

2501/201, 2502/201, 2503/201
2508/201, 2509/201
**INDUSTRIAL ORGANIZATION
AND MANAGEMENT**
Oct./Nov. 2019
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

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INSTRUCTIONS TO CANDIDATES

*You should have a Non-programmable scientific calculator for this examination:
Answer **FIVE** of the following **EIGHT** questions in the answer booklet provided.
All questions carry equal marks.
Maximum marks for each part of a question are as 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.

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- 1.
- (a) Outline **four** factors that may cause **employee dissatisfaction** according to Fredrick Herzberg's two factor theory. (4 marks)
 - lack of motivation
 - poor working conditions
 - long working hours
 - long time of working hours
- (b) Identify **four** characteristics of bureaucratic management developed by Max Weber. (4 marks)
 - division of labour
 - mass production
 - good working conditions
- (c) Describe the '**systems approach**' theory of management. (6 marks)
 - etc.
- (d) Explain **three** key issues that are shaping management practice in modern organizations. (6 marks)
 - ~~Democracy~~

- 2.
- (a) Explain the stages involved in the process of management by objectives (MBO). (6 marks)
 - Set of organizational objectives
 - Two levels of objectives to employees
 - Monitor monthly progress and performance
 - Performance feedback
 - Performance appraisal
 - Performance improvement
- (b) (i) Define the term 'span of control'. (5 marks)
 - The ability of a manager to have control to workers
- (ii) Explain **four** factors that influence span of control in an organization. (9 marks)
 - Qualitative and Quantitative
 - Degree of specialization
 - Trust and faith
 - Use of communication technology
 - Mass production
- (c) Highlight **five** strategies that managers may apply in order to make delegation **effective**. (5 marks)
 - (Negative attitude towards workers) - Nature of work
 - (Failure to trust the employees) - relevant criteria on workers
 - (Willingness to make other mistakes) - poor lack of time of supervision
 - (Poor present) - Lack of subordinates

- 3.
- (a) Explain the following types of tests used during selection of employees. (4 marks)
 (i) intelligence tests;
 (ii) personality tests.
- (b) Highlight **four** benefits of systematic training to an organization. (4 marks)
- (c) An organization intends to carry out a Training Needs Assessment (TNA) for its employees. Explain **four** methods that may be used to carry out the exercise successfully. (8 marks)
- (d) Explain the following approaches of employee performance appraisal: (4 marks)
 (i) objective;
 (ii) subjective.

- (a) (i) Outline **four** advantages of preventive maintenance. (4 marks)
 - ensures continuous flow of goods and services
 - economy of maintenance
- (ii) Identify **four** activities involved in a preventive maintenance system. (8 marks)
 - minimize preventive activities
 - on an organized set of goals
 - contribute industry harmonization
 - motivation to workers
 - establishment of mechanism for administration
- (b) (i) Explain the meaning of 'condition-based' maintenance.
 (ii) Explain how electronic instruments may be used to carry out condition based maintenance. (4 marks)
 - fan to repair

- 1.
- (a) Outline **four** factors that may cause employee dissatisfaction according to Fredrick Herzberg's two factor theory - *lack of motivation, poor working conditions, long time of working hours* (4 marks)
- (b) Identify **four** characteristics of bureaucratic management developed by Max Weber. *division of labour, mass production, good working conditions* (4 marks)
- (c) Describe the 'systems approach' theory of management. *etc* (6 marks)
- (d) Explain **three** key issues that are shaping management practice in modern organizations. *Democracy* (6 marks)

- 2.
- (a) Explain the stages involved in the process of management by objectives (MBO). *Set of organizational objectives, task divide of objectives to employees, constant monitoring progress and performance, performance evaluation, providing feedback, performance appraisal, and employee self-empowerment* (6 marks)
- (i) Define the term 'span of control'. *is the ability of a manager to have control to workers* (6 marks)
- (ii) Explain **four** factors that influence span of control in an organization. *Qualitative and Quantitative, degree of specialization, trust and faith, use of communication technology, mass production in* (9 marks)

- (c) Highlight **five** strategies that managers may apply in order to make delegation **effective**. *Good* (5 marks)
- 3.
- (a) Explain the following types of tests used during selection of employees.

- (i) intelligence tests;
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- (b) Highlight **four** benefits of systematic training to an organization. (4 marks)

- (c) An organization intends to carry out a Training Needs Assessment (TNA) for its employees. Explain **four** methods that may be used to carry out the exercise successfully. (8 marks)

- (d) Explain the following approaches of employee performance appraisal:

- (i) objective;
- (ii) subjective! *ensuring continuous flow of goals and objectives, responsibility of* (4 marks)

- (a) (i) Outline **four** advantages of preventive maintenance. *ensuring continuous flow of goals and objectives, responsibility of* (4 marks)
- (ii) Identify **four** activities involved in a preventive maintenance system. *minimize preventive activities on the original set of goals, contribute industry human resources to establish maintenance for equipment* (8 marks)
- (b) (i) Explain the meaning of 'condition-based' maintenance. *feasible to repair*
- (ii) Explain how electronic instruments may be used to carry out condition based maintenance. (4 marks)

(c) Table 1 shows the results of a time study exercise.

Table 1

ELEMENT	TIME IN MINUTES					
	1	2	3	4	5	6
A	3.6	3.4	2.2	3.5	3.8	3.9
B	6.8	7.2	7.0	9.5	6.9	7.1
C	4.5	4.9	4.8	4.9	4.7	4.4

Fatigue and personal allowances are estimated at 20% of normal time while the rating factor is 120%. Any observation which significantly deviates from the average should be ignored. Determine the:

- (i) average observed time for each element and the whole job.
 (ii) standard time for the job. (8 marks)

5. (a) (i) Outline **four** functions of stores department in an organization.
 (ii) Highlight **four** methods of curbing pilferage in a stores department. (8 marks)

- (b) Explain **three** benefits of de-linking the purchasing department from the stores department. (8 marks)

- (c) Explain **three** methods of purchasing used by organizations when procuring supplies. (6 marks)

6. (a) Describe the following stages of product design and development.

- (i) prototypes development.
 (ii) preliminary design. (4 marks)

- (b) Outline **five** features of batch production. (5 marks)

- (c) Explain the need for production planning and control in an industrial organization. (6 marks)

- (d) (i) Identify the most appropriate type of plant layout used for mass production.
 (ii) Outline **four** disadvantages of this type of layout in (i) above. (5 marks)

Combination type of layout
 Product or line layout

- To help the company to supply good quality products
- To obtain an uninterrupted production
- To achieve the production objectives

Job production
 - use of labour
 - high cost
 - long lead time
 - demand is irregular
 - most of materials is permitted

5. (a) Explain **four** functions of the marketing department in an organization. (8 marks)
- (b) Describe the steps that should be followed in the process of control as a function of management. (8 marks)
- (c) List **four** documents that may be raised by a dispatcher during production control. (4 marks)
6. (a) A plant produces 1000 units of product per hour on a machine. Its material cost is Ksh. 3,750, labour cost is Ksh. 2,450 and the direct expenses are Ksh. 800. The factory overhead cost is 150% of the total labour cost and office-overhead is 30% of the total factory cost. If the selling price of each unit is Ksh. 13.00, determine whether the management is making a loss or a gain and by what amount. (12 marks)
- (b) Explain **four** benefits that an organization may derive from decentralising decision making authority. (8 marks)
7. (a) List **four** methods of sales promotion that may be used in an organization. (4 marks)
- (b) Certain management practices lead to industrial disputes in an organization. Explain **five** such practices. (10 marks)
- (c) Outline **six** objectives of production planning and control. (6 marks)
8. (a) Explain the clauses that should be contained in the memorandum of Association of a public limited company. (10 marks)
- (b) Outline **four** criteria that may be used to determine which orders receive priority during scheduling. (4 marks)
- (c) The stores supervisor at Malik Limited received inventory items but has not received any request to issue the items for sometime. Outline the possible causes of this situation. (6 marks)

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7. (a) Define the following terms as used in Economics:
- (i) wealth.
 - (ii) opportunity cost. (4 marks)
- (b) (i) State the law of demand.
(ii) Highlight **four** assumptions of the law of demand. (6 marks)
- (c) With the aid of examples, discuss the factors that may influence the location of industries in a country. (10 marks)
8. (a) Explain the following types of costs in an industry, giving one example in each case:
- (i) factory overheads;
 - (ii) prime costs. (4 marks)
- (b) The following information relates to a product:
- variable costs = Ksh 150 per unit;
fixed costs = Ksh 180,000;
selling price = Ksh 450 per unit.
- Determine:
- (i) contribution margins;
 - (ii) break-even sales volume. (4 marks)
- (c) (i) Describe the features of an open office.
(ii) Outline **four** advantages of such an office layout. (6 marks)
- (d) Explain **three** benefits of office machines to a company. (6 marks)

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