


<b>Name:</b>	 <b>UPES</b> <small>UNIVERSITY WITH A PURPOSE</small>
<b>Enrolment No:</b>	

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

**Course: Human Anatomy and Physiology**  
**Program: M.Sc. Microbiology**  
**Course Code: HSND7013**

**Semester: 1**  
**Time 03 hrs.**  
**Max. Marks: 100**

**SECTION A**

**Each Question will carry 1.5 Marks**

S. No.	Question	CO
Q 1	Which cranial nerve is giving nerve supply to tongue?	CO2
Q 2	Define thrombosis	CO3
Q 3	A patient has increased TSH levels but normal thyroxine levels and no physical symptoms. The patient is suffering from which of the following disorder a) Primary hypothyroidism b) Subclinical hypothyroidism c) Euthyroid d) Hyperthyroidism	CO4
Q 4	What do you mean by white coat hypertension?	CO3
Q 5	Rennin is secreted by_____.	CO1
Q 6	What is leukocytosis?	CO3
Q 7	During flexion of arm, the arm moves a) Forward b) Backward c) Medial d) lateral	CO2
Q 8	Name three gastrointestinal hormones	CO1
Q 9	Nuclei of cranial nerve are located in a) Brain stem b) Spinal cord c) Internal capsule d) Wernicke's area	CO2
Q 10	What is the difference between bleeding time and clotting time?	CO3
Q11	Write down the three stages of deglutition	CO1
Q 12	Define 'anastomosis'	CO3

Q 13	Glucagon is secreted from _____	<b>CO1</b>
Q 14	Write the components of conducting system of heart.	<b>CO3</b>
Q 15	Trypsinogen is converted into active trypsin by _____.	<b>CO1</b>
Q 16	What is 'stroke volume'?	<b>CO3</b>
Q 17	Define 'peristalsis'	<b>CO1</b>
Q18	Give the role of BBB	<b>CO2</b>
Q 19	Chylomicrons are made up of _____	<b>CO3</b>
Q 20	Pacemaker is the structure in the heart that generates impulses for heart beat. _____ forms the pacemaker in the human heart.	<b>CO3</b>

**SECTION B**

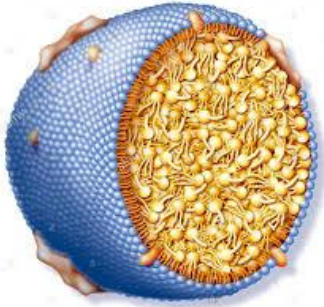
- 1. Each question will carry 5 marks (not more than 150 words)**
- 2. Instruction: Write short / brief notes**

Q 1	Differentiate neurotransmitter and hormones.	<b>CO4</b>
Q 2	Write down the composition of blood.	<b>CO4</b>
Q 3	What are the functions of juxta glomerular apparatus	<b>CO1</b>
Q 4	Explain the role of cerebro spinal fluid in brain and spinal cord	<b>CO2</b>

**Section C**

- 1. Each Question carries 15 Marks.**
- 2. Instruction:**

Q 1	<p>Analyze the following passage and answer the following questions</p> <p>Case study: A girl of age 17 years suffers from polydypsea, polyphagia and polyurea. She is not able to do her work because of weakness and pain in legs. Moreover she was continuously losing weight and body fat.</p> <p>On laboratory investigation, the following results were observed</p> <p><b>BLOOD EXAMINATION REPORT</b></p> <ol style="list-style-type: none"> <li>a. Glucose (random) – 294 mg/dl</li> <li>b. Glucose Fasting, plasma – 323 mg/dl</li> <li>c. HbA1c – 15.0%</li> <li>d. Estimated average Glucose – 395 mg/dl</li> </ol> <p><b>URINE TEST REPORT (Chemical examination)</b></p> <ol style="list-style-type: none"> <li>e. Ketones – positive</li> <li>f. Albumin – trace</li> </ol> <p>Microscopic examination</p>	<b>CO5</b>
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	<p>RBC – 10-15/HPF Pus cells – 40-45/HPF</p> <p>Questions</p> <ol style="list-style-type: none"> <li>Diagnose the disease (2 marks)</li> <li>What is the normal value for HbA1c (2 marks)</li> <li>What are the complications related to the disease (3 marks)</li> <li>What is ketoacidosis (3 marks)</li> <li>How will you manage the patient (5 marks)</li> </ol>	
Q 2	<p>Analyze the following passage and answer the following questions</p> <p>Absorption and utilization of lipids/fats/cholesterol in the body does not happen directly as these molecules are very hydrophobic. These molecules bind with protein/peptide units and the conjugated forms are known as lipoproteins. Different types of lipoproteins are formed in the body with different size, composition and have various functions. Some lipoproteins are considered as BAD some are considered as GOOD. Some of the most commonly known lipoproteins are Chylomicrons, LDL, HDL, VLDL. Given is the structure of lipoprotein.</p>  <p>Answer the following questions</p> <ol style="list-style-type: none"> <li>Chemically what are lipids? Are they water soluble? (2 marks)</li> <li>The protein/peptide unit of lipoprotein is known as _____. What is the role of protein/peptide unit? (2 Marks)</li> <li>Name the lipoprotein with highest and the lowest size (2 marks)</li> <li>Write the role of LDL, HDL and chylomicrons (6 marks)</li> <li>Which lipoprotein is considered as GOOD lipoprotein? (1 mark)</li> <li>A patient having a HDL levels of 20mg/dl. What could be the consequences to the patient. (2 marks)</li> </ol>	CO3
<p><b>Section D</b></p> <p><b>3. Each Question carries 10 Marks</b></p> <p><b>4. Instruction: Write long answer. (word limit 250 words)</b></p>		
Q 1	<ol style="list-style-type: none"> <li>Discuss Hypophyseal pituitary thyroid axis. (5 marks)</li> <li>Write down the cause and clinical symptoms of Alzheimer's disease. (5 marks)</li> </ol>	CO4
Q 2	<ol style="list-style-type: none"> <li>Describe the process of absorption of Carbohydrates. (5 marks)</li> <li>Discuss causes, types and clinical symptoms of hypoxia. (5 marks)</li> </ol>	CO2