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INDUSTRIAL ORGANIZATION AND MANAGEMENT
Oct./Nov. 2004
Time: 3 hours

THE KENYA NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN MECHANICAL ENGINEERING

**(PRODUCTION OPTION), (PLANT ENGINEERING OPTION),
(AUTOMOTIVE OPTION) (CONSTRUCTION PLANT OPTION),
(FARM POWER AND MACHINERY OPTION),
(FABRICATION TECHNOLOGY AND METALLURGY),
(ENGINES AND AIR FRAMES OPTION),
(MATERIALS TECHNOLOGY AND METALLURGY)**

INDUSTRIAL ORGANIZATION AND MANAGEMENT

3 hours

INSTRUCTIONS TO CANDIDATES:

You should have the following for this examination:

    Answer booklet
    Calculator /Mathematical Tables

Answer any **FIVE** of the following **EIGHT** questions.
All questions carry equal marks.
Maximum marks for each part of a question are indicated

1. (a) Explain the contributions of Henri Fayol in the practice of management and how this apply to the modern organization. (12 marks)

(b) Explain why policies are needed in an organization. (4 marks)

(c) Explain how proper planning lead to effective management of an enterprise. (4 marks)

2. (a) Write short notes on the following:

(i) Cross-reference
(ii) Marking absent file
(iii) Released for filing
(iv) Retention of records (8 marks)

(b) Outline the telephone switchboard procedures which **need** to be followed when handling "incoming calls" and "calls from extensions". (4 marks)

(c) Briefly outline the various classifications in filing. (8 marks)

3. (a) State the benefits of an organization chart. (4 marks)

(b) Describe the characteristics of line and staff structure **highlighting FOUR** advantages of this structure. (6 marks)

(c) Outline the limitations of using Committees in an organization. (5 marks)

(d) Explain the benefits that a Manager may derive from **delegating** duties. (5 marks)

4. (a) State THREE ways in which Natural resources may **benefit** a country. (3 marks)

(b) List the components of a business budget. (2 marks)

(c) Distinguish between:-

(i) Treasury Bills and
(ii) Treasury Bonds (4 marks)

(d) State the measures used by the Government in correcting the balance of payment deficit in Kenya. (5 marks)

(e) Identify THREE instruments that are traded in the **money** market in Kenya, highlighting the significance of each. (6 marks)

5. (a) (i) Describe FIVE difficulties that a personnel **manager** may encounter when selecting staff for promotion. (5 marks)

(ii) List FIVE monetary methods of motivating **employees**. (2½ marks)

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(b) (i) Outline FIVE reasons why it may be necessary for a manager to carry out job analysis. (5 marks)

(ii) Highlight the importance of an induction course for newly engaged members of staff in an organization. (2½ marks)

(c) (i) Define the term "Management by Objectives". (2 marks)

(ii) State the key features of the "Management by Objectives programme" (3 marks)

6. (a) Define the following terms and state the importance of each.

(i)   Maximum stock level
(ii) Minimum stock level
(iii) Re-order level   (6 marks)

(b) The following data relate to a given stock item.

Normal usage   500 per day
Minimum usage   250 per day
Maximum usage   700 per day
Lead time   15-20 days
Economic order quantity (EOQ)   10,000

Calculate:

(i)   The re-order level
(ii) The minimum level
(iii) The maximum level   (9 marks)

(c) A company uses 50,000 units of a stock item per year which cost Ksh 1,000 each. The ordering and handling costs are Ksh 15,000 per order and carrying costs are 15% per annum.

Calculate the Economic Order Quantity (EOQ).   (5 marks)

7. (a) Briefly explain the following administrative documents used in an average workshop.

(i)   Time sheets
(ii) Job cards
(iii) Equipment history records
(iv) Stores requisitions   (4 marks)

(b)   The following data is given when a digger-loader is to have its engine replaced.

Cost		Rate (Ksh.)
Direct Labour:	skilled mechanic	250/hr
	Unskilled mechanic	175/hr
Indirect Labour		75/hr
Workshop overheads		600/hr
Indirect material		30% `Direct material costs

Determine the cost of replacing an engine of a Digger-loader given the following information.

- Skilled labour required - 4 hrs ≠ 2 50 =
- Unskilled labour - 6 hrs × 175 =
- Total time to complete the work - 5hrs × 600 =
- Machine downtime - 800/hr
- Material costs - 15,000,000   (4 marks)

(c)   (i)   Discuss the causes of poor communication which are related to circumstances internal to the organization   (4 marks)

(ii)   State FOUR factors that are considered by an organization when choosing a communication system.   (4 marks)

(iii)   Explain any FOUR barriers to communication. → b'luc → Noise → language → media   (4 marks)

8.   (a)   Explain any FOUR steps of carrying out work study. → identify → Examine → implement   (4 marks)
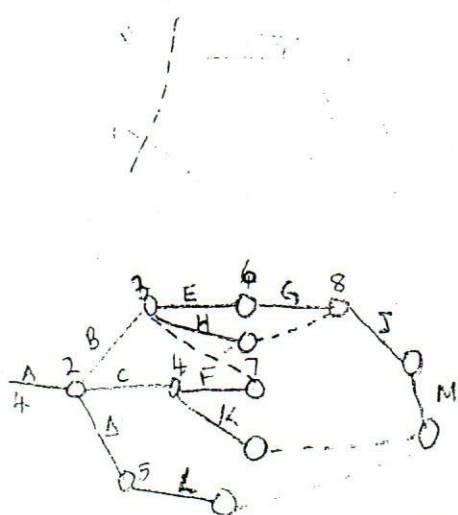
(b)   List any FOUR advantages of work planning and work scheduling. Utilize machines, No Time wastage → restore   (4 marks)

(c)   Draw the critical path of the following network:-

ACTIVITY	PRECEDING ACTIVITY	DURATION (WEEKS)
A	—	4
B	A	7
C	A	5
D	A	6
E	B	2
F	C	3
G	E	5
H	B, F	11
J	G, H	7
K	C	4
L	D	3
M	J, K, L	4

(8 marks)

(ii)   Calculate the total floats on the non-critical chains in the network above.

(4 marks)