



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS**  
**SCHOOL OF SCIENCE AND TECHNOLOGY**  
**MAY/JUNE 2012 EXAMINATION**

**Programme: PGD HIV/AIDS Education and Management**

**Course Code: HEM 604**

**Course Credit Unit: 2**

**Course Title - Basic Anatomy and Physiology of Human Body      Time**

**Allowed: 2 hours**

**Total Score: 100 marks**

**Instruction:** Answer question 1 and any other 3 questions in section B (Total: 4 questions)

**SECTION A: Compulsory (25 marks)**

1. The human skull consists of eight cranial and ----- facial bones
2. The second principal part of the human skin is known as the -----
3. The Rhesus factor determines the ----- and ----- of the human blood
4. The human blood consists of liquid plasma in which float a mixture of ----- cells
5. Blood cells are made up of Red blood cell, ----- and -----
6. We have ----- distinct blood groups in the human body
7. Blood is the fluid that circulates throughout the body via the ----- and -----
8. The human ----- is the largest organ of the body
9. The sternum is a flat, dagger-shaped bone located in the -----
10. The mandible is the lower -----bone
11. The bones of the human body fall into four general categories namely: long bones, short bones, flat bones and -----bones
12. The ribs are thin, flat, ----- bones that form a protective cage around the upper body
13. The nervous system consists of ---- main parts
14. The human brain is divided into ----- main parts
15. The Cerebellum, Pons Varolli and Medulla oblongata are located in the ---- brain
16. The synthesis of Vitamin D begins with the activation of precursor molecules in the human -----
17. The human rib comprises ----- bones arranged in pairs
18. The Gastrointestinal Tract is also known as -----
19. The small intestine has three major segments namely: Duodenum, Jejunum and -----
20. Digestion of food starts in the -----
21. The two arms of specific immune response are -----and cellular immunity
22. Heart beats occurs in two stages namely ----- and -----
23. The two major portions of the Nephron are: renal corpuscle and -----
24. The basic function of nephron is to filter blood and produce -----
25. Gonadotropin releasing hormone is hormone of the male reproductive organ.  
True or false: -----

## SECTION B - Answer any 3 questions in this section

### Question 1:

- a. What is Haematology? (2 marks)
- b. What are the characteristics of the human blood (6 marks)
- c. Mention types of blood cells? (3 marks)
- d. Mention the characteristics of each type of blood cells (14 marks) **(Total: 25 marks)**

### Question 2:

- a. Give a brief description of the Nervous system (9 marks)
- b. What are the characteristics of the human brain (8 marks)
- c. Identify the functions of the following parts of the brain: *Cerebrum, Frontal lobe, Parietal lobe* and *Temporal lobe* (8 marks) **(Total: 25 marks)**

### Question 3

- a. Describe the human heart (10 marks)
  - b. Describe the process of blood circulation within the human heart (15 marks)
- Total: 25 marks)**

### Question 4

- a. What are the major organs of the urinary system? (4 marks)
- b. Identify 3 major functions of the kidney (6 marks)
- c. Identify the three steps of renal filtration (3 marks)
- d. Briefly define any four of the following: Anatomy, Physiology, Microscopic anatomy, Cytology, Histology (12 marks) **(Total: 25 marks)**

### Question 5

- a. Briefly explain 5 functions of the human skin (15 marks)
- b. Discuss the process of synthesis of Vitamin D (10 marks) **(Total: 25 marks)**