

Name:  
Enrolment No:



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

**Course: Human Anatomy and Physiology-II**  
**Program: B.Pharm**  
**Course Code: BP201T**  
**Instructions: Read the Question Paper Carefully.**

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

**SECTION A**

S. No.	CO	Multiple Choice Questions (20X1)/Fill in the blanks/True or False	Marks
<b>Q1</b>			<b>20</b>
1	CO1	The Schwann cells form a myelin sheath around the..... a. dendrites b. cell body c. nucleus d. axon	1
2	CO2	Chemical messengers secreted by ductless glands are called _____ a. Lymph b. Platelets c. Plasma d. Hormones	1
3	CO3	Name the instrument that measures the amount of air inhaled and exhaled with each breath. a. Sphygmomanometer b. Hygrometer c. Stethoscope d. Spirometer	1
4	CO4	Which ion is reabsorbed in exchange for sodium? a. Chloride b. Potassium c. Calcium d. Magnesium	1
5	CO5	Which of the following best describe the structure of myelinated neuron? (tick all that apply) a. It consists of series of Schwann cells along the length of the neuron. b. Nodes of Ranvier assist in rapid transmission of nerve impulse. c. One Schwann cell present surrounded by the myelin sheath. d. Speed of transmission of nerve impulse is significantly lower.	1
6	CO1	..... is the site of sperm maturation. a. Epididymis b. Ductus deferens c. Spermatic cord d. Urethra	1
7	CO2	Renin acts on _____ to convert it to angiotensin I.	1

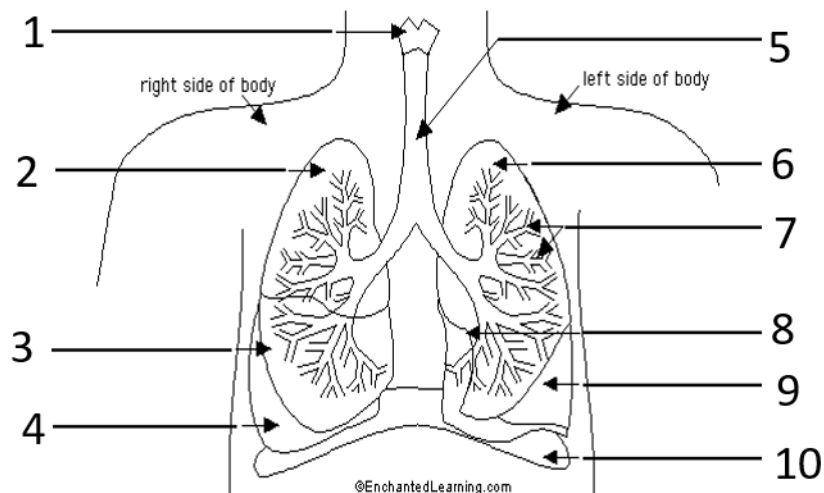
		<ul style="list-style-type: none"> <li>a. Angiotensin II</li> <li>b. Angiotensinogen</li> <li>c. ACE</li> <li>d. Aldosterone</li> </ul>	
8	CO3	<p>In the absence of acrosome the sperm _____</p> <ul style="list-style-type: none"> <li>a. Cannot get energy</li> <li>b. Cannot penetrate the egg</li> <li>c. Cannot get food</li> <li>d. Die</li> </ul>	1
9	CO4	<p>All of the following are hormones of the anterior pituitary except:</p> <ul style="list-style-type: none"> <li>a. Growth hormone (GH)</li> <li>b. Follicle stimulating hormone (FSH)</li> <li>c. Thyroid stimulating hormone (TSH)</li> <li>d. Antidiuretic hormone (ADH)</li> </ul>	1
10	CO5	<p>The walls of alimentary canal is formed by following layers (tick all that apply)</p> <ul style="list-style-type: none"> <li>a. Outer layer adventitia or serosa</li> <li>b. Muscularis Externa</li> <li>c. Mucosa</li> <li>d. Submucosa</li> </ul>	1
11	CO1	<p>Exchange of oxygen and carbon dioxide between alveolar air and blood is carried out by .....</p> <ul style="list-style-type: none"> <li>a. Active transport</li> <li>b. Gravity</li> <li>c. Diffusion</li> <li>d. Blood pressure</li> </ul>	1
12	CO2	<p>The rounded superior part of the stomach located inferior to the diaphragm, above and to the left of the cardia, is called</p> <ul style="list-style-type: none"> <li>a. Fundus</li> <li>b. Cardia</li> <li>c. Rugae</li> <li>d. Pylorus</li> </ul>	1
13	CO3	<p>The normal human chromosome diploid number is:</p> <ul style="list-style-type: none"> <li>a. 23</li> <li>b. 24</li> <li>c. 46</li> <li>d. 48</li> </ul>	1
14	CO4	<p>Which one of the following hormones binds to the pituitary and stimulates the release of luteinizing hormone (LH) and follicle-stimulating hormone (FSH)?</p> <ul style="list-style-type: none"> <li>a. Adrenocorticotrophic hormone</li> <li>b. Thyroid stimulating hormone</li> <li>c. Corticotropin releasing hormone</li> <li>d. Gonadotropin releasing hormone</li> </ul>	1
15	CO5	<p>Carbon dioxide is one of the waste products of metabolism. It is excreted and transported by which of the following mechanism (tick all that apply).</p> <ul style="list-style-type: none"> <li>a. As bicarbonate ions in the plasma (70%)</li> <li>b. Combined with erythrocytes as carbaminohemoglobin (23%)</li> <li>c. Combined with leukocytes (10%)</li> <li>d. Some is dissolved in the plasma (10%)</li> </ul>	1

16	CO1	Thalamus and hypothalamus regions are also known as .....	1
		a. Prosencephalon b. Myelencephalon c. Diencephalon d. None	
17	CO2	Trachea divided into two smaller tubes called	1
		a. Bronchi b. Micro trachea c. Eustachian tube d. None of the above	
18	CO3	Which of the following cells supports, nourishes, and protect the neurons?	1
		a. Nissl bodies b. Perikaryon c. Ganglia d. Glial cells	
19	CO4	An organ or structure that is not a component of the urinary system is the	1
		a. Urethra b. Urinary bladder c. Ureter d. Adrenal gland	
20	CO5	The functions of cerebellum are (tick all that apply).	1
		a. Balance and Posture b. Fine movement coordination c. Sensory perceptions d. Higher order functions	

**SECTION B**

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

<b>Q2</b>			<b>20</b>
1	CO4	Digestion occurs when food is moved through the digestive system. What are the accessory organs associated with digestive system? (2 marks) What are the general functions of the small intestine? (5 marks) What do the villi in the small intestine do? (3 marks)	10
2	CO5	Name glands that make up the endocrine system and how hormones act as chemical messengers in the body. (2+3 marks) Which hormones normally regulate blood glucose and how is this related to diabetes? (1 + 4 marks)	10
3	CO4	Label the given diagram (5 marks)	5+5

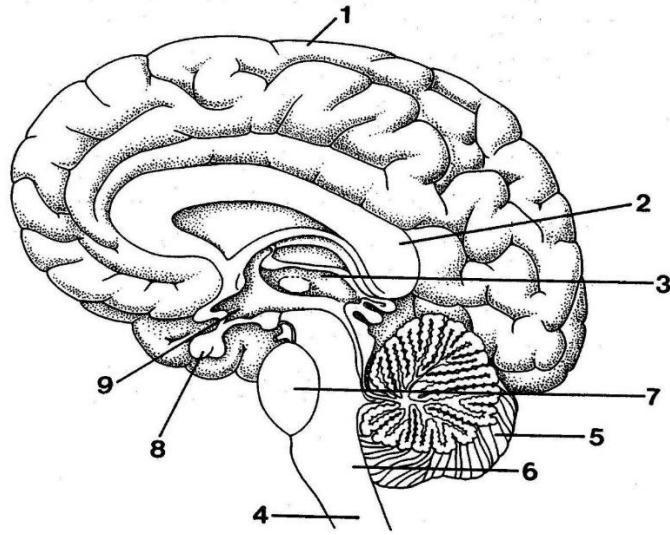


Explain the process of gaseous exchange that occurs inside the human body. (5 marks)

**SECTION C**

**Short Answers (Answer 7 out of 9) 7X5 word limit not more than 200 words**

<b>Q3</b>			<b>35</b>
1	CO1	Neuroglia are the supporting cells in the brain. Name the neuroglia present in the brain and explain the function of astrocytes.	5
2	CO2	Explain the process of mitosis and meiosis arrest that occur during oogenesis.	5
3	CO3	What is cellular respiration? Mention the functions of ATP.	5
4	CO1	Thymus gland is known as “Heart of the Immune System” Why?	5
5	CO2	Enlist the hormones secreted from anterior pituitary gland. What is the functions of pineal gland?	5
6	CO3	Which gland produces melatonin? What is its function?	5
7	CO1	Define the following a. Tidal Volume b. Total Lung Capacity	(2.5+2.5)
8	CO2	What is a nephron? Explain its anatomy with diagram.	5
9	CO3	Label the given diagram (4.5 marks)	5



Write one function of any one. (0.5 mark)

**Total** 75