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UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
(ONLINE)
SEMESTER II
SESSION 2020/2021**

COURSE NAME : HUMAN PHYSIOLOGY
COURSE CODE : BEJ35103/ BEU20103
PROGRAMME CODE : BEJ
EXAMINATION DATE : JULY 2021
DURATION : 3 HOURS
INSTRUCTION : ANSWER ALL QUESTIONS
OPEN BOOK EXAMINATION

THIS QUESTION PAPER CONSISTS OF **THREE (3)** PAGES

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TERBUKA

Q1 (a) Skin is the most obvious external defense which covers the outside of the body. Explain the following statements that are related to human skin.

(i) Dermis layer is where the acne forms. (2 marks)

(ii) Dermis layer is responsible for wrinkles. (2 marks)

(iii) Black-skin person has more melanocyte cells compared to a fair-skin person. (4 marks)

(b) Human ear functions for hearing and equilibrium. Discuss the stage of sound reception in auditory system. (6 marks)

Q2 Central nervous system (CNS) and peripheral nervous system (PNS) are two systems in the nervous system that control human movement and activity.

(a) Describe the working principle of neurons in receiving and transferring information for any movement and activity. (6 marks)

(b) Using the description in **Q2(a)**, explain the pathway of affective and effective neurons that involves brain and spinal cord. (8 marks)

(c) Peripheral nervous system (PNS) consists of nerves that lie outside the brain and spinal cord which primarily connect the CNS to the organs.

(i) Elaborate **TWO (2)** examples of actions taken by someone as the reflection of PNS. (8 marks)

(ii) Discuss **TWO (2)** possible damages in the nervous system when someone does not reflect on the stimuli that enter the body. (4 marks)

Q3 (a) Skeletal system is composed of axial and appendicular skeletons which have many functions. Discuss the features of the skeletons that allow it to accomplish those functions. (8 marks)

(b) Differentiate between true rib and false rib.

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- (c) Facial bones that composed of 14 bones is functionally to support the eyes and position them anteriorly. Give an opinion how the facial surgery is possible to be conducted if there are facial fractures on face including the area around the eyes, nose and cheekbones.

(4 marks)

- Q4** (a) Lower respiratory tract consists of trachea, lungs, bronchi and diaphragm. Describe each of the parts that function in aiding human breathing and preventing difficulty breathing.

(8 marks)

- (b) Lower respiratory tract infection includes pneumonia, bronchitis and tuberculosis. List **SIX (6)** symptoms of severe lung infections.

(6 marks)

- (c) Distinguish between the pathway of external and internal respiration process.

(6 marks)

- Q5** (a) The lymphatic system is a part of the circulatory system and a vital part of the immune system. It is a network of tubes throughout the body that drains fluid (called lymph) from tissues and empties it back into the bloodstream.

- (i) Give a brief explanation why the lymphatic system is a one-way system, whereas the blood vascular system is a two-way system.

(6 marks)

- (ii) Compare between lymphatic capillaries and blood capillaries.

(4 marks)

- (iii) Give **TWO (2)** functions of the lymphatic vessels.

(4 marks)

- (b) Heart disease is the leading cause of death around the world. One of the most common complications of heart disease is heart failure which occurs when heart cannot pump enough blood to meet body needs.

- (i) Identify **TWO (2)** unhealthy lifestyles that could contribute to heart disease.

(4 marks)

- (ii) Suggest **THREE (3)** strategies to prevent heart disease.

(6 marks)