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**INDUSTRIAL ORGANISATION
AND MANAGEMENT**

June/July 2018

Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL

**DIPLOMA IN MECHANICAL ENGINEERING
(PRODUCTION OPTION)
(PLANT OPTION)**

DIPLOMA IN AUTOMOTIVE ENGINEERING

DIPLOMA IN CONSTRUCTION PLANT ENGINEERING

**DIPLOMA IN AGRICULTURAL ENGINEERING
(FARM POWER & MACHINERY OPTION)**

**DIPLOMA IN MECHANICAL ENGINEERING
(FABRICATION TECHNOLOGY AND METALLURGY OPTION)**

**DIPLOMA IN AERONAUTICAL ENGINEERING
(AIRFRAMES AND ENGINES OPTION)**

**DIPLOMA IN MECHANICAL ENGINEERING
(MATERIALS TECHNOLOGY AND METALLURGY OPTION)**

INDUSTRIAL ORGANISATION AND MANAGEMENT

3 hours

INSTRUCTIONS TO CANDIDATES

You should have the following for this examination:

Non-programmable calculator;

Answer booklet.

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 5 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 **three** propositions of the human relations approach to management.
(ii) Highlight criticisms of the human relations approach. (6 marks)
- (b) Outline **two** responsibilities of a business organisation to its
(i) customers;
(ii) employees. (4 marks)
- (c) Distinguish between strategic decisions and tactical decisions. (4 marks) *↑ counter*
- (d) Explain **three** ways in which policies are important to an organisation. (6 marks) *↓ plan*
2. (a) Describe the following terms as used in economics:
(i) perfect market;
(ii) monopoly. (6 marks)
- (b) Outline **four** factors which determine the efficiency of labour in an organisation. (4 marks)
- (c) Explain **two** situations in which the demand of a product increases when its price increases. (4 marks) *↑ giffen housing*
- (d) Explain how national income is measured using the output method. (6 marks)
3. (a) (i) Outline **four** functions of an organisation chart. *↑ highlights pos. - hierachy*
(ii) Explain **three** challenges located when an organisational chart has got very many layers of supervision. (10 marks)
- (b) Describe 'functional' organisation. (4 marks)
- (c) Highlight **six** practices that managers may apply to make delegation effective. (6 marks)

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4. (a) Explain the purpose of each of the following during employee selection process:
- (i) medical examination;
 - (ii) references;
 - (iii) appointment letter.
- (6 marks)
- (b) Describe **four** methods used by organisations to identify training needs of their employees (8 marks)
- (c) (i) Define job analysis.
- (ii) Highlight **four** benefits of job analysis to an organisation. (6 marks)
5. (a) Distinguish between optimistic time and pessimistic time as used in programmer evaluation Review Technique (PERT). (2 marks)
- (b) Highlight **three** limitations of PERT. (3 marks)
- (c) Table 1 shows data relating to a small project.

Table 1

Activity	Predecessor	Duration (days)
A	-	2
B	-	3
C	B	5
D	A	4
E	B	7
F	D, E	2
G	C	1
H	G, F	8
I	G, F	10
J	I	6
K	H, J	3

- (i) Draw the project network.
 - (ii) Determine the critical path and project duration.
 - (iii) Explain the effect of delaying the starting of activity G for 2 days.
- (15 marks)

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6. (a) Outline **four** features of a good filing system. (4 marks)
- (b) Outline **four** benefits of office machines to the employer. (4 marks)
- (c) Table 2 shows receipts and issues of Viking limited for the month of January 2018.

Table 2

Date	Receipts (Units purchased)	Cost per unit (Ksh)	Units Issued	Bin Balance	Value of stock balance (Ksh)
08/1/2018	None	50	None	B/f 2000	100,000
10/1/2018	1000	70	None	3000	170,000
16/1/2018	1500	72	1800	2700	?
23/1/2018	4000	80	2500	4200	?
26/1/2018	2300	100	2000	4500	?
31/1/2018	None	-	1600	-	?

- (i) As the storekeeper, determine:
- (I) the bin balance as at the close of business on 31/1/2018.
- (II) the value of stock issued during the month using Last-In-First-Out (LIFO) method.
- (ii) Using the First-In-First-Out method, determine the stock balances on 16th January 2018.

(12 marks)

7. (a) (i) Describe the vertical method of filing documents.
- (ii) Outline **two** advantages of this method. (4 marks)
- (b) Identify **four** types of records kept by the production department of a manufacturing industry. (4 marks)
- (c) Explain **three** forms of preventive maintenance. *time based opportunity based* (6 marks)
- (d) Explain **three** activities of a preventive maintenance unit in a large engineering company. (6 marks)

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8. (a) Explain **four** features of mass production. (8 marks)

(b) Describe the following activities in a manufacturing process:

(i) process control;

(ii) scheduling.

(6 marks)

(c) A machine operator is observed to perform a task in 20 minutes at a rating of 120. For this work, the following allowance are given:

Relaxation	10%
Contingency for extra work	2%
Unoccupied time	1.5%
Interference	1%
Contingency for delay	1%

Calculate;

(i) basic time;

(ii) work content;

(iii) standard time.

(6 marks)

THIS IS THE LAST PRINTED PAGE.

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