



MURANG'A UNIVERSITY OF TECHNOLOGY

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF MECHANICAL ENGINEERING

UNIVERSITY ORDINARY EXAMINATION

2023/2024 ACADEMIC YEAR

**FOURTH YEAR FOURTH SEMESTER EXAMINATION FOR BACHELOR
OF TECHNOLOGY IN MECHANICAL ENGINEERING**

EMT 416 – INDUSTRIAL ENGINEERING

DURATION: 2 HOURS

INSTRUCTIONS TO CANDIDATES:

1. Answer question one and any other two questions.
2. Mobile phones are not allowed in the examination room.
3. You are not allowed to write on this examination question paper.

SECTION A: ANSWER ALL QUESTIONS IN THIS SECTION

QUESTION ONE (30 MARKS)

- a. Outline five contributions of scientific management. (5marks)
- b. Describe five objectives of inventory control in an organization. (5marks)
- c. Explain five factors that influence a plant layout. (5marks)
- d. State five advantages derived from bureaucratic system. (5marks)
- e. Explain four important factor of carrying out method study. (4marks)
- f. State and explain three types of manufacturing systems. (6marks)

SECTION B – ANSWER ANY TWO QUESTIONS IN THIS SECTION

QUESTION TWO (20 MARKS)

- a. State and explain four functions of management. (8marks)
- b. State two principles of administrative management according to Nanori's Fayol's. (2marks)
- c. List five characteristics of a good manager. (5marks)
- d. Outline five types of conveyors used in material handling. (5marks)

QUESTION THREE (20 MARKS)

- a. State and explain four types of inventories. (8marks)
- b. Describe systematically the process of carrying out work study. (8marks)
- c. State four factors influencing plant langotion. (4marks)

QUESTION FOUR (20 MARKS)

- a. Outline six objectives of production planning and control. (6marks)
- b. Define the following terms:
 - i. Work study
 - ii. Method study
 - iii. Work measurement. (3marks)
- c. State and explain four principles of plant layout. (8marks)
- d. List three functions of Top Management. (3marks)