

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

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| MODULE CODE | : MTU 07308 |
| MODULE NAME | : MATHEMATICAL STATISTICS |
| PROGRAMME | : HDIT II AND HDCS II |
| SUBMISSION DATE | : 26 th 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.