

QP Code: 101502

Reg. No.:.....

**D.M. (Medical Gastroenterology) Degree Supplementary Examinations
October 2025**

Paper I – Basic Sciences

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. Describe the cellular and molecular mechanisms of intestinal epithelial barrier function. Discuss how barrier dysfunction contributes to the pathogenesis of Inflammatory Bowel Disease (IBD).

Short essays:

(8x10=80)

2. Zenker's diverticulum
3. Gastrointestinal manifestations of systemic sclerosis
4. Molecular basis of colorectal carcinogenesis: chromosomal instability, microsatellite instability, and epigenetic pathways
5. Role of tight junction proteins in intestinal physiology
6. Gut-associated lymphoid tissue (GALT) and mucosal immunity
7. Transporters involved in intestinal absorption of glucose, bile acids, and electrolytes
8. Physiology of portal blood flow and its alteration in portal hypertension
9. Molecular basis of drug metabolism in liver: Phase I and Phase II reactions
