

Reg.No.:

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VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN
[AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]
Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.

Question Paper Code: 120009

B.E. / B.Tech. DEGREE END-SEMESTER EXAMINATIONS – NOV. / DEC. 2024

Third Semester

Biomedical Engineering

U23BM301 – ANATOMY AND HUMAN PHYSIOLOGY

(Regulation 2023)

Time: Three Hours

Maximum: 100 Marks

Answer ALL the questions

Knowledge Levels (KL)	K1 – Remembering	K3 – Applying	K5 - Evaluating
	K2 – Understanding	K4 – Analyzing	K6 - Creating

PART – A

Q.No.	Questions	(10 x 2 = 20 Marks)		
		Marks	KL	CO
1.	In what way are phagocytosis and pinocytosis similar?	2	K2	CO1
2.	What is Homeostasis?	2	K2	CO1
3.	Mention the function of cartilages?	2	K2	CO2
4.	List the three types of joints.	2	K2	CO2
5.	What is the concentration of RBC in blood?	2	K2	CO3
6.	Define Residual volume.	2	K2	CO3
7.	Name the cells in the gastric glands and its secretion.	2	K2	CO4
8.	List the significant role of bile in digestion.	2	K2	CO4
9.	Comprehend the importance of olfactory glomeruli.	2	K2	CO5
10.	What is neurotransmitter? Name few neurotransmitter produced in the brain.	2	K2	CO5

PART – B

(5 x 13 = 65 Marks)

Q.No.	Questions	Marks	KL	CO
11.	a) Draw and explain the components of a cell and its functions.	13	K2	CO1
	(OR)			
	b) List out the types of various tissues and explain the structure and physiology.	13	K2	CO1
12.	a) Briefly explain the sliding theory of contraction with neat diagram.	13	K2	CO2
	(OR)			
	b) Discuss the types of bones and its functions.	13	K2	CO2
13.	a) What are leukocytes? Name the types of Leukocytes. Describe their functions in human body.	13	K2	CO3
	(OR)			
	b) Describe the basic structure of a blood vessel and mention the difference between an artery and vein.	13	K2	CO3
14.	a) Describe the structure of nephron and specific function of each part of the nephron in the process of urine production.	13	K2	CO4
	(OR)			
	b) Name the gland associated with the GI System and explain their significance in the digestive process with necessary illustrations.	13	K2	CO4
15.	a) Discuss the different types of neuroglia found in the CNS.	13	K2	CO5
	(OR)			
	b) Illustrate & explain the structure and function of eyeball with a labeled diagram.	13	K2	CO5

PART – C

(1 x 15 = 15Marks)

Q.No.	Questions	Marks	KL	CO
16.	a) What is anemia? Identify the types of anemia and mention its physiological cause. Explain the effects of anemia on the circulatory system.	15	K2	CO3
	(OR)			
	b) Discuss the impact of age, gender and fitness level on thermoregulation in humans. How do these factors influence on individuals ability to cope with temperature extremes?	15	K2	CO4