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INDUSTRIAL ORGANIZATION AND MANAGEMENT

Oct./Nov. 2021

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 following EIGHT questions.

All questions carry equal marks.

Maximum marks for each part of a question are as shown.

Candidates should answer the questions in English.

5. (a) (i) Highlight four measures that a manager may take to minimize industrial disputes in an organization. (8 marks)
- (ii) Outline four disadvantages of internal sources of labour in an organization. (8 marks)
- (b) Explain four limitations of Management by Objectives (MBO). (8 marks)
- (c) List four benefits of office automation in an organization. (4 marks)
7. (a) Outline four barriers to effective decision making by a manager in an organization. (4 marks)
- (b) Explain the following types of costs incurred in a company: (5 marks)
- variable
 - margin
 - prime
- (c) A manufacturing firm incurred a fixed cost of Ksh 3,000. The variable cost per unit was Ksh 20 and the selling price was Ksh 50. Determine the break even level of output. (4 marks)
- (d) Highlight three advantages associated with breakdown maintenance in a factory. (6 marks)
- (e) Explain four difficulties encountered when computing the National Income. (8 marks)
- (f) Outline four features of a good performance appraisal system. (4 marks)
- (g) Utilise four reasons for carrying out manpower planning in an industrial organization. (4 marks)
- (h) List four elements of stock control. (4 marks)

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- (c) A time study of a job operation involves four elements: A, B, C and D as shown in Table 1. The operation was studied over five cycles which are recorded in minutes.

Table 1

ELEMENT	CYCLES				
	1	2	3	4	5
A	2.0	2.1	2.2	2.4	2.0
B	2.6	2.1	2.4	2.6	2.2
C	4.2	4.8	5.2	5.0	5.4
D	2.6	2.1	2.4	2.8	3.0

Additional information:

- element C is a machine element;
- performance rating is 115 and standard rating is 100;
- total allowance is 18%.

Determine the:

- (i) basic time for the entire job;
- (ii) standard time.

(12 marks)

- (5) (a) Explain each of the following terms as used in work time measurement:

- (i) performance rating;
- (ii) qualified worker.

(4 marks)

- (b) Explain five requirements of a good plant layout.

(11 marks)

- (c) An organization has an annual demand of 85,000 kg for a certain material. The cost price per kilogram is Ksh 4,200 and the stock hold cost is 16% per annum of the stock value. Delivery cost per lot is Ksh 8,000.

Calculate the:

- (i) economic order quantity (EOQ);
- (ii) number of orders made in a year.

(8 marks)

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1. (a) Explain each of the following principles of management as proposed by Henri Fayol.
- (i) co-ordination.
 - (ii) planning.
 - (iii) organising.
- (6 marks)
- (b) Explain five benefits of delegation of authority in an organization. (10 marks)
- (c) Outline four disadvantages of an open plan office. (4 marks)
2. (a) Explain three benefits of elasticity of demand for a product. (6 marks)
- (b) Explain four activities carried out in a preventive maintenance system. (8 marks)
- (c) Highlight six uses of an organization chart. (6 marks)
3. (a) Explain each of the following recording techniques used in work study:
- (i) flow process chart;
 - (ii) string diagram.
- (4 marks)
- (b) Explain each of the following types of inventory.
- (i) perpetual inventory;
 - (ii) periodic inventory.
- (4 marks)
- (c) Explain four factors that determine the stock level in an organization. (8 marks)
- (d) Outline four factors that may determine wage levels in an organization. (4 marks)
4. (a) Highlight four benefits of adopting the method study in a factory. (4 marks)
- (b) Explain each of the following terms as used in production planning:
- (i) master schedule;
 - (ii) shop schedule.
- (4 marks)