

GENESIS

(Post Graduation Medical Orientation Centre)

Friday Mega Batch

Total Number- 60

Pass Mark- 42

Subject: Endocrinology

Question 16-30 is based on Single answers

Time: 20 Min

Date: 27/12/19

1. What are the effects of vasopressin?

- a) Increase permeability of PCT to Na^+
- b) Increase permeability of PCT to water
- c) Retention of water in excess of solute
- d) Increase the effective osmotic pressure of the body
- e) Raising the osmolality of body fluid

FF (CD)TF(decrease)F(decrease) (Ref: Ganong-25th--301)

2. Regarding oxytocin

- a) A hormone secreted by nuclei situated at spinal cord
- b) Causes skeletal muscle contraction
- c) Activity is enhanced by progesteron
- d) Having no effect on non-pregnant uterus
- e) Having no effect in male

TF (smooth) F (estrogen) FF (ejaculation) (Ref: Ganong-25th--313)

3. What are the factors that reduce the secretion of growth hormone?

- a) Fasting
- b) Stressful condition
- c) Glucagon
- d) Going to sleep
- e) 2 -deoxyglucose

FFFF (REF: Ganong-25th--328)

4. What are the agents that causes increase concentration of thyroid binding globulin?

- a) Cortisol
- b) Androgen
- c) Danazol
- d) Estrogen
- e) Heroin

FFFTT (REF: Ganong-25th--342)

5. Physiological effects of thyroid hormone

- a) Increase number of β -adrenergic receptors in heart
- b) Formation of HDL receptors
- c) Increase protein synthesis
- d) Increase lipogenesis
- e) Normal growth & skeletal development

T F FF T (Ganong 25th-346)

6. Correct informations regarding thyroid hormones are

- a) 7% of secreted hormone is thyroxine
- b) There is no difference between T3 & T4 regarding intensity of action
- c) Function of T3, T4 is qualitatively same
- d) Tissue use mainly T3
- e) T3 is transported to blood with carrier protein

F (93)FTT (Guyton 12th-909)

7. Regarding parathyroidectomy

- a) \uparrow Serum Po_4 concentration
- b) Symptoms usually appears after few weeks
- c) Symptoms usually appears after 2 or 3 days
- d) CHVOSTEK sign positive
- e) Plasma phosphate levels usually rise as the plasma Ca^{2+} level falls

T F T TT (Ganong-380)

8. What are the factors that causes INCREASE secretion of PTH?

- a) \uparrow Ca^{++} in circulation
- b) \uparrow 1,25- Dihydroxycholecalciferol
- c) \downarrow Phosphate in plasma
- d) Impaired renal function
- e) \downarrow C-AMP

FFFTF (Ganong-25th-382)

9. What are the factors that decrease insulin secretion?

- a) Glucose
- b) K^+ depletion
- c) Beta keto acid
- d) Acetylcholine
- e) Glucagon

FTFFF (Ref: Ganong-25th--439)

10. What are the factors that result in increase level of glucagon?

- a) Glucose
- b) Somatostatin
- c) Secretin
- d) Insulin
- e) α -adrenergic stimulus

F FFFF (Ref: Ganong-25th--443)

11. During sleep there is a fall in the circulating level of

- a) Cortisol
- b) Insulin
- c) Adrenaline
- d) Antidiuretic hormone
- e) Growth hormone

TTTTF (RODDE-446)

12. Effects of insulin in various tissue

- a) Increase cell growth
- b) Decrease K^+ uptake in muscle
- c) Increase glucose entry in muscle
- d) Decrease ketogenesis in liver
- e) Decrease ketone uptake in muscle

T F T T F (Ganong-25th-432)

13. In diabetic ketosis there is a decreased metabolic breakdown of

- a) Ketones
- b) Glycogen
- c) Glucose
- d) Fat
- e) Amino acids

FFTFF (RODDE-496)

14. Destruction of the anterior pituitary gland causes

- a) Amenorrhoea
- b) Diabetes insipidus
- c) Skin pallor
- d) Impaired ability to survive severe stress
- e) A fall in basal metabolic rate (BMR)

T F T T T (Rodde-489)

15. Regarding normal human plasma Ca^{2+}

- a) Remain in 2 forms
- b) Ionized Ca^{2+} is non-diffusible
- c) Complex HCO_3^-
- d) Bound to albumin
- e) Bound to globulin

T F F T T (Ganong-25th-376)

Each question below contains five suggested answers- choose the one best response to each question (16-30)

16. Calcitonin decreases serum calcium level directly by

- a) \uparrow Bone formation
- b) \uparrow Urinary excretion of Ca^{++}
- c) \downarrow Bone resorption
- d) \downarrow Intestinal absorption of Ca^{++}
- e) \downarrow Formation of D3

C (Ganong-25th -383)

17. Glucagon is secreted by the α -cells of the pancreatic islets. Which of the following is most likely to induce glucagon secretion?

- a) High serum concentration of glucose
- b) Low serum concentration of amino acids
- c) Low serum concentration of glucose
- d) Secretion of somatostatin by the pancreatic δ -cells
- e) Parasympathetic stimulation

C

18. A 36-year-old head-injury patient developed syndrome of inappropriate antidiuretic hormone secretion (SIADH). This patient manifesting SIADH would be expected to have:

- a) High serum sodium due to the direct stimulatory effect of ADH on distal tubular sodium resorption
- b) High serum sodium due to the concentrating effect of ADH-induced water excretion in the collecting tubules
- c) Low serum sodium due to the dilutional effect of ADH-induced water retention in the collecting tubules
- d) Low serum sodium due to a direct inhibitory effect of ADH on distal tubular sodium resorption
- e) No change in serum sodium, since the dilutional effect of ADH-induced water retention is balanced by a direct stimulatory effect of ADH on distal tubular sodium resorption

C

19. A 26-year-old woman has Graves' disease. In this woman, one would least likely expect:

- a) Goitre
- b) Increased metabolic rate
- c) Increased sweating
- d) Increased thyroid-stimulating hormone (TSH) secretion
- e) Weight loss

D

20. A 26-year-old man has elevated parathyroid hormone levels secondary to a solitary parathyroid adenoma. Elevated parathyroid hormone levels lead to:

- a) Decreased activity of osteoclasts
- b) Decreased calcium absorption from the intestines
- c) Decreased renal phosphate excretion
- d) Increased formation of 1,25-dihydroxycholecalciferol
- e) Increased renal excretion of calcium

D

21. A 56-year-old woman on long-term steroid therapy was brought to the Accident and Emergency Department unconscious and hypotensive. On enquiry from the ambulance crew it was discovered that she had been unwell for last few days and had stopped taking her oral prednisolone. She most likely has:

- a) Addisonian crisis
- b) Diabetic ketoacidosis
- c) Hypothyroidism
- d) Primary hyperaldosteronism
- e) Sheehan's syndrome

A

22. A 22-year-old male type I diabetic was received in the Accident and Emergency Department in ketoacidosis. What is the basic pathophysiology of diabetic ketoacidosis?

- a) Action of glucagon
- b) Decreased glycolysis
- c) Decreased enzyme production by liver
- d) Increased ketone bodies formation
- e) Insulin deficiency

E

23. Testosterone is the male sex hormone. Testosterone is synthesised in the testes from:

- a) Cholesterol
- b) Glycine
- c) Oestrogen
- d) Taurine
- e) Tyrosine

A

24. 21-Hydroxylase is an enzyme that is involved with the biosynthesis of the steroid hormones, aldosterone and cortisol. A 2-year-old baby girl with deficiency of 21-hydroxylase is most likely to have:

- a) Congenital adrenal hyperplasia
- b) Conn's syndrome
- c) Cushing's syndrome
- d) Klinefelter's syndrome
- e) Turner's syndrome

A

25. A 36-year-old woman is diagnosed with a pheochromocytoma. She is most likely to have increased serum levels of:

- a) Aldosterone
- b) Cortisol
- c) Noradrenaline
- d) Oxytocin
- e) Vasopressin

C

26. Thyroid hormones, when secreted in excess may cause an increase in the

- a) Peripheral resistance
- b) Constipation
- c) Attainment of energy required for a given workload
- d) Duration of tendon reflexes
- e) Heart rate when cardiac adrenergic and cholinergic receptors are blocked

E [Rodde 6th/P-193]

27. Which one of the following is not part of the diagnostic criteria for the metabolic syndrome?

- a) High triglycerides
- b) Low HDL
- c) High LDL
- d) Central obesity
- e) Hypertension

C

28. A 26 yr-old female is investigated for menstrual disturbance. A diagnosis of PCOS is made. Which of the following finding is most consistently seen in PCOS?

- a) Obesity
- b) Hirsutism
- c) Ovarian cysts on USG
- d) Raised LH: FSH ratio
- e) Clitoromegaly

C

29. A 52 yr-old man has a set A fasting bloods as part of a work-up for HTN. The fasting glucose comes back as 6.5 mmol/L. The test is repeated and reported as 6.7 mmol/L. He says he feels constantly tired but denies any polyuria or polydipsia. How should these results be interpreted?

- a) Impaired fasting glycemia
- b) Suggestive of DM but not diagnostic
- c) DM
- d) Normal
- e) IGT

A

30. A 45-year-old woman is investigated for weight gain. She had had been unwell for around four months and described a combination of symptoms including depression, facial male-pattern hair growth and reduced libido. During the work-up she was found to be hypertensive with a blood pressure of 170/100 mmHg. Which one of the following tests is most likely to be diagnostic?

- a) Renin:aldosterone levels
- b) High-dose dexamethasone suppression test
- c) Pelvic ultrasound
- d) Overnight dexamethasone suppression test
- e) 24 hr urinary free cortisol

D