

**GANPAT UNIVERSITY**  
**B.TECH. 3<sup>rd</sup> SEM. BIOMEDICAL AND INSTRUMENTATION ENGINEERING**  
**CBCS REGULAR EXAMINATION NOVEMBER 2014**  
**2BM304: HUMAN ANATOMY AND PHYSIOLOGY – I**

**TIME: 3 Hours**

**TOTAL MARKS: 70**

**INSTRUCTIONS:**

1. Use separate answer sheets for the two sections
2. Figures on the right side indicate marks
3. Please explain with the help of diagram wherever it is necessary
4. Each sub-question carries equal marks

**SECTION – I**

- Que.1 Write answers of the following questions. 12**
- A Write a note on carbohydrate.**
  - B Write a note on cartilage tissue.**
  - C Explain the anatomy of lymph node.**

**OR**

- Que.1 Write answers of the following questions. 12**
- A Explain in detail the non-mediated transport across the cell membrane.**
  - B Write a note on loose connective tissue.**
  - C Explain the functions of lymphatic system.**

- Que.2 Write answers of the following questions. 11**
- A Explain the life cycle of red blood cell.**
  - B Explain the relationship between cell-mediated and humoral immunity.**

**OR**

- Que.2 Write answers of the following questions. 11**
- A Explain in detail hemostasis.**
  - B Explain the immunodeficiency diseases.**

- Que.3 Write answers of the following questions. 12**
- A Write a note on mitosis.**
  - B Write a note on leukemia.**
  - C Provide the classification of body defense system.**



**SECTION – II**

**Que.4 Write answers of the following questions. 12**

- A Describe nasal cavity.
- B Describe mechanism of respiration.

**OR**

**Que.4 Write answers of the following questions. 12**

- A Describe pharynx.
- B How is respiration regulated?

**Que.5 Write answers of the following questions. 11**

- A Define blood pressure. How is it regulated?
- B Write on coronary circulation.

**OR**

**Que.5 Write answers of the following questions. 11**

- A Describe external features of heart.
- B Describe cardiac cycle.

**Que.6 Write short notes (any three) 12**

- A Artificial respiration
- B Hypoxia
- C Conduction system of heart
- D Factors affecting heart rate

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