2201/305
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INDUSTRIAL ORGANISATION AND MANAGEMENT
Oct./Nov. 2011
Time: 3 hours

THE KENYA NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN ELECTRONIC ENGINEERING
DIPLOMA IN TELECOMMUNICATION ENGINEERING
DIPLOMA IN ELECTRICAL ENGINEERING (POWER OPTION)
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/Scientific calculator.

*Answer any **FIVE** of the following **EIGHT** questions.*
All questions carry equal marks.
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) State the **six** key activities of an industrial organisation **as** perceived by Henri Fayol. (3 marks)

(b) Modern management theorists have identified different **key** issues that are shaping management practice today. Highlight **six** such issues. (6 marks)

(c) Explain **three** principles of management. (6 marks)

(d) Describe the managerial function of staffing. (5 marks)

2. (a) State **four** advantages of decentralising organisations. (4 marks)

(b) (i) Define the term human wants.

(ii) State **four** characteristics of human wants.

(5 marks)

(c) Explain **four** factors that influence the demand of a **com**modity apart from its price. (6 marks)

(d) Outline **five** documents presented to the Registrar of **compa**nies when registering a new company. (5 marks)

3. (a) State **four** functions of the international monetary fund. (4 marks)

(b) Explain **four** methods used by the central bank to con**trol** the national economy through monetary policy. (6 marks)

(c) State **four** rules that govern the acceptance of an offer. (4 marks)

(d) Explain each of the following remedies entitled to agg**rieve**d parties under the law of contract:

(i) damages;
(ii) injunction.

(6 marks)

4. (a) (i) Define the term 'organisation structure'.

(ii) Highlight **four** considerations that need to be a**ddre**ssed when designing an organisational structure that will best sustain th**e su**ccess of an enterprise. (6 marks)

(b) (i) Differentiate between delegation and empower**men**t.

(ii) Organisations have been pressed into delegating **m**ore widely nowadays because of emerging trends and challenges. Explain **four** such challenges. (10 marks)

(c) Outline **four** advantages of the open plan offices over closed plan offices.

(4 marks)

5. (a) (i) With the aid of a diagram, describe the features of the process layout of a manufacturing plant.

(ii) State **two** advantages of this type of layout.

(8 marks)

(b) (i) Outline **three** circumstances that can make an organisation to embark on a facility location study.

(ii) Table 1 shows a matrix developed by k-strips limited to determine the best among four identified sites for the location of their new branch. The sites were rated on a scale of 0 to 10 points, in terms of their suitability. Determine the best site.

Table 1

FACTOR	FACTOR WEIGHT	POTENTIAL SITES			
		S_1	S_2	S_3	S_4
Raw materials	7	8	3	**7**	5
Power	5	6	5	**8**	9
Laws and Taxation	3	5	7	**9**	8
Pollution	4	9	4	**1**	2
Transportation	6	5	9	**8**	6

(8 marks)

(c) (i) Define computer-aided manufacturing (CAM).

(ii) State **two** benefits of CAM.

(4 marks)

6. (a) State **four** technical factors considered when an industrial organisation is buying a new machine or equipment.

(4 marks)

(b) Differentiate between a closed tender and a single tender.

(2 marks)

(c) (i) Outline **four** duties of a store keeper.

(ii) Highlight **four** advantages of perpetual inventory over annual stock-taking in an organisation.

(8 marks)

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

Normal usage - 100 units per day
Minimum usage - 80 units per day
Maximum usage - 150 units per day
Lead time - 20-30 days
Previous EOQ - 4000 units

Determine the following stock levels:

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

(6 marks)

7. (a) Explain the responsibility of each of the following departments of an organisation in promoting quality:

(i) marketing;
(ii) research and development;
(iii) production.

(6 marks)

(b) Explain the following terms as used in acceptance sampling:

(i) process variability;
(ii) standard error;
(iii) acceptance quality level.

(4 marks)

(c) The following data relates to a product which was undergoing a statistical quality control process.

Process mean, $(\bar{\bar{x}})$	=	70.2 mm
Mean Range, (R)	=	0.2 mm
Sample size, n	=	3
Hartley's constant, d_n	=	1.69

Compute the action and warning lines for the mean chart.

(6 marks)

(d) State **four** objectives of preventive maintenance. (4 marks)

8. (a) State **four** methods that are used to carry out time study. (4 marks)

(b) Many employees are usually apprehensive of work study. **Outline four** strategies that organisation should put in place to boost the workers confidence in a work study exercise. (6 marks)

(c) Table 2 shows the activities of a certain project

Table 2

Activity	Predecessor	Duration (days)
A	-	5
B	-	3
C	B	7
D	A, B	6
E	C, D	4
F	C, D	4
G	F	7
H	E, G	2

(i) Draw the project network.
(ii) Determine the critical activities.
(iii) Determine the free float of the non-critical activities. (10 marks)