

**PG Degree Supplementary Examinations in Physiology (MD)**  
**July 2025**

**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. Compare and contrast the molecular basis of muscle contraction & relaxation in skeletal and smooth muscle fibres.

**Short essays:**

**(8x10=80)**

2. Role of T cell lymphocytes in immunity.
3. Up and down regulation of receptors in health and disease.
4. Patch clamp technique.
5. Renal function tests.
6. Role of G proteins in signal transduction.
7. Visual evoked potentials.
8. Gibb's Donnan effect.
9. Antioxidants and its effect in ageing.

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