

2501/201 2508/201
2502/201 2509/201
2503/201

**INDUSTRIAL ORGANIZATION
AND MANAGEMENT**

Oct./Nov. 2017

Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL

**DIPLOMA IN MECHANICAL ENGINEERING (PRODUCTION OPTION)
(PLANT OPTION)**

DIPLOMA IN AUTOMOTIVE ENGINEERING

DIPLOMA IN WELDING AND FABRICATION

DIPLOMA IN CONSTRUCTION PLANT ENGINEERING

MODULE II

INDUSTRIAL ORGANIZATION AND MANAGEMENT

3 hours

INSTRUCTIONS TO CANDIDATES

You should have the following for this examination:

Answer booklet

Non-programmable scientific calculator

Answer FIVE of the EIGHT questions in the answer booklet provided.

All questions carry equal marks.

Maximum marks for each part of a question are indicated.

Candidates should answer the questions in English.

This paper consists of 4 printed pages.

**Candidates should check the question paper to ascertain that all
the pages are printed as indicated and that no questions are missing.**

7)

(a) Outline six factors that may render a machine obsolete. (6 marks)

1. Technological advancement
2. Change in product design
3. Change in customer requirements

(b) A manufacturer supplies his customers with 1,200 units of a product per year. Inventory carrying cost amounts to Ksh 1.50 per unit per year. The cost set up per run is Ksh 20.00. Find:

- (i) economic order quantity;
- (ii) average number of orders per year;
- (iii) optimum number of orders per year;
- (iv) optimum period of supply per optimum order. (5 marks)

(c) Explain three factors of production. (6 marks)

1. Land
2. Labour
3. Capital

8

(a) Explain four circumstances under which delegation may be appropriate in an organization. (8 marks)

(b) Figure 1 shows a break-even chart. Label the areas represented by the Roman numbers. (7 marks)

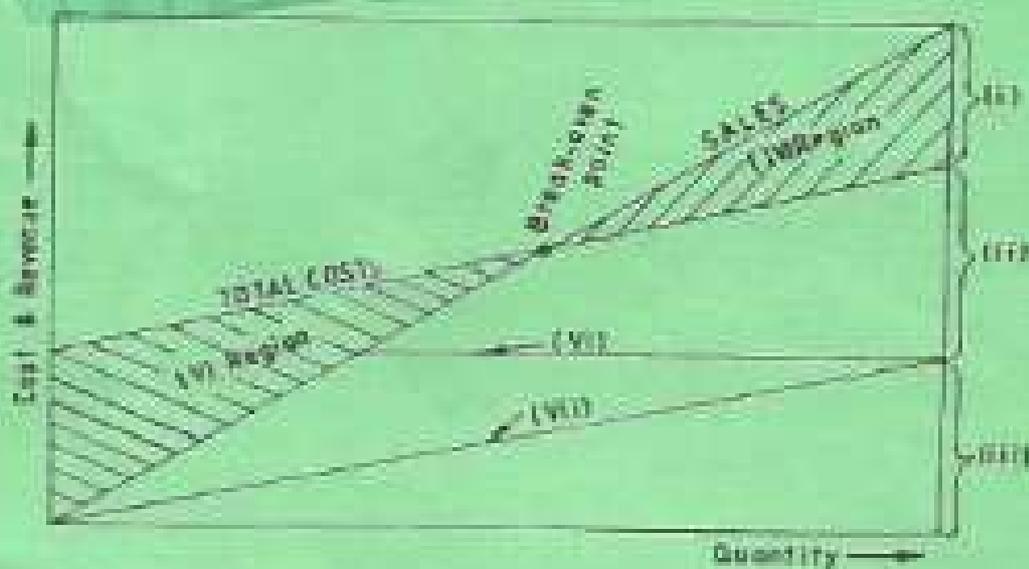


Fig. 1

(c) Outline five features of a bureaucratic organization. (5 marks)

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- 10
1. Explain five factors that may influence the structure of an organization. (10 marks)
2. Outline five advantages of informal organizations. (5 marks)
3. Describe five advantages of Management by Objectives (MBO). (5 marks)
4. Explain four methods used in quality control in production. (8 marks)
5. Outline six advantages of an open office layout. (6 marks)
6. Outline six characteristics of a good filing system. (6 marks)
7. Explain three methods that may be used to appraise employees of an organization. (6 marks)

(b) Table 1 shows the demand and supply schedule for coffee in a market for the month of February 2015.

Table 1

Price (Ksh)	Demand (kg)	Supply (kg)
80	10,000	30,000
60	12,000	25,000
40	14,000	20,000
35	15,000	17,500
30	16,000	15,000
25	18,000	12,500
20	20,000	10,000

- (i) draw the demand and supply curve on the same axis.
- (ii) determine the equilibrium price and quantity from the graph. (10 marks)
- (c) Explain the following documents as used in production planning and control:
- (i) internal delivery note;
- (ii) progress note. (4 marks)

4. Explain four advantages of sourcing employees from within an organization. (8 marks)
5. Explain four benefits that accrue to an organization from an efficient purchasing department. (8 marks)

(c) Distinguish between Gross Domestic Product and Gross National Product. (4 marks)

5. (a) Highlight six benefits of work study in an organization. (5 marks)

- Reduces cost
 - Increases productivity
 - Reduces waste
 - Improves quality
 - Increases safety
 - Improves working conditions

(b) Explain the following work study aids in an organization: (5 marks)

- Micromotion study;
- Memomotion study;
- Flow diagram;

(c) Explain four types of preventive maintenance. (5 marks)

- Time-based
 - Usage-based
 - Condition-based
 - Failure-based

6. (a) Explain the following elements of cost: (5 marks)

- material costs;
- direct expenses;
- labour costs;
- indirect costs.

(b) Table 2 shows symbols of operation as used in work study. Fill in the blank spaces with the appropriate information. (6 marks)

Table 2

Symbol No.	Symbol	Description	Purpose
1		<u>operation</u>	<u>Shows duration of time</u>
2		<u>Transport</u>	<u>Shows route direction</u>
3		---	---
4		<u>Delay</u>	<u>Shows delay in an activity</u>
5		<u>Storage</u>	<u>Shows storage of material</u>
6		---	---

(c) Outline six factors that determine the price of a product. (6 marks)

- Cost of material
 - Labour cost
 - Overhead cost
 - Profit margin
 - Market demand
 - Competition