

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM - SEMESTER- 1 EXAMINATION – SUMMER -2019

Subject Code: 2210004**Date: 06-06-2019****Subject Name: Human Anatomy Physiology - I****Time: 10:30 AM TO 01:30 PM****Total Marks: 80****Instructions:**

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

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| Q.1 | (a) Explain a molecular structure of cell membrane with labeled diagram. | 06 |
| | (b) Explain immunity. Write a note on cellular and humoral immunity. | 05 |
| | (c) Write a note on extra-cellular and intra-cellular fluids and their composition. | 05 |
| Q.2 | (a) Enlist transporter mechanisms across cell membrane. Write a note on active transport mechanism. | 06 |
| | (b) Write a note on mitochondria and nucleus with labeled diagram. | 05 |
| | (c) Explain the structure and functions liver and pancreas. | 05 |
| Q.3 | (a) Explain the protein synthesis in detail. | 06 |
| | (b) Classify joints. Write a short note on synovial joint. | 05 |
| | (c) Explain the vertebral column in detail. | 05 |
| Q.4 | (a) Classify the elementary tissues of the body. Write a note on muscular tissue. | 06 |
| | (b) Write a note on general functions of blood. | 05 |
| | (c) Explain (i) osteoporosis (ii) arthritis (iii) myasthenia gravis
(iv) anaemia (v) haemophilia | 05 |
| Q.5 | (a) Explain the neuromuscular junction. Write a note on physiology of muscle contraction. | 06 |
| | (b) Write a note blood groups and their significance. | 05 |
| | (c) Explain blood clotting mechanism. | 05 |
| Q.6 | (a) Explain the composition, formation, circulation and functions of lymph. Write a note on spleen. | 06 |
| | (b) Draw a labeled diagram of internal structure of heart. | 05 |
| | (c) Explain the cardiac cycle in detail. | 05 |
| Q.7 | (a) Explain about blood pressure and renin angiotensin aldosterone system. | 06 |
| | (b) Explain the digestion of food in small intestine | 05 |
| | (c) Explain (i) hypertension (ii) atherosclerosis (iii) peptic ulcer
(iv) hepatitis (v) angina | 05 |
