

UNIVERSITY OF SWAZILAND  
FACULTY OF HEALTH SCIENCES  
GENERAL NURSING DEPARTMENT  
FINAL EXAMINATION: MAY, 2017

COURSE TITLE: HUMAN ANATOMY AND PHYSIOLOGY II  
COURSE CODE: GNS 116  
TIME ALLOCATED: TWO (2) HOURS  
MARKS ALLOCATED: 80  
TOTAL NO. OF PAGES: 7

INSTRUCTIONS:

1. THERE ARE TWO SECTIONS IN THIS PAPER.
  - i) SECTION 1 A. MULTIPLE CHOICE  
B. MATCHING  
C. FILL IN THE BLANK
  - ii) SECTION 2 IS SHORT ANSWERS AND ESSAYS
2. PLEASE ANSWER ALL SECTIONS
  - ii) SECTION I CARRIES 40 MARKS
3. USE ANSWER SHEET FOR ALL YOUR ANSWERS
4. DO NOT OPEN YOUR QUESTION PAPER UNTIL PERMISSION HAS BEEN GRANTED BY INVIGILATOR.

## SECTION 1

### A. MULTIPLE CHOICE QUESTIONS:-

( 20 MARKS)

For each of the following questions /statements choose the most appropriate response and write it in your answer book. e.g. 1 = C

1. Atelectasis is collapse of the...

- A. Vein
- B. Artery
- C. Lung
- D. Both A and B

2. Which of the following best describe the pons?

- A. The point of decussating
- B. Speech centre
- C. Coordination centre
- D. The relay centre

3. The olfactory nerve is located in which of the following lobes?

- A. The temporal lobe
- B. The frontal lobe
- C. The occipital lobe
- D. The parietal lobe

4. Which of the following best describe the motor nerve? It is a(an)....

- A. Efferent nerve
- B. Afferent nerve
- C. Sensory nerve
- D. Optic nerve

5. Which of the following is typical of the sympathetic division of the autonomic nervous system?
- i) Digestion ii) diuresis iii) excitement iv) emergency v) defecation
- A. i and iii  
B. ii and iii  
C. ii and iv  
D. iii and iv
6. With reference to option (i) to (V) in question five above, choose the most appropriate response for question six. Which of the above responses represent the parasympathetic division?
- A. i, ii and iv  
B. ii and iii  
C. I, ii and v  
D. ii, iv and v
7. Severe injury to which structure of the brain, will result in cardiac and respiratory arrest?
- A. Cerebrum  
B. Thalamus  
C. Oblongata  
D. Medulla oblongata
8. The iris is responsible for which of the following?
- A. Adjusting the lenses  
B. Adjusting for dim light  
C. Adjusting the eye ball  
D. Constricting and dilating the pupil
9. The normal pressure in the anterior chamber of the eye is..
- A. 20mm/Hg  
B. 18mm/Hg  
C. 16mm/Hg  
D. 14mm/Hg

10. Refraction is bending of light as it goes through...

- A. Aqueous humor
- B. Vitreous humor
- C. Lenses
- D. The different medium of the eye.

11. Hyperopia is also referred to as ...

- A. Near vision
- B. Myopia
- C. Distant vision
- D. Strabismus

12. Which of the following links the nasopharynx with the middle ear?

- A. The oval vestibular window
- B. Cochlea window
- C. Mastoid canal
- D. Eustachian tube

13. The following are hormones released by the anterior lobe of the pituitary **except.**

- A. Growth hormone
- B. Prolactin
- C. Oxytocin
- D. Thyroid hormone

14. The following are cardinal signs of diabetes mellitus **except.**

- A. Polyphagia
- B. Polydypsia
- C. Polyuria
- D, Poliomyelitis.

15. Which of the following hormones is a hyperglycemic hormone?

- A. Antidiuretic hormone
- B. Glucagon
- C. Prolactin
- D. Insulin

16. The following are advantages of vaccine except.

- A. stimulates B cell production
- B. Stimulate antibody formation
- C. reduce infant mortality
- D. It may cause diseases

17. The following are advantages of passive humoral immunity except.

- A. It has no immunological memory.
- B. It acts immediately
- C. It is taken from immune individuals.
- C. It is given directly from donor to recipient.

18. Which of the following are cardinal signs of inflammation?

- A. redness
- B. Swelling
- C. Pus
- D. Both A and B

19. Which of the following is not the function of antibodies?

- A. Precipitation
- B. Lysis
- C. Agglutination
- D. Vaccination

20. Pleural effusion is..

- A. Accumulation of fluid in the cranium.
- B. Accumulation of fluid in the plural cavity.
- C. Accumulation of fluid in the joints.
- D. Accumulation of fluid in the peritonium.

SECTION 1 B                  MATCHING                  (TOTAL MARKS 10)

Choose the most appropriate alphabet in column B to describe the statement in column A and write the correct response in your answer book. e.g: 1 = D

COLUMN A	COLUMN B
1. senses deformity or bending of cells	A. Nocireceptors
2. detects chemical of taste, smell and body fluids	B. Photoreceptors
3. detects light	C. Chemoreceptors
4. detects painful stimuli	D. Mechanoreceptors
5. detects changes in temperature	E. osmoreceptors
6. responsible for uterine contractions	F. Themoreceptors
7. responsible for milk production	H Progesterone
8. Hypo secretion of the growth hormone	I. Testotarone
9. sexual maturation in males	J. Oxytoxin
10 sexual maturation in females	K. Prolacstin
	L. Retina

SECTION 1 C

(10 MARKS)

Fill in the black with the most appropriate site on the tongue for the different types of taste. Write the correct answer on your answer sheet.

e.g. 1. Tip of the tongue.

1. Umami .....
2. Bitter .....
3. Sour .....
4. Salty .....
5. Sweet .....

**SECTION 2 SHORT ANSWER AND ESSAYS (TOTAL MARKS 40)**

**QUESTION 1**

- 1.1 Follow a breath of air from the nostril to the tissues (10)

**QUESTION 2**

- 2.1 Briefly define the kidney. (1)  
2.2 Discuss the physiology of the kidney. (9)

**QUESTION 3**

- 3.1 Differentiate between mechanical digestion and chemical digestion? (2)  
3.2 Describe chemical digestion of a piece of bread with a slice of cheese from the oral cavity to the ileum. (8)

**QUESTION 4 (10)**

4.1 Two weeks ago, UNISWA had intervarsity games. On arrival in Swaziland, three of the visiting student went to a disco a few kilometre fro, Kwaluseni Campus to entertain themselves. They enjoyed the music and helped themselves to several cans of beer before returning to campus. They left the disco at 1:00 am and drove back. On their way back; they were stopped by the traffic police because their car was not steady moving from the left lane to the right lane as they drove towards their destination. The police officer fined the driver for driving under the influence of alcohol. On arrival on campus, they frequently visited the toilet to urinate; in the morning they complained of headache and dry mouth, referred to as hangover. Eventually they asked you to assist them get a pack of beer from the nearby shop.

Based on your understanding of the effect of alcohol in the brain, discuss the following;

- A) Why the car was unstable on the road? (3)  
B. Why did they have diuresis ? (3)  
C. Explain the cause of the hang over effect the next morning.(4)