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**INDUSTRIAL ORGANIZATION  
AND MANAGEMENT**

**Oct./ Nov. 2016**

**Time: 3 hours**



**THE KENYA NATIONAL EXAMINATIONS COUNCIL**

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

**(MATERIALS TECHNOLOGY AND METALLURGY OPTION)  
(FABRICATION TECHNOLOGY AND METALLURGY OPTION)**

**DIPLOMA IN AUTOMOTIVE ENGINEERING  
DIPLOMA IN CONSTRUCTION PLANT ENGINEERING**

**DIPLOMA IN AGRICULTURAL ENGINEERING  
(FARM POWER AND MACHINERY OPTION)  
DIPLOMA IN AERONAUTICAL ENGINEERING**

**INDUSTRIAL ORGANIZATION 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 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) Explain **four** advantages of matrix organisational structure. (4 marks)
- (b) (i) Define the term organising as used in management.
- (ii) Explain any **three** activities involved in the organising function. (8 marks)
- (c) Explain **four** benefits enjoyed by companies which have distinct organisational culture. (8 marks)
2. (a) Describe the following types of management:
- (i) management by objectives (MBO);
- (ii) management by exception (MBE). (6 marks)
- (b) Explain:
- (i) **four** ways by which workers may achieve self actualization in an organisation.
- (ii) **four** criticism of Maslow's needs theory. (8 marks)
- (c) Explain **three** advantages and **three** disadvantages of involving employees in decision making in an organisation. (6 marks)
3. (a) Differentiate between complementary and substitute goods giving an example in each case. (4 marks)
- (b) (i) Explain **two** factors that influence elasticity of demand of a product.
- (ii) For the year ending 31<sup>st</sup> December 2012, the price of a box of cap screws at Jasho Limited rose from Ksh 400 to Ksh 500 and demand fell from 1000 boxes to 800 boxes. Calculate the price elasticity of demand of the capscrews and comment on its nature. (8 marks)
- (c) With the aid of a labelled diagram, explain the circular flow of income in a simple economy. (8 marks)

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4. (a) Outline:

(i) **four** methods which may be used to appraise staff in an organisation.

(ii) **four** causes of employee turnover in an organisation.

(8 marks)

(b) Explain the importance of human resource planning to an organisation. (4 marks)

(c) The human resource manager has delegated the role of drafting a contract of employment for newly recruited craftsmen to the supervisor. Outline details that the supervisor should include in the draft to accomplish the task successfully.

(8 marks)

5. (a) State **two** qualities of an office manager. (2 marks)

(b) (i) Describe the open plan office.

(ii) State **four** advantages of the open plan office.

(6 marks)

(c) Outline **three** factors to be considered before purchasing new office equipment.

(3 marks)

(d) Computers have revolutionised the operations of offices today. Justify this statement.

(9 marks)

6. (a) Differentiate between total float and free float in network analysis. (6 marks)

(b) The production department for a firm has prepared time estimates in weeks for a project to be undertaken.

Table 1

Activity	1 - 2	1 - 3	1 - 4	2 - 6	3 - 5	4 - 5	5 - 6	5 - 7	6 - 8	7 - 8
Optimistic time	1	8	4	4	3	2	1	3	4	6
Most likely time	2	9	6	7	6	3	3	4	8	10
Pessimistic	3	10	20	10	45	10	5	5	24	14

(i) Draw the project network.

(ii) Indicate the critical path.

(iii) Determine the durations of the noncritical paths.

(14 marks)

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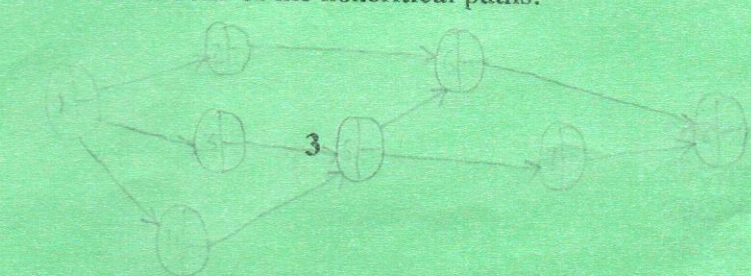
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Turn over



7. (a) State **three** benefits of having a joint procurement and stores department in an organisation. (3 marks)
- (b) Sifa Limited manufacture one type of product using one type of raw material. The information on purchases and raw materials during the first quarter of year 2012 is given in table 2.

Table 2

Date	Units purchased	Unit price (Ksh)	Value (Ksh)
20 <sup>th</sup> February	100	300	30,000
2 <sup>nd</sup> February	120	350	42,000
22 <sup>nd</sup> March	200	400	80,000
16 <sup>th</sup> April	260	450	117,000

Issues

6 <sup>th</sup> February	-	170 units
25 <sup>th</sup> March	-	180 units
20 <sup>th</sup> April	-	250 units

Determine the value of

- (i) total stock issued if the company uses the first - in - first - out (FIFO) method.
- (ii) closing stock after the last issue. (9 marks)
- (c) (i) Differentiate between relaxation allowance and contingency allowance for delay.
- (ii) A machine operator working  $\frac{2}{5}$  times harder than a qualified worker rated at 100 is observed to perform a given task in 80 minutes. Given that working and non-working allowances are estimated at 15% and 5% of the basic time respectively, determine the operator's standard time. (8 marks)

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8. (a) State **four** advantages of production planning in an organisation. (4 marks)
- (b) Explain the following production planning and control activities:
- (i) loading;
  - (ii) routing;
  - (iii) despatching;
  - (iv) scheduling.
- (8 marks)
- (c) Outline the steps involved in designing a product. (8 marks)

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