

GUJARAT TECHNOLOGICAL UNIVERSITY

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

Subject Code: 3130304

Date: 26-11-2024

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.

	MARKS
Q.1 (a) Define: Inferior, Anterior, Proximal	03
(b) Discuss levels of structural organization of human body.	04
(c) Write a short note on homeostasis.	07
Q.2 (a) Draw the figure of plasma membrane with proper labeling.	03
(b) Explain structure of Mitochondria and Ribosomes.	04
(c) Discuss about chemical bonds in detail and Enlist different types of chemical reactions	07
OR	
(c) Explain process of cell division.	07
Q.3 (a) Discuss about functions of Epithelial tissues.	03
(b) Describe different types of membranes briefly.	04
(c) Explain the following functions of the skin in detail: Protection, sensation, absorption and excretion.	07
OR	
Q.3 (a) What is antibody mediated immunity?	03
(b) Describe various functions of the lymphatic system.	04
(c) Explain aging and bone tissue in detail.	07
Q.4 (a) State the functions of bones.	03
(b) Describe the general structure of a long bone.	04
(c) Write a short note on vertebral column.	07
OR	
Q.4 (a) Enlist types of movements at Synovial Joints.	03
(b) Explain Fibrous or fixed joints in detail.	04
(c) Write a short note on Pelvic (Hip) Girdle.	07
Q.5 (a) Describe the functions and properties of blood briefly.	03
(b) Discuss the role of platelets in blood clotting.	04
(c) Explain cardiac conduction system with proper diagram.	07
OR	
Q.5 (a) Draw the figure which shows all the organs of respiration.	03
(b) Define: total lung capacity, vital capacity inspiratory capacity, and functional residual capacity.	04
(c) Write a short note on blood circulation through heart.	07
