

Name:  
Enrolment No:



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

**Course: Human Anatomy and Physiology**  
**Program: B.Pharm**  
**Course Code: BP101T**  
**Instructions: Read the Question Paper Carefully.**

**Semester: I**  
**Time 03 hrs.**  
**Max. Marks: 75**

**SECTION A**

S. No.	CO	Multiple Choice Questions (20X1) or Objective type Questions (10X2)	Marks
<b>Q1</b>			<b>20</b>
1	CO1	The lining layer of fallopian tubes, bronchi and bronchioles consists of A) Columnar epithelium B) Ciliated epithelium C) Cubical epithelium D) Squamous epithelium	1
2	CO2	_____ is the neurotransmitter used to activate almost all effectors in the sympathetic division of the ANS while _____ is used by the parasympathetic division. A) Epinephrine, Adrenaline B) Nor-epinephrine, Acetylcholine C) Epinephrine, Dopamine D) Dopamine, Adrenaline	1
3	CO3	Tip of the nose and external ears have A) areolar tissue B) cartilage C) ligament D) bone	1
4	CO4	The three bones of the middle ear are collectively called the ..... A) Auditory Vesicle B) Auditory Ossicles C) Auditory Muscle D) None	1
5	CO5	What is the correct path through the circulatory system which describes the passage of blood originating in the left leg? A) Vena cava → left atrium → right atrium → lungs → left ventricle → right ventricle → aorta B) Vena cava → right atrium → left atrium → lungs → right ventricle → left ventricle → aorta C) Vena cava → left atrium → left ventricle → lungs → right atrium → right ventricle → aorta D) Vena cava → right atrium → right ventricle → lungs → left atrium → left ventricle → aorta	1

6	CO1	The ____ system transports oxygen, carbon dioxide, nutrients, and wastes throughout the body, in the blood. A) Respiratory B) Circulatory C) Excretory D) Integumentary	1
7	CO2	Blood is a .....tissue.	1
8	CO3	How many pairs of the cranial nerves originate in the brain? A) 8 B) 10 C) 12 D) 14	1
9	CO4	Thoracolumbar outflow is also known as .....	1
10	CO5	The joint in the shoulder is an example of .....	1
11	CO1	The connection between a motor neuron axon terminal and a muscle fiber occurs at a site known as .....	1
12	CO2	.....signalling requires a cell to synthesize and secrete a hormone into the circulatory system.	1
13	CO3	<b>True/False:</b> Lymph includes fluids from the intestines that contain fats and proteins and transports it back to the bloodstream.	1
14	CO4	Organ of Corti includes .....	1
15	CO5	<b>True/False:</b> Pupil is the transparent structure inside the eye that focuses light rays onto the retina	1
16	CO1	<b>True/False:</b> Sagittal Plane – divides body into right and left parts.	1
17	CO2	The normal hemoglobin value in adult male is .....	1
18	CO3	<b>True/False:</b> All of the muscles of the tongue, intrinsic and extrinsic, are innervated by the hypoglossal nerve. The one exception is the palatoglossus muscle which is supplied by the vagus nerve.	
19	CO4	Nasal septum is made up of .....	1
20	CO5	<b>True/False:</b> The cochlear nerve is primarily responsible for maintaining body balance and eye movements, while the vestibular nerve is responsible for hearing.	1

**SECTION B**

**Long Answers (Answer two out of 3) 2X10**

<b>Q2</b>			<b>20</b>
1	CO1	Give general principle of cell communication and explain intracellular signaling pathway in detail.	(5+5)
2	CO5	Draw neat and labelled diagram of Heart. Explain cardiac cycle in detail.	(4+6)
3	CO2	Define Hemostasis. Write in detail about the mechanism of Blood Coagulation.	(2+8)

**SECTION C****Short Answers (Answer 7 out of 9) 7X5**

<b>Q3</b>			<b>35</b>
1	CO3	Differentiate between sympathetic and parasympathetic nervous system.	5
2	CO2	Define erythropoiesis. Write the function of leucocytes.	5
3	CO4	Discuss the anatomy of the eye.	5
4	CO3	Classify Joints. Give with appropriate example the types of joint movements.	5
5	CO5	Define cardiac output. Discuss factors regulating blood pressure.	5
6	CO4	Write about the structure and functions of Vestibular Apparatus.	5
7	CO4	Give the physiology of muscle contraction.	5
8	CO3	Explain in detail about types, structure and functions of epithelial tissues.	5
9	CO3	Classify the types of connective tissues with examples.	5
		<b>Total</b>	<b>75</b>