

**GANPAT UNIVERSITY**  
**B. TECH SEM: III (BME) CBCS REGULAR EXAMINATION– NOV-DEC 2016**  
**2BM304 Human Anatomy & Physiology-I**

TIME: 3 HRS

TOTAL MARKS: 60

**Instructions:** (1) This Question paper has two sections. Attempt each section in separate answer book.

(2) Figures on right indicate marks.

(3) Be precise and to the point in answering the descriptive questions.

**SECTION: I**

- Q.1** **(10)**
- (a) Explain Homeostatic control mechanism with neat Diagram. **(5)**
- (b) Mention any 4 human body systems with their functions and organs associated with it. **(3)**
- (c) Define Anatomy and Physiology. How these two terms are interrelated? **(2)**

**OR**

- Q.1** **(10)**
- (a) Explain Primary wound healing mechanism with neat diagram. **(4)**
- (b) Explain various respiratory volumes with a neat diagram of Spirogram. **(4)**
- (c) State Boyle's law. How this law is applied for Respiration? **(2)**

- Q.2** **(10)**
- (a) Mention the function of respiratory system and explain any 2 organs of lower respiratory track? **(4)**
- (b) Explain the factors affecting the skin color. **(3)**
- (c) Define Following: **(3)**
1. Anatomical position
  2. Internal Respiration
  3. Dead space volume

**OR**

- Q.2** **(10)**
- (a) Mention the functions of Lymphatic system and explain any 2 organs associated with lymphatic system. **(4)**
- (b) What is the function of Palantine bone? Mention the name of 4 sinuses. **(3)**
- (c) Explain Dermis layer of skin with neat diagram. **(3)**

- Q.3 Write Short note on following. (10)
- (a) Disorders of the Integumentary system (5)
  - (b) Mechanics of breathing. (5)

**SECTION: II**

- Q.4 (10)
- (a) What do you mean by ECF and ICF? Explain functions of blood. (5)
  - (b) Draw the process of Erythropoiesis. (5)

OR

- Q.4 (10)
- (a) Explain briefly: Osmosis, Rouleaux formation, Packed cell volume (5)
  - (b) Explain ABO blood grouping system. (5)

- Q.5 (10)
- (a) List out granulocyte and agranulocytes. Explain agranulocytes. (5)
  - (b) Explain Systemic and Pulmonary circulation of heart with diagram. (5)

OR

- Q.5 (10)
- (a) Describe location of heart and explain valves of the heart. (5)
  - (b) Explain main three stages of cardiac cycle. (5)

- Q.6 Write a short note on: (10)
- (a) Nerve supply to the heart, (3)
  - (b) Electrical changes in the heart. (3)
  - (c) Erythrocyte Disorders, (4)

-----END OF PAPER-----