

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER-III (NEW) EXAMINATION – WINTER 2020****Subject Code:3130304****Date:10/03/2021****Subject Name:Human Anatomy & Physiology-I****Time:10:30 AM TO 12:30 PM****Total Marks:56****Instructions:**

1. Attempt any **FOUR** questions out of **EIGHT** questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		Marks
Q.1	(a) Define Following Terms: 1. Embryology 2. Development Biology 3. Homeostasis	03
	(b) Enlist and explain characteristics of living human organism.	04
	(c) Explain negative and positive feedback system for homeostasis with example.	07
Q.2	(a) Explain ions, molecules and compounds with example.	03
	(b) Define a chemical reaction. Describe the various forms of energy.	04
	(c) Draw and explain structure of a plasma membrane with its major functions.	07
Q.3	(a) Define Following Terms: 1. Albinism 2. Vitiligo 3. Dermatology	03
	(b) Name the four basic types of tissues that make up the human body, and state the characteristics of each.	04
	(c) Explain classification of Epithelial tissue with structure.	07
Q.4	(a) Describe the main functions of the skeletal system.	03
	(b) Describe the structure and functions of each part of a long bone.	04
	(c) Describe the layers of the epidermis and the cells that compose them.	07
Q.5	(a) Define Following Terms: 1. Abduction 2. Adduction 3. Circumduction	03
	(b) Describe the structural and functional classifications of joints.	04
	(c) Describe and Classify bones based on their shape or location.	07
Q.6	(a) Describe the functions of blood.	03
	(b) What causes the heart valves to open and to close? What supporting structures ensure that the valves operate properly?	04
	(c) Draw and explain gross structure of heart.	07
Q.7	(a) Explain the factors that regulate the volume of blood flow.	03
	(b) Explain how heart rate is regulated within body.	04
	(c) Explain basic structure of a blood vessel.	07
Q.8	(a) Explain Boyle's Law.	03
	(b) What is the difference between a lung volume and a lung capacity? How is minute ventilation calculated?	04
	(c) Explain structure and function of lungs.	07
