NATIONAL OPEN UNIVERSITY OF NIGERIA
PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESS WAY, JABI – ABUJA
FACULTY OF MANAGEMENT SCIENCES
DEPARTMENT OF BUSINESS ADMINISTRATION
2021_2 EXAMINATION

COURSE CODE: BUS406   **CREDIT UNIT: 3**
COURSE TITLE: ANALYSIS FOR BUSINESS DECISIONS
TIME ALLOWED: 2 ½ HRS
INSTRUCTIONS:
1. Attempt Question One (1) and any other three (3) questions
2. Question 1 carries 25 marks, while the other questions carry 15 marks each.
3. Present all points in coherent and orderly manner

1a. Formulate a linear programming model for the transportation problem.   **15Marks**

	Ofada	Ewekoro	Abeokuta	Supply
Ikeja	5	8	2	250
Yaba	4	3	7	100
Alimosho	9	6	5	450
Oshodi	3	4	6	300
Demand	600	200	300	

1b. Discuss any five (5) factors to be considered in inventory control**.   10Marks**

2. A man planning for the coming winter during summer time, has a home heating tank which has capacity for 200 gallons. Over the years, he observed that the heating oil consumption depends on the severity of the winter as follows Mild winter: 100 gallons, Average winter: 150 gallons and Severe winter: 200 gallons.

The price of oil also seems to fluctuate with severity of the winters as follows:

Mild winter: #1 per gallon

Average winter: #1.50 per gallon

Severe winter: #2 per gallon

He has to decide whether to stockpile 100 gallons, 150 gallons or 200 gallons at the present price of #1. If he stockpiles more than he needs, the unused will be wasted since he will be moving next summer. What is the best decision to take?   **15Marks**

3a. Highlight the key areas where operations research is important in Financial Management. **10Marks**

3b. Explain the concept of entropy of a system?   **5Marks**

4. Trace the history and development of operations to the founding fathers of the field of management.   **15Marks**

5a. Briefly discuss areas of Industrial Application of Linear Programming.   **10Marks**

5b. Differentiate between an assignment and a transportation problem.   **5Marks**