

Tanta University

Faculty of Medicine

Department of: Medical Biochemistry

Date: 23-2-2022

### **Examination for MSc. Degree in Orthopaedic surgery**

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**Give an account on the following:**

a- Factors affecting calcium absorption and blood calcium level.

b- Biochemical aspect of Paget's disease.

**Good luck**

**ملحوظة: امتحان الشفوى سيكون يوم الاربعاء الموافق 2022/2/23 الساعة الواحدة ظهرا عقب امتحان النظرى مباشرة.**

## Pharmacology exam for Master Degree Orthopedics

Tanta University

Pharmacology Written Examination

Faculty of Medicine

Number of Questions: 4

Pharmacology Department

Time Allowed: 1 Hour

Date: 23/2/2022

Total: 30 Marks



### **I- Give a short account on each of the following: (6 marks)**

- a- Vitamin D (Mechanism of action & indications).
- b- Disease Modifying Anti-Rheumatoid drugs (Classification & Uses).
- c- Bisphosphonates (Dynamics & adverse effects).

### **II- Discuss lines of treatment of the following: (7 marks)**

- a- Osteomyelitis.
- b- Chronic gout.

### **III- Give reason why? (2 marks)**

- a- Tetracyclines should not be used in pregnancy or lactation and in children younger than 7 years.
- b- In epileptic patients, concomitant administration of phenytoin with vitamin D might precipitate adverse effects.

**IV- Multiple Choice Questions (15 marks):**

**1- Which of the followings defines an agonist that can produce submaximal effect and has moderate efficacy?**

- a. Paradoxical agonist
- b. Full agonist
- c. Inverse agonist
- d. Partial agonist

**2- Which of the following competitive neuromuscular blockers can be used in patients with hepatic and renal dysfunction?**

- a. Mivacurium.
- b. Atracurium.
- c. Pancuronium.
- d. D-tubocurarine.

**3- Which of the following agents is hepatic microsomal enzyme inducer?**

- a. Isoniazid.
- b. Tobacco smoking.
- c. Valproic acid.
- d. Ceftriaxone.

**4- Neurokinin-1 receptor antagonist that is used for treatment of chemotherapy-induced nausea and vomiting:**

- a. Ondansetron
- b. Aprepitant
- c. Nimesulide
- d. Domperidone

**5- Which of the following is selective cyclo-oxygenase-2 inhibitor?**

- a. Ibuprofen
- b. Meloxicam
- c. Ketorolac
- d. Diclofenac

## Pharmacology exam for Master Degree Orthopedics

**6- Although therapeutic doses of aspirin act as antipyretic, but in acute toxicity it causes hyperthermia. What is the explanation of this hyperthermia?**

- a. Due to increased bradykinin synthesis
- b. Due to increased release of inflammatory cytokines
- c. Due to vasoconstriction and decreasing heat loss
- d. Due to uncoupling of oxidative phosphorylation

**7- The therapeutic efficacy of angiotensin converting enzyme inhibitors as antihypertensive agents is blunted by NSAIDs because NSAIDs:**

- a. Cause sodium excretion
- b. Increase the clearance of antihypertensive drugs.
- c. Decrease the absorption of antihypertensive drugs.
- d. Decrease synthesis of the vascular prostacyclin.

**8- Which of the following is xanthine oxidase inhibitor?**

- a. Febuxostat
- b. Colchicine
- c. Probenecid
- d. Sulphinpyrazone

**9- An agent that metabolizes uric acid to allantoin which is five to ten times more soluble than uric acid:**

- a. Raloxifene.
- b. Pegloticase.
- c. Teriparatide.
- d. Febuxostat.

**10- Baclofen acts as skeletal muscle relaxant by:**

- a. Potentiates Glutamate activity in the CNS.
- b. Potentiates GABA activity in the CNS.
- c. Competes with acetylcholine for nicotinic receptors of skeletal muscles.
- d. Produces initial depolarization followed by block of nicotinic receptors of the skeletal muscles.



## Pharmacology exam for Master Degree Orthopedics

11- Which of the following is used for treatment of NSAIDs-induced peptic ulcer?

- a. Fluconazole
- b. Aripiprazole
- c. Pantoprazole
- d. Ketoconazole

12- Clopidogrel acts as antiplatelet agent by:

- a. Inhibits thromboxane A2 synthase enzyme.
- b. Inhibits the binding of adenosine diphosphate to its platelet P2Y12 receptors.
- c. Blocks the uptake of adenosine by the platelets.
- d. Inhibits binding of fibrinogen to glycoprotein IIb/IIIa receptors on the platelets.

13- Morphine is contraindicated in which of the following conditions?

- a. Severe visceral pain of cancer
- b. Acute Pulmonary edema
- c. Neurogenic shock
- d. Head injury

14- Mode of action of hydrocortisone includes increasing of:

- a. Expression of cyclooxygenase enzyme
- b. Lipocortin (Annexin-1)
- c. Production of leukotrienes
- d. Generation of cytokines

15- Adverse effects of aminoglycosides include the following EXCEPT:

- a. Ototoxicity
- b. Dark brown discoloration of urine
- c. Nephrotoxicity
- d. Skeletal muscle relaxation

انتهت الأسئلة  
GOOD LUCK

تنبيه هام: سيتم بمشيئته تعالى عقد الامتحان الشفوي بقسم الفارماكولوجي يوم الأربعاء الموافق 23 فبراير 2022 الساعة الواحدة ظهرا مع الإلتزام بكافة الإجراءات الاحترازية.



Department of physiology  
Time allowed: Three hours  
Total marks: 30

Physiology  
MSC Orthopedic

Tanta University  
Faculty of Medicine  
Code: Orth  
Date: 23 /2/2022

**All the questions must be answered:**

- 1- **Discuss** : Causes and manifestations of tetany . (5marks)
- 2- **Mention**: Function of pre motor area 6. (5 marks)
- 3- **State**: Mechanism of neuromuscular transmission. (5 marks)

**All the following must be answered by only one choice (15 marks)**

- 1- **Sympathetic stimulation could induce:**
  - a. Miosis.
  - b. Increase gastric secretion.
  - c. Bronchoconstriction.
  - d. Pupil dilatation .
- 2- **Which of the following could induce cyanosis:**
  - a. Stagnant hypoxia.
  - b. CO poisoning.
  - c. Histotoxic hypoxia.
  - d. Anemic hypoxia.
- 3- **Blood group AB is characterized by:**
  - a. Absence of A and B agglutinin on RBCs.
  - b. Presence of alpha and beta agglutinin in plasma.
  - c. Presence of A and B agglutinin on RBCs .
  - d. It is universal donor.
- 4- **Which of the following Induce coronary vasodilatation :**
  - a. Vagal stimulation.
  - b. Muscarinic stimulation.
  - c. Increase cardiac metabolic activity.
  - d. Stimulation of alpha 1 adrenergic receptors.
- 5- **Which of the following could induce edema:**
  - a. Decrease capillary hydrostatic pressure.
  - b. Increase capillary hydrostatic pressure.
  - c. Vasoconstriction of arterioles.
  - d. Increase plasma protein level.
- 6- **Which of the following help platelet aggregation in haemostasis:**
  - a. Prothrombin activator.
  - b. Thromboxan A2.
  - c. Thrombin.
  - d. Fibrinogen.
- 7- **Which of the following is CORRECT regarding peripheral chemoreceptors:**
  - a. Its stimulation induce bradycardia.
  - b. Mainly stimulated by hypoxia.
  - c. Mainly stimulated by alkalosis.
  - d. Its stimulation decrease respiratory rate.

**Look to back**

- 8- Pain sensation is characterized by which of the following :
- Its receptors are rapidly adapted .
  - Its receptors are moderately adapted.
  - Its receptors are free nerve endings.
  - Carried by dorsal column of the spinal cord.
- 9- Glucocorticoids could decrease blood level of :
- Free fatty acids.
  - Glucose.
  - Esinophils.
  - RBCs.
- 10- Which of the following is CORRECT regarding referred pain :
- Could explained by dorsal root branching mechanism.
  - Could explained by convergence facilitation mechanism.
  - Never occur with visceral pain.
  - Always occur with cutaneous pain.
- 11- Which of the following could increase heart rate:
- Stimulation to beta 1 adrenergic receptors.
  - Venodilatation.
  - Stimulation to muscarinic receptors.
  - Stimulation to arterial baroreceptors.
- 12- Intrinsic mechanism of blood coagulation is initiated by:
- Contact with rough surface.
  - Injury to blood vessels.
  - Activation of factor X.
  - Activation of factor VII.
- 13- Vasodilatation of arterioles could induce :
- Increase peripheral vascular resistance.
  - Decrease venous return.
  - Decrease central venous pressure.
  - Decrease peripheral vascular resistance .
- 14- Which of the following could induce respiratory alkalosis:
- Restrictive lung disease.
  - Renal failure.
  - Hypoventilation.
  - Hyperventilation.
- 15- Which of the following is CORRECT as regard blood PH:
- Inversely proportionate with arterial  $\text{HCO}_3^-$ .
  - Directly proportionate with arterial  $\text{PCO}_2$ .
  - Directly proportionate with arterial  $\text{HCO}_3^-$ .
  - Normally equal 7.1 for arterial blood.

إمتحان الشفهي يوم الثلاثاء 1/ 3/ 2022 في قسم الفسيولوجي التاسعة صباحا



Examination for MASTER Degree in: Orthopedic  
Course Title: Microbiology  
Date: 21/2/2022  
Term: 1<sup>st</sup> part  
Time Allowed: 1.5 hours  
Total Assessment Marks:40 marks

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**1-A 16-year-old boy injures his lower left thigh during a high school football game. The pain associated with this injury is so intense that he has to leave the game. The pain subsides for several hours but returns during the night, and the boy develops chills followed by a fever of 39.5°C. A physician examines him the next morning and notices that the lower left thigh is hot, swollen, and tender. The knee joint appears normal and has a full range of motion. The patient has a temperature 38.3°C. The physician notes several small boils on the boy's neck and chest. Some of these are scarred and crusted, and the patient admits that he has been squeezing them during the past few days. X-rays of the left femur indicate soft tissue swelling without any obvious abnormalities of the bone. (10 marks)**

Question 1.1: What is your diagnosis?

Question 1.2: what are the investigations to handle this case?

Question 1.3: What is the probable causative agent?

Question 1.4: How did the patient's bone become infected?

Question 1.5: What is the correct treatment for this disease?

Write short notes o the following :

A\_) The microbiological investigations you would use in the management of  
**Acute Septic Arthritis**

**B) Graft Rejection**

C) Diagnosis of **Pott's disease** (10 marks each)

GOOD LUCK

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oral exam will be held at 7/3/2022 at 9.0 am



Master degree examination in : Orthopedics  
Code No., : Ortho 8003  
Date: 21/2/2022  
Term: February 2022  
Time allowed: \*\* hour  
Total assessment marks: 60 marks



Tanta University  
Faculty of Medicine  
Pathology Department

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## Questions number

### Give short note about:

( 10 marks each)

- 1- Pathological bone fracture
- 2- Amyloidosis
- 3- Multiple myeloma
- 4- Pott's disease
- 5- Dystrophic bone lesions
- 6- Moist gangrene

**N.B. Oral exam will be held on Monday 21\2\2022 in pathology department after the written exam**

*Good Luck!*

Head of Pathology Department  
Prof. Dr. Mona Abd Elhak

Examination for Master degree in orthopedic  
Course Title: Histology  
Date: 19/2/2022  
Term: February  
Time Allowed:  
Total Assessment Marks: 30 marks



Tanta University  
Faculty of Medicine  
Department of:  
Histology .....

Answer the following Questions (illustrate your answers with diagrams):

Questions Number	Marks
Q1 –Describe the histological structure and function of Golgi apparatus.	6 marks
Q2 –Compare between the different types of cartilage.	6Marks
Q3- Describe the histological structure and function of bone cells .	6 Marks
Q4- Differentiate between different types of granular leukocytes .	6 marks
Q5- Describe the histological structure of thyroid follicle.	6 marks

**NB: The oral exam will be on Saturday at 1:00 PM.**

**GOOD LUCK**