



University of Fort Hare
Together in Excellence

Programme Unit: Nursing Sciences
East London Campus

SEMESTER EXAMINATION: NOVEMBER 2019

PHYSIOLOGY 2

TIME: 3 HOURS

CODE: NPH 222E

MARKS: 100

Student Surname (Capital) -----

Student Name (Capital) -----

Student Number -----

THIS QUESTION PAPER CONSISTS OF 13 PAGES INCLUDING THIS PAGE

INTERNAL EXAMINERS
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Instructions to students:

Answer Multiple choice questions on the Question paper & rest of the questions on the Answer book which is attached to the Question paper.

Submit Question paper along with Answer book which is attached to the Question paper.

NPH 222E SEMESTER EXAMINATION 2019

Section A Section B Section C Section D Total marks

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Section A (25)

Q. 1 Multiple choice Questions

Choose & circle the most correct option:

1. The maximum yield of ATP per glucose molecule is:
 - a. About 38 ATP
 - b. About 50 ATP
 - c. About 32 ATP
 - d. About 26 ATP

2. The human body cells are capable of energy capture of about:
 - a. 10%
 - b. 20%
 - c. 38%
 - d. 32%

3. Each molecule of pyruvic acid when enters Kreb's cycle, gives rise to net gain of:
 - a. 2 ATP
 - b. 28 ATP
 - c. 1 ATP
 - d. 32 ATP

8. Hypersecretion of growth hormone in children results in:

- a. Acromegaly
- b. Gigantism
- c. Cretinism
- d. Myxoedema

9. Which of the following is released for milk let down reflex?

- a. Prolactin
- b. Oxytocin
- c. Leutinizing hormone
- d. Follicle stimulating hormone

10. Which of the following hormones are secreted in response to short term stress

- a. Epinephrine & Glucocorticoids
- b. Mineralocorticoids & Epinephrine
- c. Norepinephrine & Epinephrine
- d. Mineralocorticoids & Glucocorticoids

11. Mrs Smith had her first menstrual period on 1st December 2018 Her expected due date will be:

- a. 9th October 2019
- b. 8th November 2019
- c. 8th September 2019
- d. 7th December 2019

15. Which of the following hormone serves as a 'barometer' of the normalcy of spermatogenesis?

- a. Follicle stimulating hormone
- b. Inhibin
- c. Leutinizing hormone
- d. Testosterone

16. Which of the following hormone binds to the interstitial cells of the seminiferous tubules to secrete testosterone?

- a. Leutinizing hormone
- b. Follicle stimulating hormone
- c. Inhibin
- d. Gonadotropin releasing hormone

17. Spermatogenesis - from formation of primary spermatocyte to release of immature sperm into the lumen takes about:

- a. 15 - 20 days
- b. 30 - 60 days
- c. 7 - 10 days
- d. 64 - 72 days

22. Which of the following takes part in the formation of placenta?
- Trophoblast
 - Amnion
 - Allantois
 - Yolk sac
23. When fertilized ovum gets implanted on the endometrium around 7 days after fertilization, as per his developmental stage, it is called as:
- Blastomere
 - Morula
 - Zygote
 - Blastocyst
24. The zygote travels from fallopian tube to the uterine cavity in about:
- 10-12 days
 - 7-10 days
 - 24-48 hours
 - 3-4 days
25. The placenta is formed by:
- Decidua capsularis and chorionic villi
 - Decidua capsularis and amnion
 - Chorionic villi and decidua basalis
 - Amnion and decidua basalis

Section B

(40)

- Define the following: (2)
 - Anabolism
 - Lipogenesis
- Explain the purpose of Krebs's cycle (2)

4. An intensity of stimulus for the development of action potential in a neuron is determined by the:
 - a. Strength of individual action potential
 - b. Frequency of action potential
 - c. Amplitude of action potential
 - d. Relative refractory period in an action potential

5. Electrical synapses:
 - a. Are specialized for the release of neurotransmitters
 - b. Consist of connexons which allow ions to move from one neuron to the next
 - c. Consist of synaptic vesicles
 - d. Consist of synaptic cleft which separates presynaptic & postsynaptic membranes

6. Saltatory conduction of action potential propagation is:
 - a. 50 times slower than continuous conduction
 - b. 100 times faster than continuous conduction
 - c. 30 times faster than continuous conduction
 - d. Much slower than continuous propagation

7. Graded potential:
 - a. Arises in the cell body & dendrites
 - b. Travels long distance
 - c. Does not decline with distance
 - d. Repolarization is voltage regulated

8. When graded potential has inhibitory effect, it opens:
 - a. Only sodium (Na) channels
 - b. Potassium (K) & Chloride (Cl) channels
 - c. Sodium (Na) & Potassium (K) channels
 - d. Only Chloride (Cl) channels

14. The taste transduction for bitter & sweet taste is mediated by:
- Sodium ions
 - Potassium ions
 - Calcium ions
 - Hydrogen ions
15. Which of the following are receptor membranes (sensitive membranes) of the gustatory cells?
- Gustatory cilia
 - Gustatory processes
 - Gustatory hair
 - Gustatory pores
16. The activation of taste receptors in the gustatory cell membrane releases following neurotransmitters:
- Glutamate & GABA
 - Serotonin & ATP
 - GABA & Serotonin
 - Serotonin & Glutamate
17. The normal conversation involves sound with intensities in the range of:
- 120 dB
 - 50 dB
 - 70 dB
 - 90 dB
18. Visual pigment consists of:
- Retinal
 - Opsin
 - Retinal & Opsin
 - Vitamin A















