



NATIONAL OPEN UNIVERSITY OF NIGERIA
91, Cadastral Zone, NnamdiAzikiwe Express Way, Jabi-Abuja
FACULTY OF MANAGEMENT SCIENCES
2023_1 POP EXAMINATION

Course Code: ENT 704

Course Title: QUANTITATIVE METHODS

Credit Unit: 2

- Instructions:**
- 1. Indicate your Matriculation Number clearly**
 - 2. Attempt Question 1 and any other two (2) questions**
 - 3. Question 1 is compulsory and carries 30 marks while the other 2 questions carry 20 marks each.**
 - 4. Present all your points in coherent and orderly manner**

Time Allowed: 2 Hours

Question 1

Identify a problem in your organization and in a **short cycle process** formulate a case study and carefully outline the stages involved in analyzing the case. **[30 Marks]**

Question 2

- a) List and discuss the various types of inventories. **[10 Marks]**
- b) Critically examine the issues that necessitate maintaining inventory **[10 Marks]**

Question 3

A supplier has to supply 14000 units of a product per year to his customer. The demand is fixed and known and the shortage cost is assumed to be infinite. The inventory holding cost is N 0.40k per unit per month, and the ordering cost per order is N650.

Determine:

- i. The optimum lot size q_0
- ii. Optimum scheduling period t_0
- iii. Minimum total variable yearly cost.

[20 Marks]

Question 4

- a) Identify and briefly explain by choosing a project of your choice, the FIVE project management process areas that apply to most projects. **[15 Marks]**
- b) Differentiate between PERT and CPM **[5 Marks]**