

2506/301

2507/301

**INDUSTRIAL ORGANISATION  
AND MANAGEMENT**

**Oct./Nov. 2018**

**Time: 3 hours**



**THE KENYA NATIONAL EXAMINATIONS COUNCIL  
DIPLOMA IN AERONAUTICAL ENGINEERING  
(AIRFRAMES AND ENGINES OPTION)  
(AVIONICS OPTION)**

**MODULE III**

**INDUSTRIAL ORGANISATION AND MANAGEMENT**

**3 hours**

**INSTRUCTIONS TO CANDIDATES**

*You should have a non-programmable electronic calculator for this examination.*

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

*All questions carry equal marks.*

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

*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) (i) Outline **four** determinants of employee motivation according to Human Relations theory of management.  
(ii) Explain **three** criticisms of the Human Relations theory of management. (10 marks)

(b) (i) State **four** principles of management as expounded by Henri Fayol.  
(ii) Explain **three** characteristics of principles of management. (10 marks)

2. (a) State **four** circumstances that may compel managers to delegate. (4 marks)

(b) Outline **four** benefits of making decisions through committees in an organisation. (4 marks)

*well thought decisions*  
*Makes COM.*

(c) Explain **two** advantages of management by objectives (MBO). (4 marks)

(d) A company has the following positions: Board of directors, production supervisor, Finance manager, Managing director, Personnel manager, Production foreman, Production controller, Quality Assurance manager, Production manager and workers. Draw the organisational chart for the company, clearly showing line and staff authorities. (8 marks)

*BOB*  
*M.D*

*F.M D.M C.*

3. (a) (i) Explain the relationship between reliability and availability of a manufacturing plant.

(ii) Explain **two** factors that may affect the reliability of a manufacturing plant. (8 marks)

(b) State **four** duties of a maintenance supervisor. (4 marks)

*operating cost is cheap*  
*Avoid breakdown*

(c) Explain **four** benefits of preventive maintenance to an organisation. (8 marks)

4. (a) Explain each of the following methods of material procurement:  
(i) quotation;  
(ii) spot purchasing;  
(iii) tendering. (6 marks)

(b) Distinguish between consumables register and surplus stock register used in the store department. (4 marks)

(c) Outline **four** benefits of inventory control to a firm. (4 marks)

(d) The following data relates to a stock item in a company that uses the simple re-order level inventory system:

Normal usage ----- 200 units per day  
Minimum usage ----- 100 units per day  
Maximum usage ----- 250 units per day  
Lead time ----- 10 - 15 days  
Previous Economic Order Quantity ----- 5000 units

Determine each of the following stock levels:

- (i) re-order level;
- (ii) minimum level;
- (iii) maximum level.

(6 marks)

5. (a) Differentiate between material planning and process planning in production.

(4 marks)

(b) Highlight **four** benefits of production planning and control in an industry.

(4 marks)

(c) State **four** characteristics of job production.

(4 marks)

(d) Outline the stages of product design and development.

(8 marks)

Planning  
Buying  
Scheduling  
Dispatching  
Follow up  
Inspection.

6. (a) Explain **four** reasons that make organisations to undertake work study.

(8 marks)

(b) Describe each of the following time study techniques:

- (i) synthetic timing;
- (ii) analytical estimating.

(4 marks)

(c) Differentiate between fixed costs and variable costs in a factory.

(4 marks)

(d) (i) Explain the meaning of 'break-even point' in a production system.

(ii) State **two** ways through which break-even analysis is important to an organisation.

(4 marks)

7. (a) Explain each of the following types of employee selection tests:

- (i) intelligence tests;
- (ii) personality tests.

(4 marks)