


NATIONAL OPEN UNIVERSITY OF NIGERIA
FACULTY OF SOCIAL SCIENCES
DEPARTMENT OF ECONOMICS
2023_2 EXAMINATIONS_

COURSE TITLE: OPERATIONS RESEARCH

COURSE CODE: ECO 314

UNITS: 2

TIME ALLOWED: 2 HOURS

INSTRUCTION: ANSWER ANY THREE (3) QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS

QUESTION ONE

1a. List and explain the assumptions of linear programming model. (15 Marks).

1b. What are the four (4) general procedures for setting up a transportation model ? (8.5 Marks).

QUESTION TWO

2a. Identify and discuss the three (3) time estimates in Programme Evaluation and Review Technique (PERT). (10 Marks).

2b. List out the four (4) major components that constitute risk and uncertainty in decision making. (4.5 Marks).

2c. List out the six (6) examples of qualitative models presented by Akingbade (1995) (6 Marks).

2d. Identify three (3) factors a factory production schedule will take into account (3 Marks)

QUESTION THREE

3a. List out the three (3) advantages of decision trees. (9 marks)

3b. Identify and discuss the three (3) processes of analysing decision (Phases of Decision Analysis) (8.5 Marks).

3c. Lucey (1988) as quoted by Dixon – Ogbechi (2001) identified three (3) qualitative decision techniques. List them. (6 Marks)

QUESTION FOUR

4. (i) What are the four (4) similarities between transportation problem and assignment problem? (9.5 Marks).

(ii) List out the seven (7) differences between transportation problem and assignment problem? (14 Marks).