01-2108/302
INDUSTRIAL ORGANIZATION AND MANAGEMENT
Oct/Nov. 2010
Time: 3 hours

THE KENYA NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN MECHANICAL ENGINEERING (PRODUCTION OPTION)
DIPLOMA IN MECHANICAL ENGINEERING (PLANT OPTION)
DIPLOMA IN AUTOMOTIVE ENGINEERING
DIPLOMA IN CONSTRUCTION PLANT ENGINEERING
DIPLOMA IN AGRICULTURAL ENGINEERING (FARM POWER & MACHINERY OPTION)
DIPLOMA IN AERONAUTICAL ENGINEERING (AIRFRAMES & ENGINES OPTION)
DIPLOMA IN MECHANICAL ENGINEERING (FABRICATION TECHNOLOGY & METALLURGY OPTION)

INDUSTRIAL ORGANIZATION AND MANAGEMENT

3 hours

INSTRUCTIONS TO CANDIDATES

You should have the following for this examination:
Answer booklet;
Mathematical tables/Calculator.
*Attempt any **FIVE** of the following **EIGHT** questions.*
Maximum marks for each part of a question are shown.

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) Outline **four** factors essential for successful delegation of duties. (4 marks)

(b) Differentiate between:

(i) top management and line management;
(ii) strategic decisions and tactical decisions. (8 marks)

(c) (i) Highlight **three** short-comings of organisation charts.

(ii) Draw a labelled diagram of a circular form of organization chart. (8 marks)

2. (a) Explain the meaning of the following terms as used in economics:

(i) economies of scale;
(ii) income elasticity of demand;
(iii) complementary goods. (6 marks)

(b) Highlight **four** factors that affect determination of wages in an economy. (4 marks)

(c) Table 1 shows a demand and supply schedule for tea in a given market for a given month.

Table 1

Price (Ksh)	Demand (kg)	Supply (kg)
80	10,000	30,000
60	12,000	25,000
40	14,000	20,000
35	15,000	17,500
30	16,000	15,000
25	18,000	12,500
20	20,000	10,000

(i) Draw the demand and supply curves on the same axes.

(ii) Determine the equilibrium price and quantity from the graph. (10 marks)

3. (a) Outline the contents of the seven-point plan used when interviewing employees. (7 marks)

(b) Describe the following methods of training employees:

(i) apprenticeship;
(ii) simulation;
(iii) vestibule. (6 marks)

(c) Highlight **three** managerial practices that demotivate employees. (3 marks)

(d) Describe the following problems that affect the validity and dependability of performance appraisal systems:

(i) halo effect;
(ii) central tendency bias. (4 marks)

4. (a) Differentiate between mechanical failure and thermal failure. (3 marks)

(b) Outline the:

(i) **four** types of preventive maintenance;

(ii) basic essential measures that an organization should put in place in order to achieve high standards of preventive maintenance. (11 marks)

(c) The management of Chuma Limited has the following data about purchases and issues of round metal bars for the month of June 2009:

DATE	PURCHASES	UNIT PRICE (KSH)	ISSUES
3rd June	100	300	-
9th June	150	320	-
13th June	200	360	-
24th June	-		80
29th June	-		260

Assuming the company uses the perpetual inventory system, determine the value of stock issues for the month using the following methods:

(i) FIFO;
(ii) LIFO. (6 Marks)

5. (a) Outline **four** benefits of using network analysis in organizations. (4 marks)

(b) A project consists of eight activities as given in table 2. The time estimates given are in weeks.

Table 2

Activity	Predecessor	Optimistic Time (a)	Most likely time (m)	Pessimistic time (b)
A	-	4	8	24
B	-	20	24	52
C	A	16	18	20
D	A	20	30	40
E	A	14	15	22
F	B,C	18	18	18
G	D	6	7	14
H	E, F, G	10	10	10

(i) draw the network for the project;
(ii) determine the critical path and its duration;
(iii) determine the free float and total float for each of the non-critical activities.

(16 marks)

6. (a) State **four** duties of an office administrator. (4 marks)

(b) Outline **three**:

(i) factors considered when planning office layout;
(ii) features of a good filing system. (6 marks)

(c) Explain **five** benefits of computerisation of office operations. (10 marks)

7. (a) State **four** characteristics of job production. (4 marks)

(b) With the aid of a diagram, describe the following types of plant layout:

(i) product;
(ii) functional. (8 marks)

(c) Distinguish between a work-order ticket and a move ticket. (2 marks)

(d) Explain the following stages of production planning and control:

(i) routing;
(ii) scheduling;
(iii) loading. (6 marks)

8 (a) State **four** factors that influence the design of a new product. (4 marks)

(b) Explain the meaning of the following terms as used in production management:

(i) standardization;
(ii) simplification;
(iii) capacity planning. (6 marks)

(c) (i) Highlight **three** benefits of work study to an organization.

(ii) A machine operator performs an operation in 30 minutes when working 40% harder than a qualified operator rated at 100%. The following allowances are provided for the operation:

Relaxation	8%
Contingency for extra work	2%
Contingency for delay	1.5%
Unoccupied time	1%
Interference	1%

Calculate:

(I) work content;
(II) standard time. (10 marks)