



NATIONAL OPEN UNIVERSITY OF NIGERIA
14/16 AHMADU BELLO WAY, VICTORIA ISLAND, LAGOS
SCHOOL OF MANAGEMENT SCIENCES
SEPTEMBER/OCTOBER 2015 EXAMINATION

Course Code: ENT321 **Credit Unit:** 2
Course Title: Quantitative Methods for Business Decision
Time Allowed: 2 hours

Instruction:

Attempt question one and any two questions of your choice. Question one carries 30 marks while others carry 20 marks each. Present your answer in coherent and orderly manner.

Questions

1. A. NOUN Waters Ltd is in the business of manufacturing and distributing table water. The company has decided to produce 2 litre type of table water. If it cost #45 to produce a unit of table water, what should be the best price that this unit of table water should be sold given the selling price of #50, #60, #70, #90, and #100 per unit with the market research prediction that 7000, 6000, 5000, 3000, and 2000 units would be sold respectively? Show your pricing alternatives in tabular format.

B. Suppose for a particular inventory, there exists: (a) the weekly minimum, normal and maximum usage of 2450, 3500, and 5500 respectively; (b) the lead time which vary between 4 and 10 weeks (average = 7 weeks); and, (c) the normal ordering quantity (EOQ) of 75,000. You are required to determine:
 - i. re-order level;
 - ii. minimum stock level; and
 - iii. maximum stock level
2. A. Solve for x in $3x^2 - 14x + 8 = 0$

B. Outline the general approach to the development of mathematical models of economic decision.
3. The Managing Director of Royal Taste Fast Food has decided to borrow a short-term loan to buy some equipment needed by the business. The company has current asset of N820,000 and current liabilities of N40,000. If the company's current ratio must not be less than 3.5, how much can the Managing Director borrow?
4. You are required to find the median share price giving the following table on the share prices of a quoted company over a period of 30 days.

Price in Naira	Number of days
-------------------	-------------------

100 - 104	2
105 - 109	3
110 - 114	4
115 - 119	6
120 - 124	8
125 - 129	4
130 - 134	2
135 - 139	1
	$\Sigma f = 30$

5. a. Define the following measures of variation listed below:
- range
 - standard deviation
 - coefficient of variation
- b. Solve for the unknown in the linear equation : $25x - 10 = 10x$