

*Challenge*

2201/305

2203/305

2204/305

2206/305

2208/305

**INDUSTRIAL ORGANISATION  
AND MANAGEMENT**

Oct./ Nov. 1998

Time: 3 hours

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**THE KENYA NATIONAL EXAMINATIONS COUNCIL**

**DIPLOMA IN ELECTRONIC ENGINEERING**

**DIPLOMA IN TELECOMMUNICATION ENGINEERING**

**DIPLOMA IN ELECTRICAL ENGINEERING (POWER)**

**DIPLOMA IN INSTRUMENTATION AND CONTROL ENGINEERING**

**DIPLOMA IN MEDICAL ENGINEERING**

**INDUSTRIAL ORGANISATION AND MANAGEMENT**

3 hours

**INSTRUCTIONS TO CANDIDATES**

You should have the following for this examination:

Answer booklet

Mathematical tables/ Electronic calculator

Answer any **FIVE** of the following **EIGHT** questions.

All questions carry equal marks.

**This paper consists of 5 printed pages.**

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**Turn over**

1. (a) Explain the following management terms giving ONE advantage and ONE disadvantage in each case:
- (i) Laissez-faire.
  - (ii) Democratic. (8 marks)
- (b) (i) Explain any THREE characteristics of a good organisation chart.
- (ii) Explain any FIVE benefits of correctly delegated authority. (8 marks)
- (c) Distinguish between the following in an organisation.
- (i) Line and staff managers.
  - (ii) Authority and power. (4 marks)
2. (a) (i) State any THREE functions of the international monetary fund (I.M.F.).
- (ii) Explain the following economic concepts
- (I) Elasticity of supply
  - (II) Foreign Exchange Rates. (7 marks)
- (b) Explain the following terms:-
- (i) Derived Demand
  - (ii) Joint Demand
  - (iii) Composite Demand. (6 marks)
- (c) (i) Draw the supply curve and explain its significance.
- (ii) State any THREE factors leading to a successful sale of a product. (7 marks)
3. (a) (i) State any FIVE objectives of an economic policy of a Government.
- (ii) Explain division of labour in reference to production stating TWO limitations of the system. (9 marks)
- (b) (i) Distinguish between OFFER and invitation to treat.
- (ii) Discuss FOUR obligations of a business to share-holders. (7 marks)
- (c) Explain the FOUR functions of an office. (4 marks)

4. (a) Explain FOUR elements of a production policy in an organisation. (8 marks)
- (b) With regard to the following, state any THREE factors that may be considered in factory location.
- (i) The general area of the location.
- (ii) The actual site of the plant.

(6 marks)

- (c) Outline any SIX responsibilities of the production department in an organisation. (6 marks)

5. (a) State any THREE objectives of quality control. (3 marks)

- (b) (i) Explain TWO causes of variations in the quality of a product during manufacture.

- (ii) Explain the following:

(I) Producer's Risk

(II) Consumer's Risk

(III) Acceptable quality level (AQL).

(7 marks)

- (c) Explain the rationale of sampling in statistical quality control. (7 marks)

- (d) A certain company manufacturing electric bulbs has the fraction of defective products as 0.1 and the sample size is 20. Determine the probability of a single item containing:

(i) 0 defective

(ii) 1 defective

(iii) 2 defectives.

(3 marks)

6. (a) Explain the following specifications with reference to product development.

(i) Manufacturing

(ii) Product.

(4 marks)

- (b) Define the following methods of production stating ONE example in each case.

(i) Job

(ii) Batch

(iii) Flow.

(9 marks)

- (c) (i) List any TWO limitations of a Gantt Chart in production planning.
- (ii) An engineering product consists of 16 activities represented by Table 1.

Table 1

Activity	Begin event	End event	Duration in weeks
A	1	2	4
B	1	3	9
C	1	4	2
D	2	5	6
E	3	6	3
F	3	7	0
G	4	7	4
H	7	10	7
I	5	8	4
J	5	6	2
K	6	9	5
L	6	10	3
M	10	9	6
N	8	11	2
O	9	11	3
P	11	12	1

- (I) Draw the network diagram.
- (II) Determine the total project float.
- (III) Determine the critical path.

(7 marks)

- 7. (a) (i) Distinguish between method study and work measurement.
- (ii) State any TWO objectives of EACH of the methods in a(i).

(8 marks)

- (b) Outline any THREE;
  - (i) reasons for stock-taking.
  - (ii) principles of efficient layout of stores.

(6 marks)

- (c) (i) With the aid of a graph, explain the economic order quantity relationship.
- (ii) Demand for a component is 100,000. Order cost is Ksh. 800.00 and unit cost is Ksh.40.00 while holding charge is 25%. Calculate the economic order quantity.

(6 marks)

8. (a) Outline any FIVE steps taken when estimating. (5 marks)

- (b) (i) Explain the following
  - (I) Preventive maintenance
  - (II) Planned maintenance.

(ii) State any FOUR factors to be considered before establishing a maintenance department in a factory. (8 marks)

- (c) (i) Explain the following with respect to production
  - (I) layout by process
  - (II) layout by product

(ii) State THREE factors to be considered in the positioning of a machine in a process layout. (7 marks)