

THE KAVERY ENGINEERING COLLEGE*(An Autonomous Institution)***UG/PG DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL-MAY 2026****Third Semester****Biomedical Engineering****UBMTL24301 - ANATOMY AND HUMAN PHYSIOLOGY****Regulations - 2024****Duration : 3 Hrs****Maximum : 100 Marks****PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)**

Q.No	Questions	BTL	CO	Marks
1.	Distinguish between primary and secondary transport across cell membrane.	L2	1	2
2.	Write the equations for action potential formulated by Nernst, Goldman for potential difference across cell membrane.	L1	1	2
3.	Relate the types of bones basis on their shape.	L2	2	2
4.	Name the order of the parts of the human respiratory system.	L1	2	2
5.	Justify which heart chamber has the thickest walls?	L2	3	2
6.	State the function of the intrinsic conduction system of the heart.	L1	3	2
7.	Write the sequential order of the digestive organs.	L1	4	2
8.	Justify the role of enzymes in digestion of food we have taken daily.	L2	4	2
9.	Define reflex action. Give an example.	L1	5	2
10.	Differentiate between electrical and chemical synapse.	L2	5	2

PART – B (ANSWER ALL QUESTIONS) (Marks 5*16 = 80)

Q.No	Questions	BLT	CO	Marks
11. a	Illustrate in detail about Cell Structure with organelles and its components.	L2	1	16
	Or			
b i	Discuss the mechanism of active cell membrane transport with neat sketch.	L2	1	8
ii	Explain the action potential with neat diagram.	L2	1	8
12. a	Elaborate the physiology of bone formation with bone remodeling with neat diagram.	L2	2	16
	Or			
b i	Describe in detail about the components of the respiratory system.	L2	2	10
ii	Write short notes on Gaseous exchange in lung with mechanism of breathing	L2	2	6
13. a	Construct the sequence of cardiac events occurring at one heartbeat.	L3	3	16
	Or			
b i	Identify the procedure of ABO group identification with neat diagram.	L2	3	8
ii	Explain RH factor in blood group	L2	3	8

14.	a	Illustrate in detail about the secretory function of digestive system.	L2	4	16	
Or						
	b	Elaborate the stages of urine formation in Nephron with proper pictorial representation.	L2	4	16	
15.	a	i	Assess the conduction of action potential in a neuron.	L4	5	8
		ii	Evaluate the structure and working of the human ear.	L4	5	8
Or						
	b	With neat diagrams, analyze the divisions of the human brain and the functions of each lobe.	L4	5	16	
