

QP Code:103114

Reg. No.:.....

**PG Degree Regular/Supplementary Examinations in Physiology
(MD) July 2023**

Paper III - Physiological Chemistry, Biophysics and Radiation Biology

Time: 3 hrs

Max marks:100

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw table/diagrams/flow charts wherever necessary*

Essay:

(20)

1. Explain the molecular mechanisms involved in insulin synthesis and secretion in beta cells. Also describe the molecular mechanisms at the target tissues in response to insulin.

Short essays:

(8x10=80)

2. Genesis of resting membrane potential of nerve.
3. Principle of measurement of various body fluid compartments.
4. Classify neuro-muscular blockers. Explain their mechanism of action.
5. Explain pressure-resistance-flow relationship.
6. Explain any two molecular basis of micro vascular and macro-vascular complications of diabetes mellitus.
7. Significance and application of Rheobase and Chronaxie.
8. Cochlear receptor potentials.
9. Incretin effect in healthy and diabetic individuals.
