

Name of Examination Five Year Integrated M.Sc. Part / Semester I 2022Subject System Physiology Paper / Course LS-3-5-1 Half _____Time Four HoursFull Marks 80

Sl. No. of Question Paper	<p align="center">Questions are of value as indicated in the margin. Answer <u>Question No.01</u> and <u>any Six</u> from the rest.</p>	Marks
	<p>1. Write short notes on <u>any ten</u> of the following</p> <ol style="list-style-type: none"> Photophosphorylation C4 plants Phytohormones. Abscission and senescence Turgor pressure Transpiration Blood grouping Plasma Nephron Glial cell Rod cell Phototransduction 	2X10=20
	<p>2. Explain the cardiac cycle. Discuss electrocardiograms from a healthy person and from two patients suffering from atrioventricular block, one with partial block and the other with complete block.</p>	5+5=10
	<p>3. What is neuron. Explain the changes in membrane potential and relative membrane permeability to sodium and potassium ions during the conduction of nerve impulses.</p>	3+7=10
	<p>4. Give an internal structure of the human eye. Explain the optics of vision. How can you correct the vision defects like myopia and hyperopia. (3+3+4=10)</p>	3+3+4=10
	<p>5. Explain the renal function with respect to glomerular filtration, tubular secretion and tubular reabsorption. (10)</p>	10
	<p>6. Why does Nitrogen fixation require anaerobic conditions? Describe the structure of the key enzyme involved in nitrogen fixation. What are the important genes responsible for root nodule formation?</p>	3+4+3=10
	<p>7. Name two growth retardant hormones. Describe triple response. What is the role of different phytohormones in the winter and spring season?</p>	2+3+5=10
	<p>8. What is kranz anatomy? Briefly describe the CAM cycle with a flow chart. Describe in detail the mechanism of Photorespiration in plants and the enzymes involved in it.</p>	2+3+5=10
	<p>9. Where does light reaction occur in chloroplast? Represent Z scheme with a flowchart. Describe in brief the process of CO₂ fixation in C₃ Cycle.</p>	1+4+5=10