



NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF ENGINEERING

DEPARTMENT OF FIBRE AND POLYMER MATERIALS ENGINEERING

FACTORY PLANNING AND MANAGEMENT

TFE 3203

Second Semester Examination Paper

March 2025

This examination paper consists of 3 pages

Time Allowed: 3 hours
Total Marks: 100
Special Requirements: N/A
Examiner's Name: Mr. L.K. Ncube

INSTRUCTIONS

1. Answer **ALL** Questions in Section A and **ANY THREE** Questions in Section B.
2. The first fifteen minutes should be spent reading the question paper and making notes.
3. **Do not** open your answer sheet until told to do so.
4. Marks will be awarded for skill in appreciating the scope of questions, clarity of argument and conciseness of presentation as well as for the knowledge displayed by the candidate.

MARK ALLOCATION

QUESTION	MARKS
1	40
2	20
3	20
4	20
5	20

SECTION A

(Answer **ALL** Questions- **TOTAL 40 Marks**)

QUESTION 1

- a. Define the following terms, as used in a factory:
- (i) Effective [2 Marks]
 - (ii) Efficiency [2 Marks]
 - (iii) Bill of materials [2 Marks]
 - (iv) Economic order quantity [2 Marks]
 - (v) Work Assignment [2 Marks]
 - (vi) Workload [2 Marks]
- b. List the five main functions of management? [5 Marks]
- c. Explain the importance of time management in a factory and give an example of a time management tool used by managers. [8 Marks]
- d. As a Factory Manager, briefly discuss how you would decide whether or not to introduce shift work [15 Marks]

SECTION B

(Answer **ANY THREE** Questions- **TOTAL 60 Marks**)

QUESTION 2

Write brief notes explaining the following plant location models

- a. Scoring model. [10 Marks]
- b. Center of gravity model. [10 Marks]

QUESTION 3

List and explain any five factors you would consider when deciding where to locate a manufacturing plant. [20 Marks]

QUESTION 4

Describe the group technology layout system and outline its merits and demerits. [20 Marks]

QUESTION 5

Define work stress and discuss the causes of work-related stress and the different organizational approaches to managing it. **[20 Marks]**

END OF EXAMINATION QUESTION PAPER