

2101-8/302  
INDUSTRIAL ORGANISATION  
AND MANAGEMENT  
Oct. / Nov. 2011  
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 AND  
MACHINERY OPTION)**  
**DIPLOMA IN MECHANICAL ENGINEERING (FABRICATION &  
METALLURGY OPTION)**  
**DIPLOMA IN AERONAUTICAL ENGINEERING (ENGINES &  
AIR FRAMES OPTION)**  
**DIPLOMA IN MECHANICAL ENGINEERING (MATERIALS TECHNOLOGY  
& METALLURGY OPTION)**

INDUSTRIAL ORGANISATION AND MANAGEMENT

3 hours

### INSTRUCTIONS TO CANDIDATES

*You should have the following for this examination:*

- Answer booklet;
- Electronic calculator.

*Answer 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 pages are printed as indicated and that no questions are missing.**



1. (a) Highlight **four** planning skills required by effective managers. (4 marks)
- (b) Explain **four** considerations taken into account by top managers when formulating policies. (6 marks)
- (c) (i) Differentiate between decision making under risk and decision making under certainty.
- (ii) State **two** rules that govern brainstorming as a decision making technique. (6 marks)
- (d) There has been cases where management by objectives (MBO) has totally failed in organizations. Outline **four** reasons for such failure. (4 marks)
2. (a) Explain the meaning of the following terms as used in organising:
- (i) centralisation;
- (ii) accountability;
- (iii) co-ordinating. (6 marks)
- (b) State **four** functions of the directors of a company. (4 marks)
- (c) One of the recent approaches to management of industrial organisations is the application of 'operations research (OR)' techniques in resolving managerial challenges.
- (i) Outline the steps followed in this approach.
- (ii) Highlight **four** managerial challenges which can be addressed using OR techniques in an industrial organisation. (10 marks)
3. (a) (i) Distinguish between a market economy and state-controlled economy.
- (ii) State **two** limitations of a market economy. (6 marks)
- (b) (i) Explain the meaning of 'mobility of labour' as a factor of production.
- (ii) Outline **three** ways in which mobility of labour is important to a country. (6 marks)
- (c) (i) With the aid of sketches, illustrate the difference between elastic demand and inelastic demand.



- (ii) When the price of coffee is Ksh. 100, the demand for tea is 120 units. When the price of coffee increases to sh. 140, the demand of tea increases to 160 units. Calculate the cross elasticity of demand. (8 marks)

4. (a) The employment process involves **four** basic stages; recruitment, selection, placement and induction. Explain each of these stages. (8 marks)

(b) (i) Differentiate between formal and informal interviews.

(ii) Highlight **four** limitations of interviews as a tool for employment selection. (6 marks)

(c) Describe the following methods used in managerial development:

(i) planned progression;

(ii) job rotation;

(iii) understudy.

(6 marks)

5. (a) Explain the purposes of a dummy activity in a network diagram. (2 marks)

(b) Table 1 shows the activities of a project and their durations.

**Table 1**

Activity	Preceding Activity	Duration (days)
A	-	9
B	-	3
C	A	8
D	A	2
E	A	3
F	C	2
G	C	6
H	C	1
J	B,D	4
K	F,J	1
L	E,H,G,K	2
M	E,H	3
N	L,M	4

- (i) Draw the project network
- (ii) Determine its critical path and completion time
- (iii) Calculate the total float for the non-critical chains. *(Slack)* (18 marks)

6. (a) Outline **four** different types of stockholding casts. (4 marks)
- (b) (i) Explain the periodic review system of inventory control.
- (ii) State **two** disadvantages of the periodic review system. (6 marks)
- (c) Explain **four** major functions of an office. (6 marks)
- (d) A common trend in office management in many large manufacturing organisations today is to set up an 'organisation and method' (O&M) team, which is normally directly answerable to the Chief Executive Officer. Highlight **four** responsibilities of such a team. (4 marks)

7. (a) State **four** objectives of maintenance in a manufacturing plant. (4 marks)
- (b) Explain the purpose of the following documents used in planned maintenance.
- (i) job card;
  - (ii) assets (facility) register;
  - (iii) maintenance schedule. (6 marks)
- (c) Highlight **four** possible reasons for selecting a certain job for work measurement. (4 marks)
- (d) Explain the following terms as used in work study:
- (i) work cycle;
  - (ii) standard time;
  - (iii) activity sampling. (6 marks)



8. (a) Explain **four** factors considered when designing a new product. (6 marks)
- (b) Highlight **four** main features of mass production. (4 marks)
- (c) Explain the following aspects of production planning:
- (i) process planning;
  - (ii) material planning. (6 marks)
- (d) With the aid of a diagram, illustrate the process layout of a manufacturing plant. (4 marks)