U.S.N.										

B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

April 2024 Semester End Main Examinations

Programme: B.E. **Semester: III**
Branch: Medical Electronics Engineering **Duration: 3 hrs.**
Course Code: 22MD3ESHAP **Max Marks: 100**
Course: Human Anatomy and Physiology

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may be suitably assumed.

Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.

			UNIT - I	*CO*	*PO*	Marks
1	a)		What are the general characteristics of cell? And explain the cell composition.	*CO2*	*PO2*	**10**
	b)		What are the components of cell homeostatic system? And explain the mechanism of action of homeostatic system.	*CO2*	*PO2*	**10**
			UNIT – II			
2	a)		With neat diagram explain the structure of heart and actions of heart.	*CO2*	*PO2*	**10**
	b)		Explain the electrical activity of heart.	*CO2*	*PO2*	**10**
			UNIT - III			
3	a)		With neat diagram explain the physiological anatomy of human respiratory tract.	*CO2*	*PO2*	**10**
	b)		What are the factors influencing in regulation of pulmonary blood flow?	*CO3*	*PO2*	**04**
	c)		Name and explain the different lung volumes appeared during the pulmonary function test.	*CO3*	*PO2*	**06**
			UNIT - IV			
4	a)		Compare and explain the features of skeletal, cardiac and smooth muscle fibres.	*CO3*	*PO2*	**12**
	b)		Explain the microscopic structure of myofibril and skeletol muscle.	*CO2*	*PO2*	**08**
			OR			
5	a)		Explain how nervous system is organised in human body.	*CO2*	*PO2*	**08**
	b)		Explain the structure of neuron. Also explain the neuron classification.	*CO2*	*PO2*	**12**

			UNIT - V			
	6	a)	Explain the structure and functions of kidney.	*CO2*	*PO2*	**10**
		b)	With neat diagram explain the structure of nephron and its importance.	*CO2*	*PO2*	**10**
			OR			
	7		Explain the following : 1. Hormonal action 2. Hormones classification 3. Pituitary gland 4. Thyroid gland	*CO2*	*PO2*	**20**

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