Assiut University

Faculty of Veterinary Medicine
Department of Medical Physiology

Second Semester Examination
Subject: Final Exam
Level: First
Course Code: (PHY:108)

Date: 3/6/2018 **Time allowed: 2 hours**

Final Exam of General Physiology
For First Year Veterinary Medical Students

Answer the following questions: **Mark**

1. Match each scientific term in column (I) with its corresponding definition in column (II): 9

(A)

I	II
1. Cardiac output	a. The maximum percentage that cardiac output increases above normal.
2. Stroke volume	b. The continuous basal discharge of pressor impulses from the vasoconstrictor center through sympathetic vasoconstrictor nerves during rest to maintain the normal level of arterial blood pressure.
3. Cardiac reserve	c. The volume of blood pumped by each ventricle per minute.
4. Vasomotor tone	d. Continuous inhibitory impulses transmitted through the vagi to the heart to check the inherently high rhythm of the SA node.
5. Vasosensory areas	e. The volume of blood pumped by each ventricle per beat.
	f. Regions in the circulatory system which contain receptors sending impulses along afferent nerves to cardioinhibitory center causing reflexes controlling circulation.

(B)

I	II
1. Osmosis	a. Movement of leucocytes towards a source of certain chemical substances.
2. Pinocytosis	b. The process of engulfing liquid substances by enfolding of the cell membrane.
3. Diapedesis	c. The process of engulfing solid particles as bacteria, breaking them down and digesting their cellular materials.
4. Phagocytosis	d. The net movement of water through the membrane down its concentration gradient.
	f. Escape of leucocytes from very narrow pores in the wall of the blood vessel.

→ أنظر بقية الأسئلة خلف الصفحة

Marks

2. (A) Mention valves of the heart and their functions 5

(B) What are the definition, evidence and mechanism of vagal tone. 6

3. (A) Mention 8 causes of variation of heart rate. 4

(B) Define excitability and mention the effect of a stimulus applied during each of the excitability changes during cardiac activity 5

4. (A) Define action potential and illustrate its depolarization stage. 5

(B) Demonstrate the various steps of the contractile process of the smooth muscle. 3

5. **(A) Describe the effects of the sympathetic nervous system on the thoracic viscera (cardio-pulmonary division).** 2

(B) How is the blood coagulation prevented in the normal vascular system? 4

6. **(A) Horse is a unique example for ventilation mechanics. Explain how?** 3

(B) Explain the role of the ventral neural group in controlling breathing. 4

Good luck

Examination Committee: Staff Member of The Department of Medical Physiology

Exam Coordinator: Professor Ibtisam Elmileegy

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