Seat No. : _____

JB-105

January-2021

B.Sc., Sem.-III
202 : Biochemistry
(Cell Biology and Physiology)

Time : 2 Hours] **[Max. Marks : 50**

Instructions : (1) All questions in Section-I carry equal marks.
(2) Attempt any **THREE** questions in Section-I.
(3) Question No. **9** in Section-II is Compulsory.
(4) Illustrate your answers with neat diagrams wherever necessary.

Section-I

Attempt any **THREE** :

1. Discuss structure, composition and functions of Mitochondria. **14**

2. (A) Discuss different types of Lysosomes. **7**
   (B) List important differences between a Prokaryotic and Eukaryotic cell. **7**

3. (A) Write a brief note on Glial cells. **7**
   (B) Explain transmission of Nerve Impulse. **7**

4. (A) Discuss the sliding mechanism theory of muscle contraction. **7**
   (B) Explain Bone remodeling. **7**

5. Name the Pancreatic hormones and discuss each of them in detail. **14**

6. (A) Draw the structure and discuss briefly the functions of Vitamin C. **8**
   (B) Name the dietary sources, deficiency, disease, coenzyme forms and state any two roles of Niacin. **6**

7. Draw a labelled diagram of structure of Heart. Explain Blood Pressure. **14**

8. (A) Discuss Cardiac cycle. **8**
   (B) Write a brief note on factors affecting heart rate. **6**

Section-II

Attempt any **EIGHT** : (**All** questions are of **1** mark each) **8**

9. (1) Name the two processes involved in cell fractionation.

(2) Draw and label a chloroplast.

(3) State one important role of Cell wall.

(4) Write an important role of Ribosomes.

(5) Define Action potential.

(6) What are Acetylcholine and Norepinephrine ?

(7) Name two proteins of Muscles.

(8) Name the Bone cells.

(9) Name the two mechanisms of Hormone action.

(10) Write the deficiency disease of Vitamin B1.

(11) Write the dietary sources of Vitamin B12.

(12) Name the Thyroid hormones.

(13) Name the two types of circulation.

(14) What is normal stroke volume and minute volume of a healthy adult ?

(15) Draw and label ECG pattern of a healthy adult.

(16) Name the junctional tissues.