



**NATIONAL OPEN UNIVERSITY OF NIGERIA
FACULTY OF SOCIAL SCIENCES
DEPARTMENT OF ECONOMICS
2021_1 EXAMINATION**

COURSE TITLE: OPERATIONS RESEARCH

COURSE CODE: ECO 314

UNITS: 3

TIME ALLOWED: 3 HOURS

INSTRUCTION: ATTEMPT QUESTION ONE (1) AND ANY OTHER THREE (3) QUESTIONS

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| 1a. Explain the scope of operations research in financial management | (4 marks) |
| 1b. Explain briefly some areas of management where operations research techniques have been successfully applied | (21 marks) |
| 2a Trace the history and evolution of operation research | (9 marks) |
| 2b. Explain the research phase of the scientific method of operations research | (6 marks) |
| 3a. List five (5) different decision making criteria | (2.5 marks) |
| 3b. Explain the five (5) different decision making criteria listed above (in 3a) | (12.5 marks) |
| 4a. Differentiate between a model and modelling | (2.5 marks) |
| 4b. Outline five characteristics of a good model. | (5 marks) |
| 4c. Explain the classification of models by structure. | (7.5 marks) |
| 5a. Describe transportation problem? | (2.5 marks) |
| 5b. List and explain are the major assumptions in using transportation model? | (4.5 marks) |
| 5c. Enumerate the steps in the use of the Vogel's Approximation Method (VAM) | (8 marks) |