

Tanta University

Faculty of Medicine

Human Anatomy & Embryology Dep.

2/4/2016- Time Allowed: 3 Hours

Master of Science in Cardiothoracic surgery

Anatomy Exam.

Number of Questions: 5

Total: 30 Marks



## CARDIOTHORACIC SURGERY

All questions to be answered

Illustrate your answer with diagram whenever possible:

1. A. Enumerate the tributaries of the azygos vein. (4 marks)  
B. Mention the position of aortic opening of the diaphragm and enumerate structures passing through it. (2 marks)
2. Define the bronchopulmonary segments and enumerate them in both lungs. Mention the lymphatic drainage of the lung. (4.5 marks)
3. A. Describe the relations of the trachea. Identify its surface anatomy. (5 marks)  
B. Enumerate the branches of descending thoracic aorta. (4 marks)
4. Describe the internal features and openings of the right atrium. (6 marks)
5. Discuss the course, relations and end of the femoral vein. Mention its tributaries and identify its surface anatomy. (4.5 marks)

**END OF THE EXAM**

Oral and Practical Examination:

On Sunday 10/ 4/ 2016 at 9.5 o'clock in the Anatomy Department  
(Second floor)

**WITH MY BEST WISHES**

Chairman of Department: Prof. Dr. Mona Zoair

**Exam for Master Degree in: Cardiothoracic Surgery**  
**Course Title: Histology**  
**Date: 2/4/2016**  
**Term: April**  
**Total marks: 30 marks**

**Tanta University**  
**Histology Department**  
**Faculty of Medicine**

**Answer all of the following questions and illustrate your answers with diagrams:**

- 1- Give an account on mitochondria (7.5 marks)
- 2- Describe structure of blood platelets. (7.5 marks)
- 3- Give an account on structure of aorta (7.5 marks)
- 4- Describe cells lining the lung alveoli. (7.5 marks)

**GOOD LUCK**

**الامتحان الشفوي بعد الامتحان التحريري يوم ٢-٤-٢٠١٦**

6 / 4 / 2016

Master of Cardiothorathic Surgery  
( I<sup>st</sup> part Microbiology )

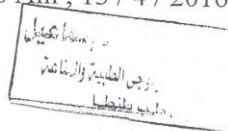
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All questions must be answered

- 1 – a ) Sterilization and disinfection , what is the difference ?  
( 5 marks )
- b ) Classify types of chemical disinfectants giving examples  
for each , what type of disinfectant you prefeere for  
disinfection of fibrooptic bronchoscope .  
( 15 marks )
- 2 ) Mention types of tissue transplant , how to avoid rejection ?  
( 10 marks )
- 3 ) Mention the causative bacterial agent responsible for  
occurrence of rheumatic fever its mechanism , methods of  
laboratory diagnosis , complication and treatment .  
( 20 marks )
- 4 ) Enumerate the important viral transfusion transimeted  
diseases , how to avoid , mention prophylaxis against one of  
them .  
( 10 marks )
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Good luck

Oral exam ; ( At 8 Am , 13 / 4 / 2016 )



Examination for Master Degree in: cardiothoracic surgery  
Course Title: **CARD 8003**  
Date:6-4-2016  
Term: April 2016  
Time Allowed:3 hours  
Total Assessment Marks: 60



Tanta University  
Faculty of Medicine  
Department of:  
Pathology

Questions Number

Marks

- |  |                 |
|--|-----------------|
| <b>Q1: Mention the types and complications of aneurysm</b>         | <b>15 marks</b> |
| <b>Q2 :Discuss the etiology and types of emphysema</b>             | <b>15 marks</b> |
| <b>Q3 : Mention the sites and mechanisms of thrombus formation</b> | <b>15 marks</b> |
| <b>Q4 : Discuss the grading and staging of malignant tumours</b>   | <b>15 marks</b> |

Chairman of department  
Prof Dr. Afaf Alshafey

Tanta University  
Faculty of Medicine

Master exam of General Surgery

ماجستير جراحة القلب والصدر

Exam 5 April 2016  
All questions to be answered

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1. Discuss the diagnosis and management of esophageal perforation (10 degrees)
2. What are the types, clinical picture and differential diagnosis of a case of retrosternal goiter? (10 degrees)
3. Discuss post-operative complications and how to manage them (10 degrees)
4. Discuss the pathophysiology, clinical picture and management of hypovolemic shock (10 degrees)
5. Discuss the risk factors , the diagnosis and the management of deep vein thrombosis (10 degrees)
6. Discuss primary survey of trauma (10 degrees)

امتحان الشفوي والعملي يوم ٢٠١٦/٤/١٧ بقسم الجراحة العامة بالمستشفى التعليمي الجديد الساعة الثامنة صباحا

Chairman of Department  
Prof Dr. Mohamed Ali Attia

Good luck



Tanta University  
Faculty of Medicine  
Department of Physiology.

Examination for (MSC Cardiothoracic Surgery)  
Course Title: Physiology  
Total Assessment Marks:30

Course Code:  
CARS 8002

Time Allowed:Physio.  
+ Pharm.  
Three Hours

Date:3/4/2016

Term : Final

**All the questions are to be answered:-**

**Q1-State:** Factors maintaining the arterial blood pressure. Mention types and physiological basis of hypertension. (10 marks)

**Q2- Explain briefly:**

- a) Dead space, definition, types, measurements and its significance. (5 marks)  
b) Thyroid hormones, types, functions and control of its secretion. (5 marks)

**Case study: A 27-year-old man develops adult respiratory distress syndrome (ARDS) after near-drowning. Conventional mechanical ventilation on 100% O<sub>2</sub> together with inhaled nitric oxide do not provide sufficient oxygenation. Porcine surfactant is instilled via fiberoptic bronchoscope, and the PaCO<sub>2</sub>, fraction of inspired oxygen, and shunting improve impressively. The improvements in respiratory function occurred because surfactant increased which of the following?**

- a. Bronchiolar smooth muscle tone.  
b. The pressure gradient needed to inflate the alveoli.  
c. Lung compliance.  
d. Alveolar surface tension.  
e. The work of breathing.

(2.5 marks) Explain your answer

**Answer the following MCQ by the most probable one choice: In answer sheet (7.5 marks)**

**Q.1. When activated  $\beta$  adrenergic receptors, the G protein:**

- a. Activates phospholipase C.  
b. Activates adenyl cyclase.  
c. Activates protein kinase C.  
d. Converts guanosine diphosphate to guanosine triphosphate.

**Q.2. Thrombin inhibits:**

- a. Factor X.  
b. Tissue plasminogen activator.  
c. Platelets.  
d. None of the above.

**Q.3. Erythropoietin:**

- a. Red cell maturation 24 – 72 hours.  
b. Inactivated by Kupffer cells.  
c. Metabolized in liver.  
d. Half-life is 5 minutes.

**Q.4. Hemoglobin breakdown:**

- a. Fe is excreted by the kidney.  
b. Haem is broken down to biliverdin.  
c. Haem is converted to bilirubin and is transported to liver bound to albumin.  
d. b and c are correct.

**Q.5. Problems of massive transfusion most commonly include**

- a. Metabolic alkalosis.  
b. Hyperkalemia.  
c. Coagulopathy due to hypocalcemia.  
d. Hypokalemia.

**Q.6. Antithrombin III inactivates which coagulation factor:**

- a. XII a.  
b. X a.  
c. II a.  
d. All of the above.

**Q.7. A decrease in cortisol secretion would lead to:**

- a. Increased storage of glycogen in the

LOOK IN THE BACK OF THIS PAGE



- liver.
- b. Decreased ACTH secretion.
- c. Increased plasma glucose concentration.
- d. Decreased adrenomedullary synthesis of epinephrine.

**Q.8. The most biologically active iodothyronine secreted by the thyroid follicles is:**

- a. Triiodothyronine.
- b. Tetraiodothyronine.
- c. Thyroglobulin.
- d. Triiodothyroacetic acid.

**Q.9. Mixed venous blood has:**

- a. Higher hematocrit than arterial blood.
- b. Higher pH than arterial blood.
- c.  $P_{O_2}$  lower than coronary sinus blood.
- d. None of the above.

**Q.10. Physiological dead space:**

- a. Decreases with age.
- b. Increases with anesthesia.
- c. Increases with supine position.
- d. Decreases with increased anatomical dead space.

**Q.11. All of the following are components of the homeostatic control mechanism EXCEPT:**

- a. The control center.
- b. The receptor.
- c. The effectors.
- d. The cytosole.

**Q.12. The effector of homeostatic control mechanism:**

- a. Is a sensor that sends information to the

- control center.
- b. Analyzes the information it receives.
- c. Receives the information from the control center.
- d. None of the above.

**Q.13. Hypoglycemic coma differs from hyperglycemic coma in that there is more likelihood of:**

- a. Weak pulse.
- b. Rapid loss of consciousness.
- c. High acetone level in urine.
- d. Shift of pH towards acidic side.

**Q.14. The major stimulus for the release of secretin is:**

- a. Protein digestion products.
- b. Histamine.
- c. Somatostatin.
- d. Hydrochloric acid.

**Q.15. An increase in systemic blood pressure leads to which of one of the following effects?**

- a. An increase in the velocity at which blood is ejected from the left ventricle.
- b. An increase in cardiac output.
- c. An increase in the residual volume of blood in the left ventricle.
- d. A decrease in the time it takes for the left ventricular wall to develop peak tension.

Oral exam will be on Sunday 10 April 2016 at 9 am in physiology department.