

**GANPAT UNIVARSITY**  
**B.Tech. Semester III (BM&I), Regular Examination NOV-DEC 2010**  
**BME- 304: HUMAN PHYSIOLOGY AND ANATOMY**

Time:- 3 Hours

Marks:- 70

**Instructions:**

1. Answer to the questions must be written in separate answer books.
2. Figure to the right indicate marks.
3. Conventional terms / notations are used.
4. All the questions are compulsory.

**SECTION-I**

Q-1

- (a) Discuss three phases of menstrual cycle.
- (b) Define: Osmosis  
Active transport  
Iodine trapping  
Gluconeogenesis
- (c) Write about characteristics of cell.

[12]

**OR**

Q-1

- (a) Write the disorders of growth hormone & thyroid stimulating hormone.
- (b) Write in detail Haemopoiesis with neat diagram.
- (c) Describe the interaction between ascending & descending limbs.

[12]

Q-2

- (a) Compare and contrast the three types of Muscle tissue.
- (b) Write a short note on synovial joint.
- (c) Discuss the phases of mitosis with neat figure.

[12]

**OR**

Q-2

- (a) Discuss the disorders related to White Blood Cells.
- (b) Define Osmosis & Osmotic pressure & state the conditions that needed for osmosis to occur.
- (c) Explain the role of Oxytocin in positive feedback mechanism.

[12]

Q-3

- (a) Write about three types of cells in Pancreatic islets & discuss disorder of Pancreatic islets and effects of that disorder on other organs.
- (b) Describe the different types of epithelial tissue and state their locations in the body.
- (c) Describe the pressures that affect the formation of glomerular filtration.

[11]

## SECTION-II

- Q-4 [12]  
(a) Write in detail on Cerebrum.  
(b) Describe the structure of neuro muscular junction & How does transmission of impulse take place?  
OR
- Q-4 [12]  
(a) Describe the structure of pericardium.  
(b) Describe the properties of heart.
- Q-5 [12]  
(a) Write a short note on gaseous exchange.  
(b) Describe lungs in detail.  
OR
- Q-5 [12]  
(a) Describe the structure of spinal cord in detail.  
(b) Write a short note on reflexes.
- Q-6 [11]  
Write short notes: (Any three :)  
(a) Larynx  
(b) Heart Rate  
(c) Hypothalamus  
(d) Physiology of smell

END OF PAPER