



All questions to be answered:

All questions in one page:

- 1) Give an account on cell cycle? (10 degrees)
- 2) Give definition: (3 degree each)
 - Mutarotation?
 - Isomerism?
 - Zymogens?
 - Saponification?
 - Denaturation of protein?
- 3) Give short notes on: (5 degrees each)
 - Eicosanoids ?
 - Importance of essential fatty acids?
 - Enzyme inhibitors?
 - Types of DNA?
 - Post-transcriptional modification of mRNA?
 - Post-translational modification?
 - Enzyme specificity?
- 4) Give structural formula for the followings? (5 degrees each)
 - Two basic amino acids?
 - Cholesterol?
 - Sorbitol?

GOOD LUCK

Aswan University

Faculty of Medicine

Dep.of Medical Physiology

Tuesday, 23/5/2017

Final Exam for First Year medical Students

Time: 3 h.

Marks: 150

The Examination is composed of **TWO** pages.

Answer all the following questions:

1- Cardiovascular (1): **30**

- a- Describe the phases of the action potentials in the cardiac muscle? 10
- b- Give an account on the **T** wave of the ECG and **list Three** causes of its abnormality? 10
- c- Mention with explanation the relation between the arterial blood pressure and the kidney? 10

2-Cardiovascular (2): **28**

- a- Define respiratory sinus arrhythmia and mention its mechanisms? 10
- b- Explain why the pulmonary resistance to blood flow is low? 10
- c- Discuss the effects of gravity on the venous pressure? 08

3- Respiratory system: **26**

- a- Discuss factors affecting the gas diffusion across the respiratory membrane? 10
- b- Write an account on chloride shift and its significance? 10
- c- Define pulmonary surfactants and explain their functions? 06

4- Gastrointestinal: **20**

- a- Compare between secretin and cholecystinin hormones (stimulus of release and functions)? 10
 - b- Mention the stimulus for release and functions of gastrin hormone? 05
 - c- Briefly discuss **FIVE** functions of bile salts? 05
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5- Blood:	15
a- Write an account on FIVE functions of plasma proteins?	05
b- Explain the extrinsic mechanism of blood coagulation?	05
c- Mention the process of fate of aged red blood cells?	05
6-Nerve and Muscle:	13
a- Compare between isometric and isotonic muscle contractions?	06
b- Describe the mechanisms of conduction of the action potential?	07
7- Autonomic Nervous System:	10
Give an account on FIVE functions of:	
a- The vagus nerve?	05
b- The sympathetic supply to the head and neck?	05
8-Biophysics:	08
Discuss the types of intracellular communication?	

Good Luck .Prof.Mahmoud Raafat and Exam Committee.



Aswan University

Final Exam of Cytology & General
Histology for 1st Year students



Faculty of Medicine
Department of Histology

Date: 20- 8 -2017

Number of Exam Pages: 8

Time allowed: 2hrs

I. Give the histological differences between the following structures? =====> (20Marks)

I.1. Blood capillaries and lymphatic capillaries

(4 Marks)

Blood capillaries	Lymphatic capillaries

I.2. Cardiac muscle fibers and smooth muscle fibers

(4 Marks)

Cardiac muscle fibers	Smooth muscle fibers

I.3. Unilocular and multilocular fat cells

(4 Marks)

Unilocular fat cells	Multilocular fat cells

I.4. Medium sized artery and medium sized vein.

(4 Marks)

Medium sized artery	Medium sized vein

I.5. Protoplasmic and fibrous astrocyte.

(4 Marks)

Protoplasmic astrocyte	Fibrous astrocyte

II- Fill in the blanks:

(17 Marks)

II.1.Enumerate the types of secondary lysosomes.

(1.5Mark)

- a)-
- b)-
- c)-

II.2.Enumerate the ultrastructural components of Golgi apparatus.

(1.5Mark)

- a)-.....
- b)-.....
- c)-

II.3.Enumerate all types of neuroglia.

(2 Marks)

- a)-.....
- b)-.....
- c)-

II.4.Enumerate the types of simple epithelium.

(2 Marks)

- a)-.....
- b)-.....
- c)-
- d)-.....

II.5.The cardiac muscle fibers producehormone.

(1 Mark)

II.6.The is the secretory apparatus of the cell, and composed of interconnected stacks of flattened crescent- shaped cisternae.

(1 Mark)

II.7. Theis produced by the Golgi apparatus, and considered as the stomach of the cell.

(1Mark)

II.8.The is a single membrane-bound organelle, and arises by fission or by pinching off from the endoplasmic reticulum.

(1Mark)

II.9. Theare non-membranous organelles, and considered as the factory of protein synthesis in the cell.

(1Mark)

II.10. Zellweger syndrome is an inherited disease, which caused due to
.....
.....
.....

(1 Mark)

