

Cork Institute of Technology
Bachelor of Science (Honours) in Herbal Science – Stage 1
(NFQ – Level 8)
Autumn 2007
Anatomy
(Time: 3 Hours)

Instructions

Answer FIVE questions only

All answers require a diagram of the relevant structure

Examiners: Dr. D. Corrigan
Mr. E. Walsh
Ms. A. Keaveney

1.

- a. Describe the features of skeletal muscle. **(10 marks)**
- b. Compare and contrast the main features of cardiac and smooth muscle. **(10 marks)**

2.

- a. Describe the different types of diarthroses joints (freely movable joints). **(3 marks)**
- b. Describe the main features of a synovial joint and how these features function within the joint. **(12 marks)**
- c. Describe the features that affect movement of a freely movable joint (diarthroses joint). **(5 marks)**

3.

- a. List and describe the different types of neuroglial cells. **(6 marks)**
- b. Describe the main features of a synapse between two motor nerve cells, indicating the direction of nerve impulse. **(14 marks)**

4.

- a. What is homeostasis? **(3 marks)**
- b. Describe the processes that occur with positive and negative homeostasis using specific examples. **(12 marks)**
- c. In the nervous system what structures are involved in the process of homeostasis. **(5 marks)**

5.

- a. What is the difference between the specific and non-specific immune systems? **(3 marks)**
- b. Describe the different components/ structures which the body uses to protect itself in non-specific defence mechanisms. **(12 marks)**
- c. What is meant by the terms memory and specificity in relation to the specific immune system and what components are involved? **(5 marks)**

6.

- a. What are the components of the urinary system? **(2 marks)**
- b. Describe the structure of the nephron including the blood supply. **(12 marks)**
- c. Describe the structure of the ureters, bladder and urethra indicating differences between male and females. **(18 marks)**

7.

- a. Describe the features of the mouth, including accessory organs, which assist mechanical digestion **(5 marks)**
- b. Describe the features of the mucosal layer of the stomach and small intestine (in the digestive system) and how they assist in chemical digestion **(10 marks)**
- c. Describe the main features of the pancreas **(5 marks)**

8.

- a. What is Respiration? **(3 marks)**
- b. List the components of the respiratory system and briefly describe the main features of each. **(12 marks)**
- c. Describe the features of the alveolar-capillary membrane and how these features affect diffusion of gases. **(5 marks)**