



School of Postgraduate Studies

Entrance Test Examination (TOS)

PhD (Medical Genetics)

S. No	Topics and Subtopics
1	Structure and Function of Genes <ul style="list-style-type: none"> • Structure of DNA, RNA and Proteins • DNA Replication, Transcription and Translation • Gene expression
2	Transmission Genetics <ul style="list-style-type: none"> • Mendelian Genetics (Classic Inheritance) • Non-Classic Inheritance (Mitochondrial, Genomic Imprinting, Trinucleotide Repeat disorders) • Inborn errors of Metabolism (Biochemical Genetics)
3	Molecular Genetics <ul style="list-style-type: none"> • Mutations and DNA repair • Genetic Testing and Screening • PCR, Sequencing
4	Clinical Cytogenetics <ul style="list-style-type: none"> • Chromosomal disorders showing Structural abnormalities • Chromosomal disorders showing Numerical abnormalities • Karyotyping, FISH
5	Population Genetics and Genetic Diversity <ul style="list-style-type: none"> • Linkage and Crossing Over • Single Nucleotide Polymorphisms
6	Genetic Engineering/Therapeutics <ul style="list-style-type: none"> • Gene editing • Gene therapy