ?**

- A) Cortisol**
- B) PTH**
- C) Adrenaline**
- D) ACTH**
- E) Thyroxin**

**Answer: B**

**Explanation: Even if PTH can affect the heart and different organs by its receptors, it stills not considered as stress hormone, while thyroxine increases body metabolism and activate body functions that correlate with stress.**

**35) Which of the following is not true about intracellular receptors?**

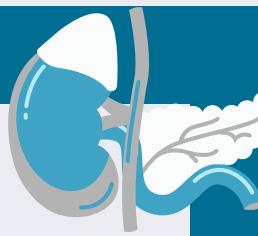
- A) thyroid hormones bind as heterodimers**
- B) intracellular receptors dimerize before binding to DNA**
- C) RXR is a part of heterodimers**
- D) some ligands may inhibit the transcription of a specific gene**
- E) steroid receptors bind as heterodimers**

**Answer: E**

**36) which of the following is not correct regarding pituitary tumors?**

- A) corticotropin secreting adenoma has highest potential to become malignant**
- B) form 10% of intracranial tumors**
- C) prolactinoma is the rarest type**

**Answer: C**



**37) Rate limiting enzyme of fatty acid synthesis is:**

- A) citrate lyase
- B) acetyl CoA carboxylase
- C) malonyl CoA carboxylase
- D) acetyl transacylase
- E) fatty acyl transacylase

**Answer: B**

**38) Regarding the proton pump activity in ETC, what is correct?**

- A) forms a pore within inner mitochondrial membrane
- B) causes asymmetrical transfer of protons through inner mitochondrial membrane

**Answer: B**

**39) which of the following is false regarding diagnosis of diabetes?**

- A) one 2-hour post prandial blood glucose test for symptomatic person is sufficient for diagnosis
- B) If random glucose test is  $>200$  the patient will diagnose with diabetes
- C) glycated hemoglobin=5.6 indicates a risk of diabetes
- D) a+c

**Answer: C**

**40) Von gierk's disease include all the following manifestations except:**

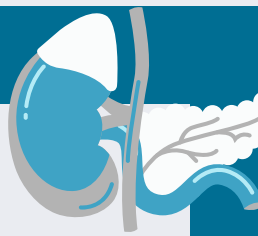
- A) muscle cramps and fatigue after exercise
- B) fatty liver and hepatomegaly
- C) renal failure
- D) hyperlipidemia

**Answer: C**

**41) glycolysis has \_\_\_ as the rate limiting enzyme, which is inhibited by \_\_\_\_**

**Answer: PFK-1, Citrate**





**42) The wrong statement about tyrosine kinase receptors is:**

- A) a mutation of neu locus gene is noticed in some breast cancers**
- B) Sos is activated by binding with GTP instead of GDP**
- C) SH2 domain is involved in various signaling pathways**
- D) SH2 domain binds with phosphorylated tyrosine residues**
- E) RAS is connected to cell membrane by anchor**

**Answer: B**

**43) choose the wrong statement regarding adrenaline and it's receptors:**

- A) beta 1 receptors found mainly in heart**
- B) phospholamban inhibits the activity of SERCA**
- C) heart rate is decreased due to inhibition of phospholamban activity**
- D) beta 2 receptors are found in liver**

**Answer: C**

**44) A patient comes with sudden nausea and vomiting episodes, with symptoms of Cushing triad. One of the following is not a cause:**

- A) diabetes insipidus**
- B) meningitis**
- C) syndrome of inappropriate ADH secretion**
- D) brain tumor**

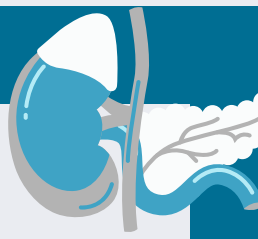
**Answer: A**

**Explanation: Diabetes insipidus typically does not lead to hypertension, which is one of the components of Cushing's triad associated with increased intracranial pressure. In contrast, SIADH, meningitis, and brain tumors are conditions in which increased intracranial pressure is a primary symptom.**

**45) One of the following conditions is true as indication to use Octreotide drug :**

- A) Pediatric patients with short stature**
- B) Growth hormone deficiency**
- C) Acromegaly**

**Answer : C**



**46) Which one of the following is correct ?**

- A) Epinephrine increase C-AMP**
- B) heart is major organ to Beta 2 receptors**
- C) Epinephrine decreases C-AMP**

**Answer : A**

**47) One of the following is not regarding to Abnormalities in fructose metabolism :**

- A) fructosuria = deficiency in fructokinase**
- B) HFI is sever condition**
- C) fructose malabsorbtion = deficiency in GLUT5**
- D) fructosuria are asymptomatic**
- E) HFI cause fasting hypoglycemia because of depletion of fructose-1-phosphate that required for glycolysis & glycogenesis**

**Answer: E**

**48) which of the following enzymes increase in perforated peptic ulcer :**

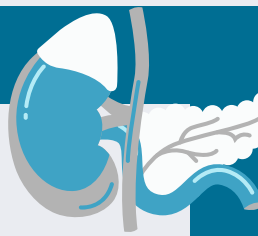
- A) ALP and AST**
- B) creatinine kinase and phospholipase**
- C) Amylase and Lipase**

**Answer: C**

**49) One of the following is best preparation management for septic shock:**

- A) cortisol**
- B) cortisone**
- C) hydrocortisone**
- D) aldosterone**
- E) DOCA**

**Answer: C**



**50) Drug used to treat woman with infertility?**

- A) vasopressin**
- B) follitropin**
- C) cabergoline**
- D) Bromocriptine**

**Answer: B**

**51) All of the following about  $\alpha$ -glucosidase inhibitors is true ,except?**

- A) Acarbose is an example of them**
- B) increase HbA1c**
- C) Inhibit pancreatic  $\alpha$ -glucosidase enzyme**
- D) delays the carbs absorption**

**Answer : B**

**52) All Adverse effects of thyroid hormones, except ?**

- A) Tachycardia**
- B) Anginal attacks**
- C) Hyperthyroidism with high doses**
- D) Arthralgia**

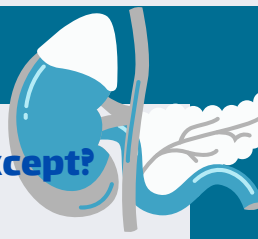
**Answer: D**

**53) Aldosterone:**

- A) decrease Na absorption from ECF**
- B) increase NA absorption from ICF**
- C) increase NA absorption from GIT**

**Answer: C**

**Explanation: aldosterone increases Na in blood in order to control low blood pressure. The most important sites for aldosterone action are GI and urinary systems**



**54) All of the following are related to high renin and high Aldosterone ,except?**

- A) Adrenal adenoma**
- B) Hypotension**
- C) Renal artery stenosis**
- D) Hypokalemia**

**Answer: B**

**55) Which one of the following is true about free cholesterol :**

- A) minimal amount in blood cause atherosclerosis**
- B) increase cell membrane integrity**
- C) hydrophobic**
- D) three hydroxyl cholesterol**

**Answer: C**

**56) About hexokinase IV , all of the following are true, except:**

- A) has high Km value and low affinity**
- B) expressed in pancreas and liver**
- C) add phosphate at carbon 1**

**Answer: C**

**57) Regarding non oxidative phase of PPP, which one is true :**

- A) transketolase will trans 3 carbon atoms**
- B) transaldolase will trans 2 carbon atoms**
- C) mediated by NADPH**
- D) produce intermidates in glycolysis**

**Answer : D**



58) Which one of the following can Add to carbon molecule to elongation of fatty acid chain:

- A) Acetyl CoA
- B) Malonyl CoA
- C) Pyruvate
- D) Glucose

Answer: B

59) Which one of the following is False regarding Glucagon receptor :

- A) phosphorylation by PKA
- B) It's activated by cGMP that phosphorylate by PKA

Answer: B

Explanation : The activation of the glucagon receptor typically involves the activation of a signaling cascade through cyclic AMP (cAMP), not cGMP

60) One from these insulin secretagogues mainly increase insulin release :

- A) Repaglinide
- B) acarbose
- C) metformin
- D) pioglitazone

Answer : A

إِنِّي أُتِيْتُكَ بِهَذَا الْقَلْبِ، أَسَاقُ حُرُوفِي، وَغَبْرَاتِي ..

أَنَا جِيكَ، وَقَلْبِي هَذَا؛ بِكُلِّ سَوَاءَةٍ، وَعَلَى عِلَاتِهِ يَا رَبِّي يَبْفِيكَ

قَدْ عَاتَ فِيهِ الْهَوَى حَتَّى أَهْلَكَهُ، وَطَافَ بِهِ الذَّنْبُ حَتَّى أَغْرَقَهُ، لَكِنَّهُ

يُشْهِدُكَ يَا اللَّهُ؛ أَنَّهُ لَمْ يَبْأَسْ وَلَمْ يَقْنَطْ، وَلَمْ يَجْزَعْ

أَحْمَدُ شَقِيرَ رَحْمَةِ اللَّهِ -

# ENDOCRINE SYSTEM

## ROUH- FINAL

Done BY: Shaimaa Ababneh





1. Hyperprolactinemia is ?

Bromocriptine

2. Duration of rapid insulin ?

- A. 10 min
- B. 20 min
- C. 10 sec
- D. 30 min
- E. 20 sec



Answer: A

3. Which of the following is wrong about rapid action insulin:

- A. soluble form
- B. given SC, IM, IV
- C. its action begins within 10 mins
- D. for controlling DM
- E. given in cases of diabetic ketoacidosis

Answer: C

4. Which of the following not produced by anterior pituitary ?

- A. TSH
- B. FSH
- C. GH
- D. Prolactin
- E. ADH

Answer: E

5. Which of the following not secreted by anterior pituitary ?

- A. TSH
- B. ACTH
- C. FSH
- D. Oxytocin
- E. PRL

Answer: D

6. A 40 years old pregnant woman has a sugar craving, Her serum glucose increases which cause release of insulin which is known to increase the activity of acetyl Co carboxylase, the rate limiting step in fatty acid biosynthesis. Which of the following best describes this regulatory enzyme?

Select one:

- A. It catalyzes a reaction that requires biotin and ATP
- B. It is activated by malonyl CoA
- C. It catalyzes a reaction that condenses acetyl group with malonyl group
- D. It is activated by carboxylation
- E. It converts malonyl CoA to acetyl CoA

Answer: A

7. The final product for complete oxidation of odd chain fatty acids yields which of the following?

Select one:

- A. Acetyl CoA and propionyl CoA
- B. Acetyl CoA only
- C. Succinyl CoA
- D. Propionyl CoA only
- E. Palmitoyl CoA

Answer: A

8. H2 connect with H3 by?

- A. C1
- B. C2
- C. E1
- D. E2
- E. E3

Answer: C



9.False about medullary carcinoma ?

- A. Associated with pituitary adenoma
- B. Flushing and diarrhea

Answer:A

10. The hypothalamo - hypophysial portal system carries hormones from the?

Select one:

- A. Brain to thyroid gland
- B. Anterior pituitary to the hypothalamus
- C. Hypothalamus to the posterior pituitary
- D. Posterior pituitary to the hypothalamus
- E. Hypothalamus to the anterior pituitary

Answer:E

11) the origin of adrenal cortex is:

- A. endoderm
- B. neuroectoderm
- C. coelomic epithelium
- D. surface ectoderm

Answer:C

12)the cause of presence of craniopharyngeal canal:

- A. failure of degeneration of thyroglossal duct
- B. Failure of degeneration of the Rathke's pouch
- C. anterior pituitary is on upper oropharynx

Answer:B

13. All true except related to colloid ?

- A. Iodination occur inside lumen
- B. In parathyroid cell

Answer:B

14. Conn disease ?

- A. Hyperkalemia and hypertension
- B. Hypocalcemia and hypotension
- C. Hypokalemia and hypertension



Answer:C

15. which structure related to pituitary gland superiorly ?

- A. Diaphragm sella
- B. Intercavernous sinuses.
- C. Cavernous sinus
- D. Dorsum sellae
- E. Sphenoidal airsinuses.

Answer:A



16. predominantly mineralocorticoids?

- A. Betamethasone
- B. cortison
- C. Triamcinolone
- D. Fludrocortisone

Answer:D

17. which enzyme used to diagnosis thiamin deficiency?

- A. Transaldose
- B. Transketolase

Answer:B

18. If a woman hears her baby cry, she may experience milk ejection from the nipples even before the baby is placed to the breast. What is the explanation for this?

- A. The sound of the hungry baby's cry elicits secretion of oxytocin from the posterior pituitary, which reaches the breast and causes contraction of the myoepithelial cells
- B. The sound of the hungry baby 's cry causes a reflex relaxation of the myoepithelial cells, allowing the milk to flow
- C. The sound of the hungry baby 's cry elicits a surge of prolactin from the anterior pituitary, which promptly stimulates milk production from the breast.
- D. The sound of the hungry baby 's cry elicits sympathetic nervous system discharge that causes contraction of the myoepithelial cell

Answer:A

19. according to accelerated atherosclerosis all is true except (Mechanisms for vascular disease in diabetes ALL True except ?

- A. impaired vasodilatory response attributable to nitric oxide inhibition
- B. smooth muscle cell dysfunction
- C. Decrease of endothelial growth factors.

Answer: C

20. Defined of diabetes insipidus?

- A) large amount of dilute urine

21. The glycolysis and gluconeogenesis linked by which enzyme ?

- A. Phosphoglycerate kinase
- B. hexokinase
- C. pyruvate kinase
- D. PFK -2/FBPase-2

Answer: D

22. the enzyme that regulates glycolysis/ gluconeogenesis positively (39. Enzyme/s is considered as a positive regulator for both glycolysis/ gluconeogenesis?)

- A. Phosphoglycerate kinase
- B. hexokinase
- C. pyruvate kinase
- D. PFK -2/FBPase-2

Answer: D

23. ALL these sentences related to drug used to treatment osteoporosis except?

- A. Estrogen enhance PTH
- B. Alendronate



Answer: A

24. in glucogenolysis and glucogenesis the enzyme used in both is ?

A. Phosphoglucomutase

B. Pyruvate kinase

Answer::A

25. carbohydrate and fat metabolism linked by ?

A. DHAP

B. 1,3Bisphosphoglucerate

26. side effect of rhGH ?

A) Acromegaly

27. hypercalcemia all true except ?

A. diuresis with a loop diuretic such as furosemide

B. Bisphosphonates

C. Phosphate

D. 1,25 (OH)<sub>2</sub> D (calcitriol)

E. Rehydration with saline solution

28. Adrenal gland anatomy?

A) Right adrenal is related to cealomic ganglion medially

29. Antimycin A block between cytochrome c , then?

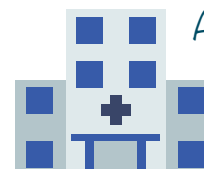
A)Inhibition of all ATP synthesis

30. NADH complex site blockage, what heppens to P:O ratio generated by fatty acyl Co?

A) The same energy generated by normal fatty acyl co

31. Enzymes in heptobiliary diseases?

A) Nucleotidase 5 and Alkaline phosphatase\*



Answer::A

Answer::D





32. What is wrong about cholinesterase ?

A) Used in liver function test

33. Wrong about pyruvate carboxylase ?

A) Its action in inner mitochondrial space

34. All of the following are inhibitors of glutamate dehydrogenase except?

A) ADP\*

35. True about prostacyclin PGI<sub>2</sub>?

A) Its action opposed by TXA<sub>2</sub>

36. Glucagon and epinephrin action in liver ?

A) Activate glycogen phosphorelase ,inhibit glycogen synthase\*

37. Cox 1/PGHS 1 needs ?

A) Gamma glutamyl cysteine glycine\*

38. Why does muscle use PPP pathway in little amount?

A) No dehydrogenases in the muscles\*

39. NAPH is generated by action of ?

A) Glucose\_6\_phosphate dehydrogenase\*

40 . Enzyme act on both pathways glycogenesis and glycogenolysis?

A) Phosphoglucomutase

41. The strongest stimulus on aldosterone ?

A. Low blood pressure

B. Hyperkalemia

Answer:A

42. increase of steroid cause all of the following except ?

A) Hypotension

43. Which of the following is not involved in regulation of plasma  $\text{Ca}^{++}$  levels?

A.Kidneys

B.Skin

C. Liver

D.Intestine

E. Lungs

Answer::E

44.If we remove hormone's receptor from organs what happens?

A.continue responding to hormone without any change

B.continue responding to hormones but randomly

C. no response to hormones

D.continue responding to hormones but need more concentration

Answer:C

45) a female patient of 36 age years old, is suffering from severe pain and inflammation. Her doctor has prescribed for her prednisone as pain management, noting that she already has other medications for that purpose. Prednisone tablets are likely to be consumed at all after 2 months of use. What will happen if the patient is unable to refill her prescription?

A. cardiovascular collapse (adrenal crisis)

B. risk of infection

C. insomnia

D. osteoporosis

E. fatigue

Answer::A



46.The wrong about IP3 is:

- A. a second messenger
- B. contain 3 phosphate groups
- C. it is inositol 1,4,5-phosphate
- D. bind to IP3 gated channels on cell membrane

Answer:D

47.All of the following can treat hypercalcemia except:

- A. calcitonin
- B. furosemide
- C. rehydration with saline
- D. alendronate
- E. all of the above

Answer:E

48)what happens when the binding of hormone to plasma proteins increase?

- A. increasing the negative feedback inhibition on releasing hormones
- B. increases the action resulted from hormone
- C. reduces half life of hormone
- D. increases renal excretion of hormone
- E. increases store of active form for quick replenishment

Answer:E

49)which of the following is not an indication for mecasermin?

- A. acromegaly
- B. chronic renal failure
- C. prader willi syndrome
- D. terber syndrome
- E. idiopathic short stature



Answer:A



50)all of the following occurs with corticosteroids except:

- A) hirsutism
- B) Hypotension
- C) virilization
- D) striated abdomen

Answer:B

51)PGHS/COX utilizes  for synthesis of PGH<sub>2</sub>

- A) glutamate
- B) glycine
- C) gamma glutamyl cysteinyl glycine
- D) gamma glutamyl cysteine
- E) byutric acid

Answer:C

52)a patient with defective NADH dehydrogenase of ETC is now depending on fatty acyl utilization for energy production. What is the correct change regarding P/O ratio?

- A) decrease by 1 value
- B) remains constant(zero)
- C) increase by 1 value
- D) no energy production at all

Answer:B

53)a patient is poisoned with antimycin A that inhibits cytochrome c of ETC, what changes occur to energy production?

- A) no energy production at all
- B) energy is produced in less amounts
- C) energy is produced in slower rate
- D) energy is produced for short period of time
- E) energy production is not affected due to increased rates of ETC

Answer::A



54)thyrocalcitonin is secreted by:

- A) anterior pituitary
- B) hypothalamus
- C) thyroid
- D) parathyroid
- E) adrenal

Answer::C

55)which of the following is incorrectly matched?

- A) hashimoto = oncocytic change
- B) de quervain thyroiditis = preserved follicular epithelium with dense lymphocytic infiltrate \*\*

Answer:B

56)Why is pentose phosphate pathway is not processed in muscular tissues?

- A) muscle do not need NADPH for their activity
- B) muscles do not require the produced pentoses
- C) muscles have small amount of non-oxidative phase of the pathway
- D) muscles have small number of dehydrogenases

Answer::D

57) The DNA binding domain? (except كان لازم)

- A. mediates dimerization
- B. Contain zink finger motifs if 10-20 a.a
- C. have the nuclear localization signal which recruits coactivator
- D. stabilize binding HRE to the receptor

Answer::C

58)Conn disease is :

- A. Diabetes Insipidus which release a large of concentrated urine
- B. Diabetes Insipidus which release a large of diluted urine

Answer::B

59) The goiter :

- A. increase the function of thyroid gland
- B. increase the size of thyroid gland \*
- C. increase the function and size of thyroid gland

Answer: B

60) Which of the following doesn't need plasma protein :

- A. dopamine
- B. progesterone
- C. vitamins D
- D. moniodotyrosine

Answer: A

61) The wrong about adrenal gland:

- A. has Chromaffin cells
- B. spinal ganglion cells
- C. Lymphocyte like cells
- D. highly blood vessel

Answer: B

62) Which of the following about suprarenal gland is correct :

- A. The left gland relates medially to celiac ganglion.
- B. the posterior surface of right gland relates to IVF

Answer: A

63) The muscles that cover thyroid gland:

- A. Sternothyoid ,sternohyoid
- B. thyrohyoid & sternothyroid

Answer: A

64) All stimulation ADH except ?

- A) Alcohol





65)What is wrong about the mechanism of action of insulin ?

Increased Intracellular ATP activates ATP sensitive potassium pump \*

66)All of the following are therapeutic uses of insulin except ?

A.Hypokalemia

B.Hyperkalemia

Answer: A

67)Insulin deficiency causes?

Increased ketogenesis

68)Wrong about estrogen receptors?

Bind to direct repeats

69)All of the following are differences between aldolase a and aldolase b except?

A. They are used in splitting, condensation reaction ( الصياغة غير دقيقة )

B. tissue

C. substrate

Answer: A

D. product

E. the way of act

70)DIFFERENCES In ATP production is due to?

A. Shuttling of NADH molecules

71)Which of the following is true about acetyl coA formation?

A) Pyruvate is oxidized by oxidizing agent  $\text{NAD}^+$

( مش اكيد )



72) All of the following are correct about diabetes except?

A) Both patients of diabetes type 1 and 2 should screen about complication at the time of diagnosis

73) Which of the following is diagnostic of threshold of diabetes ?

A) Fasting glucose  $\geq 140$

74) According to America's committee of diabetes which of the following is used to confirm prediabetes?

A) Glycated haemoglobin  $>5.7$   $<6.4$ \*

75) What is the most potent stimulator of aldosterone ?

A) Hyperkalemia

76) All are Adverse effect of antithyroid drugs except?

A) Myalgia

77) All of the following is affected by inhibitory and stimulatory hormones of hypothalamus except ?

A) Thyrotropic hormones

78) Baby cry causes?

A) Increased secretion of oxytocin



# Endocrine

## دفعه وثين



**1)Pars distalis is the ?**

- A)anterior pituitary**
- B)posterior pituitary**
- C)infundibulum**
- D)pituitary stalk**

**Answer: A**

**2)Pars nervosa is the?**

- A)anterior pituitary**
- B)posterior pituitary**
- C)infundibulum**
- D)pituitary stalk**

**Answer: B**

**3)Protruding tounge and umbilical hernia are symptoms of??**

- A)Hashimato thyroiditis**
- B)De Quevan thyroiditis**
- C)Subacute lymphocytic thyroiditis**
- D)certinism**

**Answer: D**

**4)Neurohypophysis?**

- A)pars distalis**
- B)pars tuberalis**
- C)pars nervosa**

**Answer: C**

**5) Right adrenal gland anteriorly related to ?**

**A)body of pancreas**

**B)liver**

**C)Diaphragm**

**D)kidney**

**Answer: B**

**6) Superior to the pituitary gland?**

**A)diaphragma sellae**

**B)sphenoid air sinus**

**C)dorsum sellae**

**D)pons and basilar artery**

**Answer: A**

**7) All Treatment of hypercalcemia except?**

**A)calcitonin**

**B)Bisphosphonate**

**C)phosphate**

**D)PTH**

**Answer: D**

**8) All Treatment of hypocalcemia except?**

**A)calcium(iv or oral)**

**B)Vit.D**

**C)PTH**

**D)calcitonin**

**Answer: D**

**9) All Treatment of osteoporosis except?**

**A) calcitonin**

**B) Estrogen replacement therapy**

**C) Dietary Ca supplements & Vit.D**

**D) PTH**

**Answer: D**

**10) Which of the following polypeptide loops connect the domains(H3 &H4) in GPCRs??**

**A) C3**

**B) E2**

**C) E1**

**D) C2**

**Answer: D**

**11) All are true according to the gonadotropin toxicity and contraindication except?**

**A) multiple pregnancies**

**B) Headache**

**C) edema and depression**

**D) ovarian hypostimulation syndrome**

**Answer: D**

**12) IP<sub>3</sub>-gated channel(receptor) composed of \_large identical subunit.**

**A) 1**

**B) 3**

**C) 2**



**D)4**

**Answer: D**

**13) The origin of adrenal cortex:**

**A)coelomic epithelium**

**B)neural crest**

**C)copula of His**

**D)1st pouch between tuberculum impar**

**Answer: A**

**14) All of the following are true according to the hyperglycemia during pregnancy except??**

**A)defined by the same criteria as in non pregnant person**

**B)consider as a risk factor for developing T2DM**

**C)Diagnosed at glucose cut-off points that are higher than those for diabetes**

**Answer: A**

**15) According to the Waterhouse friderichsen syndrome all are true except?**

**A)grossly, the adrenals are hemorrhagic and shrunken**

**B)in histo ,little residual cortical architecture is discernible**

**C)always unilateral**

**D)in infant with overwhelming sepsis**

**Answer: C**

**16) All are correct about Ganirelix except?**

**A)absorbed rapidly**

**B)given orally**

***C)preventing the LH surge during controlled ovarian hyperstimulation***

***D) can cause nausea and headache***

***Answer: B***

***17) All of the following Adverse effect of carbimazole except?***

***A)rash***

***B) liver damage***

***C)arthralgia***

***D)granulocytosis***

***Answer: D***

***18) Calcitonin is secreted from?***

***A)chief cells***

***B)islet of langerhans***

***C)parafollicular cells(c-cells)***

***D)oxyphil cells***

***Answer: C***

***19) According to the steroid nucleus all are true except?***

***A)4 rings(A,B,C,D)***

***B)composed of 17 carbon atoms beside 2 methyl groups***

***C) there is a methyl group at C17***

***D)there is methyl group at C13***

***Answer: C***

***20) Deficiency in 21-hydroxylase can lead to all of the following except?***

***A)Excess adrenal androgens***

***B)Deficiency in cortisol and aldosterone***

**C) Ambiguous genitals**

**D) adrenogenital syndrome**

**Answer:**

**21) According to the cholesterol all true except?**

**A) has 2 methyl group (one of them between (A,B) ring and another between (C,D) ring**

**B) eight -carbon branched hydrocarbon chain attached to C17 of the D ring**

**C) Ring A has hydroxyl group at C3**

**D) Ring B has double bond between C6 & C7**

**Answer: D**

**22) All are true according to the adverse effects of thyroid hormones except?**

**A) Muscle pain (myalgia)**

**B) Anginal attacks**

**C) Headache**

**D) hyperthyroidism**

**E) Arrhythmias**

**Answer: B**

**23) Outer part of the adrenal cortex?**

**A) Z. glomerulosa**

**B) Z. fasciculata**

**C) Z. reticularis**

**Answer: A**

**24) Inner part of the adrenal cortex?**

**A) Z. glomerulosa**

**B)Z.fasciculata**

**C)Z.reticularis**

**Answer: C**

**25)All are true about the soluble insulin except?**

**A)short duration of action**

**B)used 30m before meals**

**C)given 3 times per day**

**D)given (IM) in diabetic ketoacidosis**

**Answer: D**

**26) All are mass effect of pituitary adenoma except ??**

**A)elevated intracranial pressure**

**B)hypopituitarism**

**C) cranial nerve palsy**

**D)symptoms of hormone production**

**E)visual field abnormalities**

**Answer: D**

**27) Energy rich molecule??**

**A)NADH\FADH<sub>2</sub>**

**B)phosphoenolpyruvate**

**C)1,3bisphosphoglycerate**

**D)1,3disphosphoglycerate**

**Answer: A**

**28) The enzyme that is inhibited by fluoride?**

**A)Fumarase**

**B)Enolase**

**C)malate dehydrogenase**

**D)pyruvate kinase**

**Answer: B**

**29) According to the reactant in gluconeogenesis all are true except?**

**A)2 pyruvate**

**B) 2NAD**

**C)4ATP**

**D)4Pi**

**E)2GTP**

**Answer: D**

**30) Total ATP molecules in the liver ??**

**A)28**

**B)30**

**C)32**

**D)34**

**Answer: C**

**31) The following reaction or step is reversible?**

**Select one:**

**A) AcetylCoA formation reaction**

**B) Formation of pyruvate from phosphoenolpyruvate**

**C) Phosphorylation of fructose-6-phosphate to fructose 1,6 bisphosphate**

**D) Cleavage of fructose 1,6 bisphosphate by aldolase enzyme**

**E) Phosphorylation of glucose to glucose-6-phosphate**

**Answer: D**

**32) For chylomicrons, the major lipid is?**

- A) Free fatty acids**
- B) Cholesterol esters**
- C) Cholesterol**
- D) Triglycerides**
- E) Phospholipids**

**Answer: D**

**33) Hemolytic anemia occurs in patients who are diagnosed with favism only when they eat?**

- A) Broad beans**
- B) Meat**
- C) Bread**
- D) Bananas**
- E) Rice**

**Answer: A**

**34) Favism is caused by deficiency in?**

- A) Glycogen synthase**
- B) Fructokinase**
- C) Galactokinase**
- D) G6PD**
- E) Glucokinase**

**Answer: D**

# الطب الجراحة لجنة