Strathmore
UNIVERSITY

STRATHMORE INSTITUTE OF MATHEMATICAL SCIENCES (SIMS)
MASTER OF SCIENCE IN DATA SCIENCE AND ANALYTICS
ASSIGNMENT 2
DSA 8205: OPTIMIZATION FOR DATA SCIENCE

DATE: December, 2024 **TIME**: 3 weeks

(i) What is an assignment problem? Describe how to formulate an assignment problem.

(ii) Explain what a balanced assignment problem means.

(iii) Use Hungarian method to solve both a maximization and minimization cases of an assignment problem. Note, get your own examples to solve.

(iv) Explain with a help of an example how to obtain an optimal solution to an assignment problem.

(v) Clearly describe a transportation problem and explain how to formulate a transportation problem.

(vi) Explain three main methods of solving transportation problem.

(vii) Explain with a help of an example how to obtain an optimal solution to a transportation problem.

(viii) Describe what a network problem entails. Explain the rules involved in formulating a network problem.

(ix) How do we get a critical path and project completion time. Explain how to obtain the three floats of a project and their significance. Use an example.

END