



TECHNICAL UNIVERSITY OF MOMBASA

SCHOOL OF BUSINESS

DEPARTMENT OF MANAGEMENT SCIENCE

UNIVERSITY EXAMINATION FOR:

BACHELOR OF SCIENCE IN MARITIME MANAGEMENT (COMMERCIAL)

BPM 4102: PRINCIPLES OF OPERATIONS AND PRODUCTION

MANAGEMENT

END OF SEMESTER EXAMINATION

SERIES: DECEMBER 2016

TIME: 2 HOURS

DATE: Pick Date Dec 2016

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of FIVE questions. Attempt question ONE (Compulsory) and any other TWO questions

Do not write on the question paper.

Question ONE (Compulsory)

- a) Explain with an appropriate example, how a materials requirement planning (MRP) system works. (10 marks)
- b) Explain the role and responsibilities of an operations manager within an organization. (10 marks)
- c) State the reasons for keeping inventories in an organization (10 marks)

Question TWO

- a) Using a product of your choice, examine the content of the design process. (14 marks)
- b) State the factors affecting productivity (6 marks)

Question THREE

- a) Consider the life cycle of a product from introduction to maturity to decline. What kind of process (job shop, batch process, mass, continuous) would be appropriate at each stage and why (12 marks)
- b) Explain the objectives of production management (8 marks)

Question FOUR

- a) Explain the key concepts of operations management using a schematic diagram (15 marks)
- b) State the characteristics of production system (5 marks)

Question FIVE

- a) Explain the concept of JIT. How does it help the manufacturing system to improve productivity? (15 marks)
- b) Find the economic order quantity from the following data: (5 marks)

Average annual demand	= 30,000 units
Inventory carrying cost	= 12% of the unit value per year
Cost of placing an order	= 70\$
Cost per unit	= 2\$