

## 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

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