

QP Code: 103383

Reg. No.....

**First Year M.Sc. MLT Degree Supplementary Examinations December 2025
(Biochemistry)**

Paper III - Vitamins and Hormones

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*

Essays:

(10x10=100)

1. Explain in detail the biochemical role of Vitamin K. Add a note on Vitamin K antagonists. (7+3)
2. Name the sulphur containing vitamins. Write in detail the coenzyme role and deficiency manifestations of any one of them. (1+5+4)
3. Discuss in detail the hormonal regulation of sodium and water balance.
4. Explain in detail the mechanism of action and biochemical role of glucagon. (5+5)
5. Describe the diagnostic tests for hormonal disorders of thyroid gland.
6. Name the gonadal hormones. Outline the synthesis and clinical significance of estrogen. (1+4+5)
7. Enumerate the hormones in proopiomelanocortin (POMC) peptide family. Write in detail the biochemical role and clinical significance of any one of them. (1+5+4)
8. Discuss in detail insulin signaling pathways.
9. Describe the mechanism of action and metabolic role of parathyroid hormone. (5+5)
10. Discuss the degradation of catecholamines. Enumerate the methods of determination of urinary VMA (VanillylMandelic Acid). Add a note on the clinical significance of VMA. (4+2+4)
