Name:

Enrolment No:

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

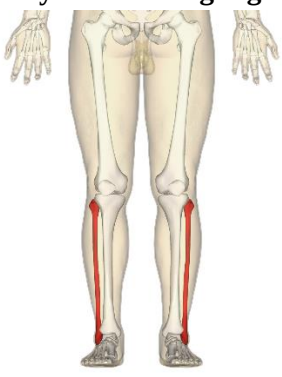
End Semester Examination, December 2022

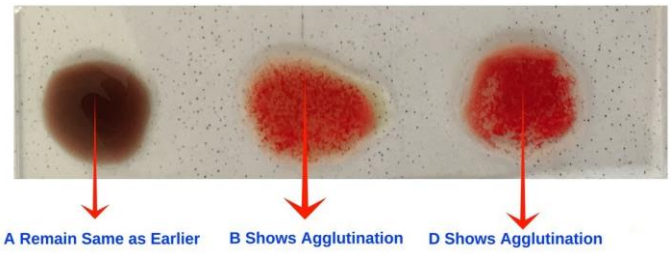
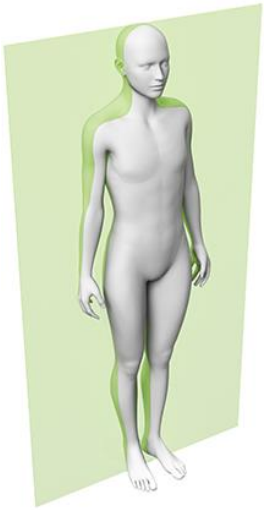
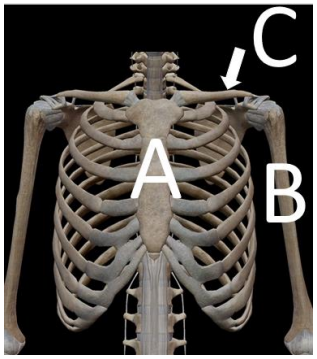
Course: Human Anatomy & Physiology I — **Semester: 1st**

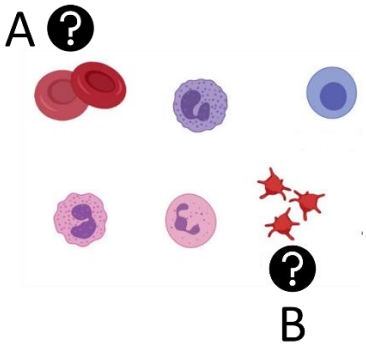
Program: BSC/Int BMSC – CR./MB./N&D. — **Duration: 3 Hours**

Course Code: HSCC1002 — **Max. Marks: 100**

Instructions: Read all questions carefully.

S. No.	Section A Short answer questions/ MCQ/T&F (20Qx1.5M= 30 Marks)	Marks	COs
Q			
1	_____ are known as the suicidal bags of the cell.	1.5	CO 1
2	The integumentary system includes skin and its appendages (hairs, nails, sweat glands and sebaceous glands). (True/False)	1.5	CO 1
3	List the four phases of mitosis.	1.5	CO 1
4	Calculate the patient's cardiac output when her heart rate and stroke volume is 100 bpm and 70 mL respectively.	1.5	CO 1
5	Define cell division.	1.5	CO 1
6	The articular cavity (or the joint cavity), which is filled with a fluid called _____.	1.5	CO 1
7	Draw the structure of heart.	1.5	CO 1
8	Name the formed elements found in blood.	1.5	CO 1
9	The study of structure and function of body organs is known as _____.	1.5	CO 1
10	Sketch the well-labelled diagram of cross-section of skin.	1.5	CO 1
11	Identify the bone highlighted in red? 	1.5	CO 1
12	The cell which consist of cell body, a major branching fiber (axon) and numerous smaller branching fibers (dendrites) is known as _____.	1.5	CO 1

13	**Cellular respiration is the metabolic reactions that take place in the cells to convert chemical energy into adenosine triphosphate. (True/False)**	**1.5**	**CO 1**
14	**Determine the blood group.** 	**1.5**	**CO 1**
15	**Name the plane dividing the body vertically.** 	**1.5**	**CO 1**
16	**Identify the bones.** 	**1.5**	**CO 2**
17	**Mark the steps of heart conduction pathway.**	**1.5**	**CO 3**
18	**Identify the blood cells and write their function.**	**1.5**	**CO 3**

			
19	**Sketch a well labelled diagram of nerve cell.**	**1.5**	**CO 3**
20	**Write the different functions of skin.**	**1.5**	**CO 3**
Section B (4Qx5M=20 Marks)			
21	**Differentiate with example how positive feedback mechanism leads to homeostasis.**	**5**	**CO 4**
22	**Discuss the distinctions between eukaryotes and prokaryotes.**	**5**	**CO 4**
23	**Explain the process of signal transduction in nerve cell.**	**5**	**CO 3**
24	**Explain the existence of blood typing.**	**5**	**CO 4**
Section C (2Qx15M=30 Marks)			
25	**Categorize with numbers and provide a full description of the cranial bones and rib cage.**	**15**	**CO 2**
26	**Using a diagram, demonstrate the cell division process of somatic cells.**	**15**	**CO 3**
Section D (2Qx10M=20 Marks)			
27	**Evaluate and give the role of various blood components.**	**10**	**CO 2**
28	**Examine the concept of the human body's structural levels of organization.**	**10**	**CO 4**