THE UNIVERSITY OF BURDWAN

B. Sc. Semester I (Honours) Theory Examination, 2020 (CBCS)

SUBJECT: PHYSIOLOGY

Paper: CC1 (Cellular Basis of Physiology)

Time: 2 Hours **Full Marks: 40**

The figures in the right hand margin indicate full marks
Candidates are required to give their answers in their own words as far as practicable.

Examinees are instructed to submit the scanned copies/photographs of their answer scripts within 30 minutes after the completion of examination

Answer any **eight** questions of the following: **(5X8) =40**

1. Mention the structure and importance of tight junctions. (5)
2. How are lysosomes formed? Mention any two functions of lysosomes. (5)
3. What are HeLa cells? Why is the use of HeLa cells more advantageous over other human cells in scientific research? (5)
4. Write the significance of the 'S phase' of the cell cycle. Mention what happens if there is loss of control of cell cycle? (5)
5. In which phase of meiosis crossing over occurs? Describe how meiosis produces genetic diversity? (5)
6. How is aging different from senescence? Mention how aging can be delayed. (5)
7. Explain 'uniport', 'symport' and 'antiport' citing examples of each. (5)
8. Give a brief outline of the fluid mosaic model of plasma membrane with a neat diagram. (5)
9. Mention the structure and function of F0-F_1 particles in mitochondria. (5)
10. State the factors affecting membrane asymmetry. How does membrane asymmetry affect its function? (5)