

Name:	 UPES UNIVERSITY WITH A PURPOSE
Enrolment No:	

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

Course: Human Anatomy & Physiology-II
Program: B.Sc. Micro/Clinical/Nutrition
Course Code: HSCC1007

Semester: IInd
Time 03 hrs.
Max. Marks: 100

Instructions: Read the paper carefully. All sections are compulsory

SECTION A

S. No.	MCQs or Fill in the blanks (1.5 marks each)	30 Marks	CO
1	Nervous system is _____ a) An external communication system b) A slow communication system c) A rapid communication system d) A moderate communication system	1.5	CO1
2	_____ controls the voluntary functions of the body. a) PNS b) CNS c) Neurons d) ANS	1.5	CO1
3	Neuroglial cells support and provide nutrition for the _____ a) Nephron b) Muscles c) Glands d) Neurons	1.5	CO1
4	Sympathetic nervous system is associated with _____ a) Fight and flight b) Fear and rage c) Hormonal secretions d) Skeletal muscles	1.5	CO1
5	Which of the following cells produces Hcl? a) Beta cells b) Oxyntic cells c) Chief cells d) Alpha cells	1.5	CO2
6	The gastric juice contains _____ a) Trypsin, pepsin, lipase b) Pepsin, lipase, rennin c) Pepsin, amylase, trypsin d) Trypsin, pepsin, rennin	1.5	CO2

7	Digestion of protein is completed in _____ a) Stomach b) Ileum c) Duodenum d) Duodenum and Ileum	1.5	CO2
8	Enzyme rennin is secreted by _____ a) Stomach b) Liver c) Kidney d) Pancreas	1.5	CO2
9	Where does the arterial blood come from that supply to visceral pleura? a) Bronchial veins b) Intercostal nerves c) Bronchial arteries d) Intercostal veins	1.5	CO3
10	The respiratory system is made up of trachea, the lungs and the _____ a) Diaphragm b) Pancreas c) Esophagus d) Liver	1.5	CO3
11	Which blood vessel carries the least amount of urea? a) Pulmonary vein b) Renal artery c) Renal vein d) Hepatic portal vein	1.5	CO3
12	Which of the following facilitates reabsorption of water by nephron? a) Medulla b) Cortex c) Pelvis d) Loop of nephron	1.5	CO3
13	Grave's disease is due to _____ a) Hypoactivity of Islets of Langerhans b) Hyperactivity of adrenal cortex c) Hyperactivity of thyroid gland d) Hyperactivity of adrenal medulla	1.5	CO4
14	The hormone that controls the level of calcium and phosphorus in blood is secreted by _____ a) Thyroid gland b) Parathyroid gland c) Pituitary gland d) Thymus	1.5	CO4
15	The Thymus is located in _____ a) Neck b) Along intestinal walls c) Along trachea d) In abdominal cavity above diaphragm	1.5	CO4

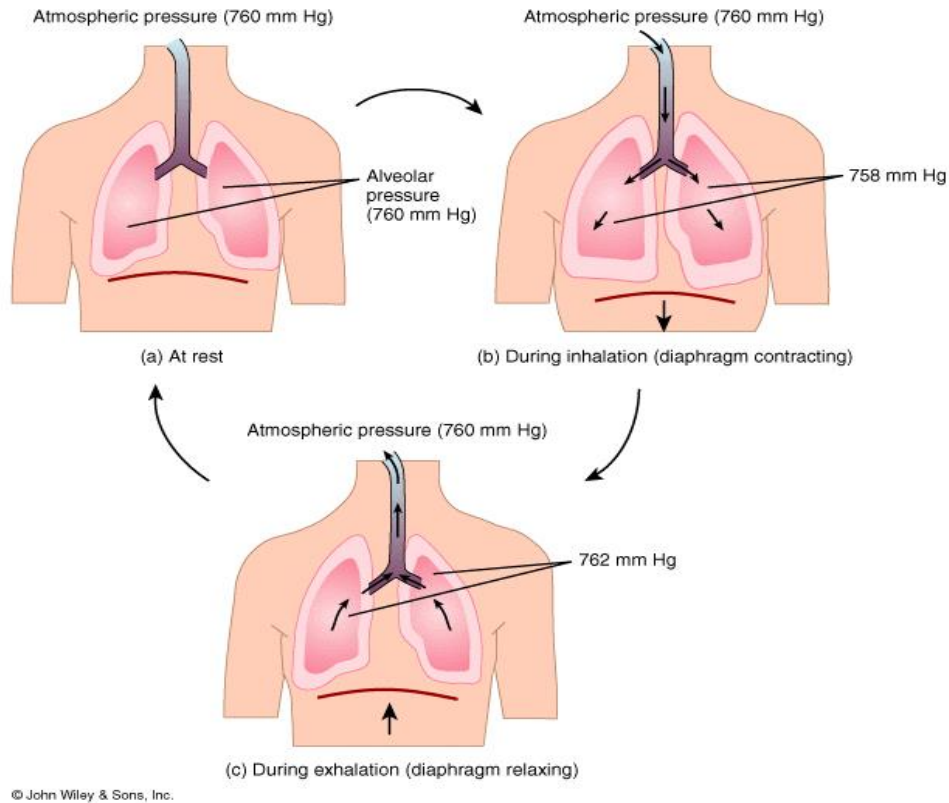
16	T lymphocytes mature in _____ a) Spleen b) Thymus c) Red bone marrow d) Thyroid	1.5	CO4
17	The lytic enzyme released by sperm is _____ a) Ligase b) Acrosome c) Androgamone d) Hyaluronidase	1.5	CO5
18	In the absence of acrosome, the sperm _____ a) Cannot penetrate the egg b) Cannot get energy c) Cannot get food d) Cannot swim	1.5	CO5
19	Human sperm moves with the help of _____ a) Cilia b) Flagellum c) Basal body d) Nucleosome	1.5	CO5
20	Spermatogonia are formed by _____ a) Meiosis b) Mitosis c) Amitosis d) Meiosis II	1.5	CO5

SECTION B 20 marks 4 questions 5 marks each

Q	Short Answer Type Question (5 marks each) Scan and Upload 4 questions 5 marks each	20 Marks	CO
1	Discuss in brief about components of nervous tissue	5	CO1
2	Explain in brief two disorders of GIT	5	CO2
3	Describe in brief artificial respiration and resuscitation methods	5	CO3
4	Explain the mechanism of carbonic acid buffer system in kidney for maintenance of biological pH	5	CO3

SECTION C 30 marks

Q	Two case studies 15 marks each subsections	30 Marks	CO
1	Case Study 1	2+10+3	CO3



1. Identify the type of respiration process and explain the mechanism from the above diagram at point a, b & c.
2. Also explain the next level of respiration after point c.
3. Assertion (A) Tidal volume is the volume of air inspired or expired with the normal breath.

Reason (R) Adult person contains 500 mL expired or inspired volumes of air with each normal breath. You have to select one code of the following

A If both Assertion and Reason are true and Reason is correct explanation of Assertion

B If both Assertion and Reason are true but Reason is not the correct explanation of Assertion

C If Assertion is true but Reason is false

D If both Assertion and Reason are false

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Case Study 2

Various cells and secretory substances are secreted by stomach to do the chemical digestion in the stomach to perform the role of protection, absorption, conversion, denaturation etc. From the below mentioned function identify and write the cells and secretory substances involved.

5+5+5

CO₂

	<p>a) Pepsinogen is converted into the activated form Pepsin, and breaks down proteins into peptides.</p> <p>b) Breaks triglycerides into fatty acids and monoglycerides.</p> <p>c) Kills microbes in food, denatures proteins and converts pepsinogen into pepsin.</p> <p>d) Needed for absorption of vitamin B12, which is used in red blood cell formation (erythropoiesis).</p> <p>e) Forms a protective barrier that prevents digestion of stomach wall.</p> <p>f) Small quantity of water, ions, short-chain fatty acids, and some drugs enter the bloodstream.</p> <p>g) Stimulates parietal cells to secrete HCl and chief cells to secrete pepsinogen; increases motility of the stomach, and relaxes pyloric sphincter.</p>		
	SECTION- D 20 marks		
Q	Long Answer type Questions Scan and Upload (10 marks each)	20 Marks	CO
1	Describe the location and role of parathyroid and thymus gland	10	CO4
2	Explain with help of labelled diagram process of spermatogenesis	10	CO5