

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-III (NEW) EXAMINATION – SUMMER 2024

Subject Code:3130304

Date:19-07-2024

Subject Name:Human Anatomy & Physiology-I

Time:10:30 AM TO 01:00 PM

Total Marks:70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

- Q.1** (a) What are the main functions of bones? **03**
(b) Draw and explain the general structure of a long bone. **04**
(c) Write a note on classifications of joints with example with necessary **07**
- Q.2** (a) Define the terms: 1. Anterior 2. Posterior 3. Distal **03**
(b) Explain different types of body planes with necessary figures. **04**
(c) Write a note on levels of structural organization and body systems. **07**
- OR**
- (c) Explain the structure and function of plasma membrane with necessary **07**
figures.
- Q.3** (a) Draw the structure of human heart and with all the chambers and valves. **03**
(b) Enlist the differences between artery and vein. **04**
(c) Draw and explain the systemic circulation of heart. **07**
- OR**
- Q.3** (a) Explain the main functions of the skin. **03**
(b) Describe the structure of the skin. **04**
(c) Compare and contrast the processes of primary and secondary wound **07**
healing.
- Q.4** (a) Explain in detail the stress and immunity. **03**
(b) Describe the composition and the main functions of lymph. **04**
(c) Write a note on blood and nerve supply to the bone. **07**
- OR**
- Q.4** (a) Draw and explain the pulmonary ventilation. **03**
(b) Define: Residual Volume, Inspiratory Reserve Volume, And Expiratory **04**
Reserve Volume.
(c) Write a detailed note on exchange of Oxygen and Carbon Dioxide. **07**
- Q.5** (a) Explain the cell junctions. **03**
(b) Enlist the comparison between epithelial and connective tissues. **04**
(c) Draw and explain the transport across the plasma membrane. **07**
- OR**
- Q.5** (a) What is a process of homeostasis? **03**
(b) Explain the types of movements at synovial joints. **04**
(c) Write a detailed note on functions and properties of blood. **07**
