

NATIONAL INSTITUTE OF TRANSPORT

**FACULTY OF INFORMATICS AND TECHNICAL EDUCATION (FoITE)
DEPARTMENT OF EDUCATION AND MATHEMATICS (EM)
SECOND SEMESTER
ACADEMIC YEAR - 2025/2026
GROUP ASSIGNMENT PRESENTATIONS**

MODULE CODE	: MTU 07308
MODULE NAME	: MATHEMATICAL STATISTICS
PROGRAMME	: HDIT II AND HDCS II
SUBMISSION DATE	: 26th January, 2025 11:00 HRS

Question one

With examples, describe the marginal and conditional Chebyshev's inequality.

Question Two

- (a) Describe stochastic convergence.
- (b) State the laws of large numbers (Weak and Strong).

Question Three

- (a) Prove the stochastic convergence of s^2 to σ^2 .
- (b) Describe the Central limit theorem.

Groups should contain not more than ten individuals.