

**QP Code:103114**

**Reg. No.:.....**

**PG Degree Supplementary Examinations in Physiology (MD)  
November 2021**

**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. Discuss the relation between the muscle length, tension and velocity of contraction in skeletal muscle.

**Short essays:**

**(8x10=80)**

2. Action potentials in auditory nerve fibers and mechanism of sound transmission.
3. Physiology of language and its disorders.
4. Describe the muscle spindle and its functions. Add a note on physiological tremor.
5. Law of Laplace and its applications in physiology.
6. Effect of ultraviolet rays.
7. Physiological challenges in weightlessness.
8. Application of Bernoulli's principle in dynamics of blood flow.
9. Define metabolic rate and factors affecting it. Add a note on basal metabolic rate

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