

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

**INDUSTRIAL ORGANIZATION
AND MANAGEMENT**

June/ July 2023

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 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.

1. (a) Explain **three** disadvantages of centralised stores. (3 marks)
- (b) Explain **four** factors that may affect the stock level of materials in an organization. (8 marks)
- (c) The following information relates to the consumption of a store item:
- | | |
|-------------------------|-----------------------|
| maximum consumption | 8,000 units per week; |
| minimum consumption | 6,000 units per week; |
| lead time | 5 - 7 weeks; |
| economic Order Quantity | 28,000 units. |
- Determine the:
- (i) re-order level;
- (ii) minimum stock level;
- (iii) maximum stock level;
- (iv) average stock level. (9 marks)
2. (a) Distinguish between job description and job specification. (4 marks)
- (b) Outline **four** merits of job rotation as a method of employee training. (4 marks)
- (c) Explain **four** advantages of promotion of workers as a method of internal recruitment. (8 marks)
- (d) Highlight **four** causes of industrial disputes in an organization. (4 marks)
3. (a) Explain **three** documents used in production planning and control. (6 marks)
- (b) Outline **four** activities carried out during the routing stage of production planning. (4 marks)
- (c) Highlight **four** advantages of mass production. (4 marks)
- (d) Explain each of the following types of schedules used in production planning:
- (i) master schedule;
- (ii) order schedule;
- (iii) machine schedule. (6 marks)

4. (a) Explain **two** circumstances that may compel a manufacturing company to adopt a centralised maintenance system. (4 marks)
- (b) Outline **four** differences between preventive maintenance and breakdown maintenance. (8 marks)
- (c) Explain **four** characteristics of management by objectives (MBO). (8 marks)
5. (a) With the aid of sketches, explain the difference between elastic supply and perfectly inelastic supply. (6 marks)
- (b) Explain **four** factors that determine the demand for labour in an economy. (8 marks)
- (c) Explain **three** factors that may lead to a rightward shift in the demand curve of a commodity. (6 marks)
6. (a) Outline **four** demerits of a closed type of office. (4 marks)
- (b) (j) Describe lateral filing.
(ii) List **three** advantages of lateral filing. (5 marks)
- (c) Outline **four** objectives of method study. (4 marks)
- (d) Table I shows time study data of a job with time cycles.

Table I

| Number of cycles | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------------|------|------|------|------|------|------|------|-----|------|------|
| Time in minutes | 1.24 | 1.28 | 1.21 | 1.28 | 1.30 | 1.32 | 1.26 | .29 | 1.34 | 1.20 |

Additional information:

- performance rating is 110%;
- working allowances = 20%.

Determine the:

- (i) basic time;
- (ii) standard time.

(7 marks)

7. (a) Explain each of the following principles of management by Henri Fayol:
- (i) scalar chain;
 - (ii) discipline. (4 marks)
- (b) Explain **four** characteristics of bureaucratic system of management. (8 marks)
- (c) Outline **four** differences between authority and responsibility. (8 marks)
8. (a) Distinguish between variable costs and marginal costs. (4 marks)
- (b) Explain **three** benefits of break-even analysis to an organization. (6 marks)
- (c) Table II shows the costs incurred by a certain manufacturing company.

Table II

| Item Number | Item Description | Amount (Ksh) |
|-------------|-------------------------------------|--------------|
| 1 | Material in hand (November 1, 2019) | 120,000 |
| 2 | Plant depreciation | 400,000 |
| 3 | Wages of direct works | 250,000 |
| 4 | New material purchased | 350,000 |
| 5 | Office lighting and heating | 60,000 |
| 6 | Variable direct expenses | 150,000 |
| 7 | Material in hand (February 2020) | 80,000 |

Determine the:

- (i) material cost;
 - (ii) prime cost;
 - (iii) factory cost. (6 marks)
- (d) Outline **four** qualities of an effective purchasing manager. (4 marks)

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