Name: **Enrolment No:**	UPES UNIVERSITY WITH A PURPOSE

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Theory Examination, December 2021

Course: Human Anatomy and Physiology **Semester: I**
Program: B.Pharm **Time 03 hrs.**
Course Code: BP101T **Max. Marks: 75**
Instructions: Read the Question Paper Carefully.

SECTION A

S. No.	CO	Multiple Choice Questions (20X1) or Objective type Questions (10X2)	Marks
Q1			**20**
1	CO1	Which of the following is NOT a part of the axial skeleton? A) Sternum B) Vertebral column C) Scapula D) Skull	1
2	CO2	Define the term “Homeostasis”.	1
3	CO3	The nucleus has a _____ membrane and communicate(s) with the cytoplasm by means of (a) _____. A) double; perinuclear space B) double; nuclear pores C) single; perinuclear space D) single; nuclear pores	1
4	CO4	The middle ear in humans consisted of _____ A) Semicircular canals B) Cochlea C) Vestibule D) Eustachian tube	1
5	CO5	The reason why tricuspid and bicuspid valves are closed is… A) ventricular relaxation B) ventricular filling C) atrial systole D) attempted backflow of blood into the atria	1
6	CO1	Which of the following organs is known as “graveyard” of RBCs? A) Spleen B) Kidney C) Liver D) Gall bladder	1
7	CO2	Which of the following organs contains ‘Purkinje Fibres’? A) Pancreas B) Brain C) Kidney	1

		D) Heart	
8	CO3	How many pairs of the cranial nerves originate in the brain? A) 8 B) 10 C) 12 D) 14	1
9	CO4	The maximum exchange of material between blood and surrounding cells takes place in …… A) Veins B) Heart C) Capillaries D) Arteries	1
10	CO5	……is an example of ball and socket joint.	1
11	CO1	Pick the correct one A) Serum = Blood + Fibrinogen B) Lymph = Plasma + RBC + WBC C) Plasma = Blood – Lymphocytes D) Blood = Plasma + RBC + WBC	1
12	CO2	……exhibits properties of both non-living and living are. A) diatoms B) lichens C) bacteria D) viruses	1
13	CO3	Which of the following are the basic categories of chemical signaling found in multicellular organisms? (a) Paracrine signaling (b) Autocrine signaling (c) Endocrine signaling (d) All of the above	1
14	CO4	The main function of the cornea present in the human eye is (a) structural support to the eye (b) bends light before it reaches the lens (c) changes the shape of the lens enabling image to be focused on the retina (d) contains a concentrated amount of cone cells on the correct orientation	1
15	CO5	Tongue is attached to the floor of buccal cavity by (a) falciform ligament (b) frenulum (c) lingual papilla (d) mesentery	1
16	CO1	Which of the following structure at a synapse has the neurotransmitter? (a) Schwan cells (b) Synaptic cleft (c) Synaptic knobs	1

		(d) Synaptic vesicles	
17	CO2	In muscle contraction……..ion is essential. (a) Cl (b) Ca (c) K (d) Na	1
18	CO3	The formation of erythrocytes in foetus takes place in_____. (a) Redbone marrow (b) Sarcoplasm (c) Liver and spleen (d) Blood	
19	CO4	Organ of Corti is …….	1
20	CO5	The action potential while the propagation of a nerve impulse is due to the movement of_____. (a) K+ ions from intracellular to extracellular fluid (b) K+ ions from extracellular to intracellular fluid (c) Na+ ions from intracellular to extracellular fluid (d) Na+ ions from extracellular to intracellular fluid	1
SECTION B			
Long Answers (Answer two out of 3) 2X10			
Q2			**20**
1	CO1	What is the function of Neuromuscular junction? Discuss in the detail about the process of muscle contraction.	(2+8)
2	CO5	What do you understand by systemic and pulmonary circulation? What is the function of arteries and veins? Draw a labelled diagram of Heart.	(2+4+4)
3	CO2	Explain the anatomy of ear with diagram. Discuss in detail about the organs involved in hearing process.	(5+5)
SECTION C			
Short Answers (Answer 7 out of 9) 7X5			
Q3			**35**
1	CO3	Classify types of Epithelial Tissue. What is the function and location of columnar epithelial tissue?	2+3
2	CO2	Define “hemostasis”? Write in steps the process of blood coagulation	2+3
3	CO4	What is the function of Plasma membrane? Give the composition of plasma membrane.	2+3
4	CO3	Explain the anatomy of the lymph node with diagram and discuss the composition of lymph.	3+2
5	CO5	Define “cardiac output”. Discuss factors regulating blood pressure.	2+3

6	CO4	Write the names of the cranial nerve I, II, IV, V and X.	5
7	CO4	Discuss the function of Sympathetic Nervous System?	5
8	CO3	Discuss the function of the following. a. Mitochondria b. Endoplasmic Reticulum	2.5+2.5
9	CO3	Classify the types of connective tissues with examples.	5
		Total	**75**