

MURANG'A UNIVERSITY COLLEGE

A constituency College of Jomo Kenyatta University of Agriculture and Technology

School of Business and Commerce

Supplementary University Examinations

Bachelor of Purchasing and Supplies Management

YEAR OF STUDY: SECOND

COURSE CODE: HPS 2209 OPERATIONS MANAGEMENT

Date:

Time: 2 hrs

INSTRUCTION: ANSWER QUESTION ONE AND ANY OTHER TWO QUESTIONS

Question one

Operations management focuses on specific capabilities that give an organization competitive advantage. Using well-articulated examples discuss the four operational priorities. (6 Marks)

Alpha Manufacturing Incorporation has an opportunity to improve its production and operations processes. The following table gives the activities and other relevant data for the project.

Activity	Immediate Predecessor	Normal time (days)	Crash time (day)	Normal Cost(t)	Crash Cost(t)
A	-	4	3	600	800
B	A	2	2	400	400
C	B	5	4	750	900
D	C	7	5	400	600
E	B	7	6	700	1000
F	E	2	1	500	650
G	D, F	5	4	600	850
H	E	6	2	500	900
I	H	8	3	600	800

J	G, I	7	6	670	850
K	J	5	3	640	650

In addition to the above cost figures there are \$80 indirect costs per day during the project

- i. Using normal duration determine the total overall cost for the project and its duration (6mk)
- ii. Find the project duration that will minimize the total cost of the project (10 marks)

Operations management focuses on specific capabilities that give an organization a competitive advantage over its competitors'. Discuss the four major operations priorities supporting your argument with relevant examples (8 mks).

QUESTION TWO

- a) A company's competitiveness will be affected by its location as it will impact on costs such as for transportation and labour. Assume that Tranzoia County wants to set up soya milk – processing plant.
 - (i) Advise on any three types of facility layouts likely to be adopted by the county (6 mks).
 - (ii) Discuss any four factors to be considered in selecting the facility location (8 mks).
- b) Using well articulated examples describe any three methods for improving product design (6 mks)

QUESTION THREE

- a) The total quality management, just in time and computer integrated manufacturing are the core modules of world class manufacturing that can be adapted to any specific manufacturing industry or enterprise. Using well articulated examples elucidate the above statement (12 mks).
- b) Goods and services share many similarities. They are driven customers and provide value and satisfaction among customers. Describe four major differences between goods and services (8 mks).

QUESTION FOUR

- a) A firm is engaged in the production of three products A, B & C. the maximum capacities of operations per week I, II, & III are 100hrs, 120hrs & 80 hrs respectively. The times required to produce one item in each of the operations are given below

	A	B	C
I	3	1	2

II	1	4	1
III	2	3	0

Profit per unit of A, B, & C are \$10, \$12 & \$8 respectively. Find the optimum production of A, B, & C so as to maximize profit (12 marks)

- b) Waste is considered in the widest sense as any activity which does not add value to the operations. Discuss any five types of waste identified by Toyota and its implications to organization operations (8 mks).

QUESTION FIVE

- a) New product design can provide a competitive advantage by bringing new ideas to the market quickly and satisfying customer needs. in light of the above discuss Idea generation (8mks)
- b) ISO 8402 states that quality is the totality of features and characteristics of the product that bears the ability to satisfy stated or implied needs. Garvin identified five approaches and eight dimensions of quality. Elaborate the statement supporting your argument with relevant examples (12 marks)