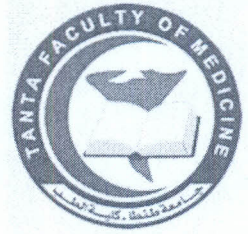


TANTA UNIVERSITY-----Internal Medicine Exam
FACULTY OF MEDICINE ----- Audiology MD
INTERNAL MEDICINE DEPARTMENT-----Total marks: 45 mark
24/ 8/2021-----TIME ALLOWED:1.5 hours



All Questions must be answered :

I-Choose the correct answer:(2 Marks Each)

- 1- A 40 years old female complains of amenorrhea and galactorrhoea .MRI showed mass in the pituitary fossa. what is the most probable diagnosis?
 - a) Adrenal gland adenoma
 - b) Thyroid adenoma
 - c) Prolactinoma
 - d) Hyperparathyroidism
- 2- All the following cause vomiting of blood expect :
 - a) Ulcerative colitis
 - b) Esophageal varices
 - c) Peptic ulcer
 - d) Gastric cancer
- 3- Wilson disease is a disorder of metabolism of :
 - a) Copper
 - b) Iron
 - c) Zinc
 - d) Calcium
- 4- A 42 -year- old male presented with dyspnea , dysphagia with tight skin Autoimmune panel showed positive anti-scl 70 ..What is the most probable diagnosis ?
 - a) Kawasaki disease
 - b) Temporal arteritis
 - c) Scleroderma
 - d) Systemic lupus

- 5- The mode of infection for HIV is :
- a) Oral
 - b) Droplet
 - c) Sexual
 - d) Insect
- 6- The antibody used in diagnosis of Systemic lupus erythmatosis (SLE) :
- a) ANA
 - b) Anti-RNP
 - c) Anti-Jo
 - d) Anti-Ro/Anti-La
- 7- A 33 years old female presented with loss of weight in spite of increased appetite and frequent palpitations . Eye examination revealed protruded eye globe . The most probable diagnosis is :
- a) Hypothyroidism
 - b) Hyperthyroidism
 - c) Hypocalcaemia
 - d) Hypercalcemia
- 8- The insulin which could be used by intravenous route is :
- a) Premixed insulin
 - b) Insulin glargine
 - c) Aqueous insulin
 - d) Non of the above
- 9- All the following drugs have anti-platelets action expect :
- a) Aspirin
 - b) Clopidogrel
 - c) Dipyridamole
 - d) Warfarin
- 10- A 63-year-old woman develops exertional angina and has had two episodes of syncope. Examination shows a systolic ejection murmur with radiation to the carotids and a soft S2 . Which of the following is the most likely diagnosis?
- a) mitral stenosis
 - b) mitral insufficiency
 - c) aortic stenosis
 - d) aortic insufficiency

11- The most common acid base balance occurs in late stage of Chronic kidney disease is :

- a) Metabolic acidosis
- b) Metabolic alkalosis
- c) Respiratory acidosis
- d) Respiratory alkalosis

12- A 61-year-old man presents with Subconjunctival hemorrhage . He is on warfarin for chronic atrial fibrillation.His CBC shows a Hb of 11.2 g/dL and his INR is 9 - the patient is haemodynamically stable.. Which of the following would be the blood product of choice for treatment of his condition ?

- a) Packed R.B.Cs
- b) Fresh frozen plasma
- c) whole blood
- d) Platelet transfusion

13- One of the common complications of prolonged recumbence in bed in the post operative period is :

- a) Stress ulcer
- b) piles
- c) esophageal stricture
- d) DVT (Deep Venous Thrombosis)

14-10-All are recognized causes of hyperkalemia except:

- a) Acute kidney injury
- b) Tumor lysis syndrome
- c) Chronic kidney disease
- d) Loop diuretics

II- Give an account of :

1. Describe the age-related vestibular loss (5 Marks)
2. Clinical manifestation and investigation of infective endocarditis . (3 Marks)

3. Causes of vasculitis. (3 Marks)

4. Clinical manifestations of Iron deficiency anemia. (3 Marks)

5. Microvascular complication of Diabetes mellitus. (3 Marks)

Good luck

سيتم عقد الامتحان الشفوي والعملى يوم الاحد الموافق 29/8/2021 الساعة الثامنة صباحا بقسم الامراض الباطنة .



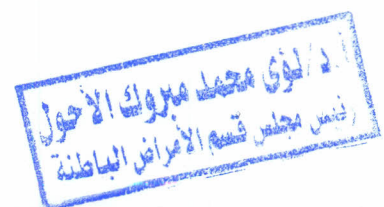
Question 1: Choose the single best answer (30 subquestions). All questions MUST be answered (45 marks, 1.5 marks for each subquestion)

- 1) Which of the following is FALSE regarding gastrin?
 - A. Its secretion is increased in response to vagal stimulation
 - B. Act on enterochromaffin-like (ECL) cells of the gastric fundus to cause histamine release
 - C. The effects of gastrin are primarily mediated via binding of the cholecystokinin (CCKB) receptor.
 - D. Helicobacter pylori gastritis is associated with suppressed gastrin levels

- 2) A 50-year-old man presents with a hoarse voice. He has a unilateral swelling of the thyroid gland. There is also a right recurrent laryngeal nerve palsy. Which one of the following diagnoses is most likely?
 - A. Single thyroid nodule
 - B. Anaplastic thyroid carcinoma
 - C. Medullary thyroid carcinoma
 - D. Lymphoma

- 3) All of the following hormones affect bone remodeling EXCEPT:
 - A. Prolactin
 - B. Estrogen
 - C. GH
 - D. Insulin

- 4) All of the following are phases of ossification except:
 - A. Remodeling
 - B. Quiescence
 - C. Osteoid formation
 - D. Mineralization



- 5) **Dehydration is primarily a loss of which of the following?**
- A. Intracellular and interstitial sodium.
 - B. Intracellular and interstitial water.
 - C. Interstitial and intravascular sodium
 - D. Interstitial and intravascular water.
- 6) **Vasodilation and resulting hypotension and increased capillary permeability is characteristic of which type of shock?**
- A. Anaphylactic shock
 - B. Cardiogenic Shock
 - C. Hypovolumic shock
 - D. Septic Shock
- 7) **An increase in sympathetic stimulation or circulating norepinephrine and epinephrine in the blood can cause heat production by which of the following mechanisms?**
- A. ATP formation
 - B. Uncoupling oxidative phosphorylation
 - C. Increase production of TSH hormone
 - D. Formation of an insulator zone adjacent to the skin
- 8) **Which of the following drugs reduces glucose production by the liver?**
- A. Acarbose
 - B. Metformin
 - C. Dapagliflozine
 - D. Saxagliptine
- 9) **In a man passively warmed such that his mean skin temperature reaches 40.5°C/104.9°F, which of the following circulatory responses will occur?**
- A. Increased cardiac output, decreased splanchnic blood flow
 - B. Increased cardiac output, increased muscle blood flow
 - C. Unchanged cardiac output, decreased right atrial pressure
 - D. Unchanged cardiac output, decreased renal blood flow

- 10) If a patient is experiencing heat exhaustion, which of the following would most reliably indicate that he/she is now at risk for heat stroke?
- A. Increased sympathetic dilation of their blood vessels
 - B. Increased hypotension
 - C. Their skin becomes very dry
 - D. They have an increased volume of sweat production
- 11) What is the major heat source to retain body temperature for a 65-kg adult person in a 29°C/84.2°F environment?
- A. Brown adipose tissue
 - B. Liver
 - C. Skeletal muscle
 - D. White adipose tissue
- 12) Which of the following is a human thermoregulatory response controlled by cholinergic sympathetic pathway?
- A. Brown adipose tissue thermogenesis
 - B. Shivering thermogenesis
 - C. Sweat secretion
 - D. Thermoregulatory behavior
- 13) After falling from a 4-meter ladder, a patient is brought to the emergency department. The patient is alert, reports back pain, and difficulty moving the lower extremities. Which additional observation is an indication the patient may be experiencing neurogenic shock?
- A. Cool and pale skin
 - B. Bradycardia
 - C. Poor skin turgor
 - D. Increased systolic blood pressure
- 14) How long does it normally take to replace red blood cells lost in 20% blood loss by erythropoiesis?
- A. 1-2 days
 - B. 3-4 weeks

- C. 6-8 weeks
- D. 1-7 days

15) Which of the following statements about thyroid hormones is FALSE?

- A. T3 and T4 are both stored in colloid vesicles as thyroglobulin
- B. T3 and T4 are mainly bound to albumin in serum
- C. 85% of circulating T3 arises from extra-thyroidal T4
- D. Conversion of T4 to T3 decreases in acute illness

16) The finding of reduced serum free T4 and thyroid stimulating hormone (TSH) is compatible with which of the following conditions?

- A. Primary hypothyroidism
- B. Nephrotic syndrome
- C. Pneumonia
- D. Pregnancy

17) Which of the following is TRUE regarding Grave's ophthalmopathy?

- A. Diplopia is the most common presenting symptom
- B. The patient is invariably thyrotoxic
- C. Serum eye muscle antibodies are pathognomonic
- D. Hypothyroidism exacerbates the condition

18) A 30-year old man is admitted to the emergency department with sudden onset of severe shortness of breath, no chest pain, diffuse wheezing, cyanosis, and a blood pressure of 70/30 mmHg, Pulse = 100 beats/minute. This event occurred soon after a meal. What is the most likely diagnosis?

- A. Acute pulmonary embolism
- B. Tension pneumothorax
- C. Anaphylaxis
- D. Myocardial infarction

19) Which of the following is the expected abnormality in preoperative pulmonary function test in a patient with severe kyphoscoliosis?

- A. Decreased RV and TLC
- B. Reduced FEV1/ FVC ratio



- C. Reduced FEF 25-75%
- D. Increased FRC

20) Which of the following may occur after ^{131}I radioiodine treatment for thyrotoxicosis?

- A. Rising plasma TSH suggests disease recurrence
- B. Relapse is common in patients with a solitary hot nodule
- C. A clinical effect should be expected within 4 to 12 weeks
- D. 70% of patients require further radioiodine therapy

21) Which of the following lung volumes can NOT be measured by spirometry?

- A. Tidal volumes.
- B. Inspiratory reserve volume.
- C. Expiratory reserve volume.
- D. Residual volume.

22) Normal pulmonary function tests with a reduced DLCO (diffusion capacity) would be most suggestive of which of the following?

- A. Pulmonary embolism.
- B. Bronchial asthma
- C. Obstructive airway disease.
- D. Interstitial lung disease.

23) Obstructive pattern in pulmonary function tests is best defined by which of the following?

- A. An FEV1/FVC that is less than 70% to 75% percent of predicted.
- B. FVC that is less than 75% of predicted.
- C. A maximal midexpiratory flow that is less than 70% to 75% of predicted.
- D. Total lung capacity that is less than 70% to 75% of predicted.

24) Pulse oximetry is least predictive of true oxygen saturation when

- A. The PCO_2 is elevated.
- B. Carbon monoxide is elevated.
- C. The patient is febrile.
- D. The patient is exercising.

- 25) A 10-year-old child presents with fever and rhinorrhea. On examination there is evidence of otitis media and mild cervical lymphadenopathy. Full blood count is remarkable only for a platelet count of $987,000/\text{mm}^3$. Which of the statements is TRUE regarding this patient management?
- A. Reassurance and follow-up of full blood count within few weeks
 - B. Bone marrow evaluation
 - C. JAK2 kinase mutation testing
 - D. Alpha-fetoprotein levels
- 26) A 15-year-old male presents with acute onset of bruising. On examination: the child is lethargic. Full blood count: Hb.%: of 8.7 g/dl, total leukocytic count: $5,600/\text{mm}^3$ with a normal differential, and platelet count: $6,000/\text{mm}^3$. Creatinine: 0.8 mg/dL. Reticulocyte count is 10%. Peripheral blood smear shows red cell fragmentation and a few large platelets. What is the appropriate management at this time?
- A. Platelet transfusion
 - B. Intravenous immunoglobulin
 - C. Plasmapheresis
 - D. High-dose corticosteroids
- 27) A 45-year-old man with no prior medical history is involved in a severe motor vehicle accident. On arrival to the emergency department, he is hypotensive with a BP of 82/40 mmHg and a pulse of 120 beats/min. Intravenous access is obtained, and he receives a bolus of 2 L of 0.9% normal saline. How much of the 2 L of 0.9% saline will contribute to increasing the volume of the intravascular space?
- A. 2000 mL
 - B. 1000 mL
 - C. 500 mL
 - D. 250 mL
- 28) A 75-year-old man with small cell lung cancer metastatic to the brain is treated with high-dose dexamethasone. Because of inadequate nutrition, tube feedings are begun. One week later, he becomes lethargic, and laboratory data are obtained. These show the following: Serum Na, 146; K, 4; Cl, 109; CO_2 , 25; BUN, 60 mg/dL; Creat, 1.0 mg/dL Urine osmolality, 600 mOsm/kg; urine Na, 20 mEq/L; urine K, 15 mEq/L; urine output, 180 mL/hr Which of the following is MOST accurate?

- A. The concentrated urine is diagnostic of syndrome of inappropriate antidiuretic hormone secretion (SIADH)
- B. The less than maximally concentrated urine is diagnostic of incomplete diabetes insipidus
- C. The high BUN/creat ratio and low urine sodium are diagnostic of prerenal azotemia due to hypovolemia
- D. The low urine to plasma electrolyte ratio indicates that the serum sodium will rise unless water is added to the tube feedings.

29) You are asked to see a 24-year-old woman who is being treated for pre-eclampsia and is noted to have a serum calcium of 7.6 mg/dL and a serum phosphate of 5.1 mg/dL, with a serum albumin of 4.0 g/L. She has a BUN of 18 and a creatinine of 1.8 mg/dL. Which of the following is the likely cause of the hypocalcemia?

- A. Renal failure
- B. Hyperphosphatemia
- C. Hypermagnesemia
- D. Hyperkalemia

30) Which of the following is contained within the alpha granules of platelets?

- A. Serotonin
- B. Adenosine diphosphate
- C. Fibrinogen
- D. Calcium

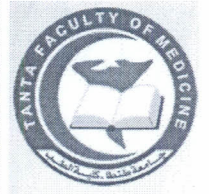
Question 2: Short essay questions (9 subquestions). All questions MUST be answered (45 marks; 5 marks for each subquestion)

1. Mention **FOUR** mechanisms by which glucagon-like peptide 1 plays a role in glucose homeostasis
2. Mention **FOUR** mechanisms within renal tubules by which cyclosporine produces hyperkalemia
3. Mention **FIVE** causes of acquired thrombophilia
4. Mention **FIVE** small intestinal hormones and one clinical application for each:
5. Mention **FIVE** mechanisms by which catecholamines affect glucose homeostasis
6. Enumerate the phases of remodeling cycle.
7. Enumerate **FIVE** the markers of bone resorption.
8. Mention **FIVE** causes of hypergastrinaemia
9. Mention **FIVE** causes of high diffusing lung capacity for carbon monoxide (DLCO)?

Tanta University ----- Internal Medicine Exam

Faculty Of Medicine ----- DM of Therapeutic & Diagnostic Radiology

17/8/2021 ----- Time allowed : 3 h



Give an account on the following :

1- Vasculitis

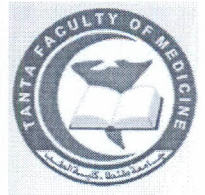
2- Mediastinal syndrome

Good Luck

Tanta University ----- Internal Medicine Exam

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Give an account on the following :

1- Vasculitis

2- Mediastinal syndrome

Good Luck