

**GUJARAT TECHNOLOGICAL UNIVERSITY**

**B. Pharm. - SEMESTER-I • EXAMINATION – SUMMER-2016**

**Subject Code: 210007**

**Date: 30/5/2016**

**Subject Name: Human Anatomy, Physiology and Health Education - I**

**Time: 02:30 pm – 05:30 pm**

**Total Marks: 80**

**Instructions:**

- 1. Attempt any five questions.**
- 2. Make suitable assumptions wherever necessary.**
- 3. Figures to the right indicate full marks.**

- Q.1** (a) Draw neat and well labeled diagram of cell and write a short note on nucleus of the cell. **06**  
(b) Write a short note on Renin - Angiotensin System. **05**  
(c) Draw well labeled diagram of liver. Give the functions of liver. **05**
- Q.2** (a) Give the composition of gastric juice. Explain the digestion and absorption of nutrients in stomach. **06**  
(b) Classify blood cells with diagram. Give functions of Leucocytes. **05**  
(c) Draw neat and well labeled diagram of digestive system. **05**
- Q.3** (a) Draw neat and well labeled diagram of heart. Explain in detail the conduction system of heart. **06**  
(b) Write a short note on Pancreas **05**  
(c) Enumerate the blood clotting factors. Explain the mechanism of blood coagulation. **05**
- Q.4** (a) Draw the diagram of neuromuscular junction. Explain in detail mechanism of skeletal muscle contraction. **06**  
(b) What is cardiac output? Explain different factors regulating the cardiac output. **05**  
(c) Explain following terms. **05**  
1) Cardiac arrhythmia 2) Venous return 3) Universal blood donor 4) Active immunity 5) ESR
- Q.5** (a) Classify body tissues. Explain in detail about muscular tissues. **06**  
(b) Write a short note on : 1) ECG **05**  
2) Define Anatomy and Physiology. Write the functions of Mitochondria  
(c) Classify joints? Explain in detail about synovial joints? **05**
- Q. 6** (a) Explain digestion and absorption of nutrients from small intestine **06**  
(b) Explain following terms. **05**  
1) Semilunar valve 2) Leukemia 3) Microvilli 4) Gastric ulcer  
5) Heart burning syndrome  
(c) Differentiate : 1) Artery and Vein **05**  
2) Small intestine and Large intestine
- Q.7** (a) Explain different types of transport mechanism with suitable example across cell membrane. **06**  
(b) Write a short note on Lymph node. **05**  
(c) Name all the bones of skull, upper limb, lower limb and Vertebral column. **05**

\*\*\*\*\*