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THE OPEN UNIVERSITY OF SRI LANKA
FACULTY OF HEALTH SCIENCES
DEPARTMENT OF BASIC SCIENCES
ACADEMIC YEAR 2018/2019 – SEMESTER I

BACHELOR OF PHARMACY HONOURS
BSU3431 - HUMAN PHYSIOLOGY – LEVEL 3
CONTINUOUS ASSESSMENT I (NBT I)

DURATION: ONE HOUR

DATE: 23rd NOVEMBER 2018

TIME: 09.00AM – 10.00 AM

REGISTRATION NO:

IMPORTANT INSTRUCTIONS/ INFORMATIONS TO CANDIDATES

- This question paper consists of **10** pages with **20 Multiple Choice Questions (Part A)** and **02 Structured Essay Questions (Part B)**.
- Write your Registration Number in the space provided.
- Answer **ALL** questions.
- **Multiple Choice Questions (Part A):** Indicate answers in the answer sheet provided by placing a cross (X) in **INK** in the relevant cage. (answers in pencil will **NOT** be marked)
- **Structured Essay Questions (Part B):** Write answers within the space provided.
- Do not remove any page/part of this question paper from the examination hall.
- Mobile phones and any other electronic equipment are **NOT** allowed. Leave them outside.
- Please fill the address sheet. (See last page)

BACHELOR OF PHARMACY HONOURS
BSU3431 - HUMAN PHYSIOLOGY- LEVEL3
CONTINUOUS ASSESSMENT I (NBT I)

REGISTRATION NO:

ANSWER SHEET FOR PART A

Q. No.	(a)	(b)	(c)	(d)
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REGISTRATION NO:

Part A – Multiple Choice Questions*(40 marks)*

Choose the most suitable / best answer and indicate with a 'X' in the answer sheet provided.

1. Active transport across the cell membrane is occurred by
 - a) osmosis
 - b) endocytosis
 - c) facilitated diffusion
 - d) simple diffusion

2. Acetylcholine is
 - a) an enzyme
 - b) a hormone
 - c) an amino acid
 - d) a neurotransmitter

3. Resting membrane potential of a nerve cell
 - a) is the potential, across a neurons membrane at its rest
 - b) has a positive value
 - c) is actively involved in sending signals
 - d) has more negative charges in the outside of the cell membrane

4. Cells that are associated with electrical signalling include
 - a) erythrocytes
 - b) nerves
 - c) pancreatic cells
 - d) liver cells

5. Universal donor among human blood groups is
 - a) AB
 - b) B
 - c) O
 - d) A

6. Intrinsic pathway of blood clotting mechanism is initiated by
- factor X
 - calcium ions
 - fibrinogen
 - factor XII
7. Which one of the following is not a component of non – specific immunity?
- Skin
 - T cells
 - Neutrophils
 - Interferon
8. Antibody (Immunoglobulins) production is the main function of
- cytotoxic T cells
 - macrophages
 - B cells
 - helper T cells
9. Immune cell which targeted by the HIV virus is
- helper T cells
 - neutrophils
 - macrophages
 - B cells
10. Major immunoglobulin which found in the breast milk is
- Ig M
 - Ig A
 - Ig D
 - Ig E
11. Main regulator of the heart rate is
- atrioventricular node
 - right ventricle
 - sinoatrial node
 - left atrium

12. Arterial blood pressure is increased when there is an increase in
- peripheral resistance
 - heart rate
 - force of contraction of the heart
 - all of the above
13. The 2nd heart sound is produced by the
- closure of tricuspid valve
 - closure of semilunar valves
 - closure of bicuspid valve
 - closure of all the valves in the heart
14. The main function of the surfactants in the lung is
- transport of oxygen
 - reduction of surface tension
 - transport of carbon dioxide
 - reduction of lung compliance
15. Disease, which affects the respiratory system includes
- tuberculosis
 - pneumonia
 - bronchial asthma
 - all of the above
16. Most accurate equation regarding the circulatory system is
- Cardiac Output = Heart Rate x Stroke Volume
 - Pulse Pressure = Systolic pressure – Diastolic pressure
 - Mean Arterial Pressure = Diastolic pressure + (Pulse pressure/3)
 - all of the above
17. Which one of the following is correct regarding blood gas transport?
- Majority of carbon dioxide is transported as bicarbonate ions
 - Oxygen is transported by red blood cells
 - Part of the carbon dioxide is transported by red blood cells
 - All of the above

18. Gastrin is
- a) an enzyme
 - b) a hormone
 - c) a neurotransmitter
 - d) a gland
19. A component of the gastric juice includes
- a) sodium bicarbonate
 - b) insulin
 - c) hydrochloric acid
 - d) none of the above
20. Mechanical digestion of food occurs by
- a) secretion of acids from the stomach
 - b) chewing
 - c) secretion of lipase from the small intestine
 - d) production of bile from the liver

REGISTRATION NO:

Part B – Structured Essay Questions
(60 marks)

Write answers in the space provided.

1. a) What is a neuromuscular junction? (4 marks)

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- b) Briefly describe the events involved in excitation – contraction coupling of skeletal muscle. (10 marks)

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c) List **three** (03) main steps of hemostasis.

(2 x 3 = 6 marks)

- i.
- ii.
- iii.

d) List **two** (02) general functions of the immune system.

(2 x 2 = 4 marks)

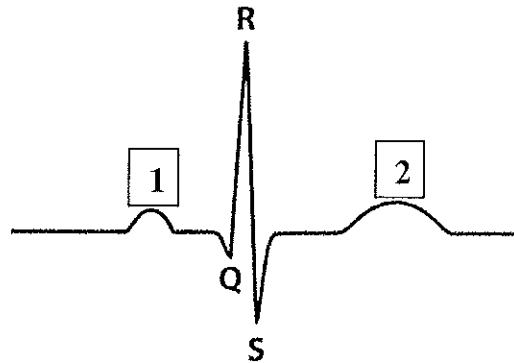
- i.
- ii.

e) Give **two** (02) examples for passive immunity.

(2 x 3 = 6 marks)

- i.
- ii.

2. a) The normal electrocardiogram (ECG) pattern is given below.



i. Identify the waves in 1 and 2.

(2 x 2 = 4 marks)

- 1 -
- 2 -

ii. Name the specific events that occur in the heart at 1 and 2 mentioned in the above diagram.

(3 x 2 = 6 marks)

- 1-
- 2-

b) Define the term 'Tidal volume'.

(6 marks)

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c) Briefly explain the mechanism of inspiration.

(10 marks)

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d) What is the importance of bile in the process of digestion?

(4 marks)

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Reg. No:.....

Name:.....

Address:

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