

2920/202A  
COMPUTER APPLICATIONS II (THEORY)  
PAPER 1  
November 2021  
Time: 2 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY

MODULE II

COMPUTER APPLICATIONS II (THEORY)

Paper 1

2 hours

**INSTRUCTIONS TO CANDIDATES**

*This paper consists of SIX questions.*

*Answer any FOUR of the SIX questions in the answer booklet provided.*

*Candidates should answer the questions in English.*

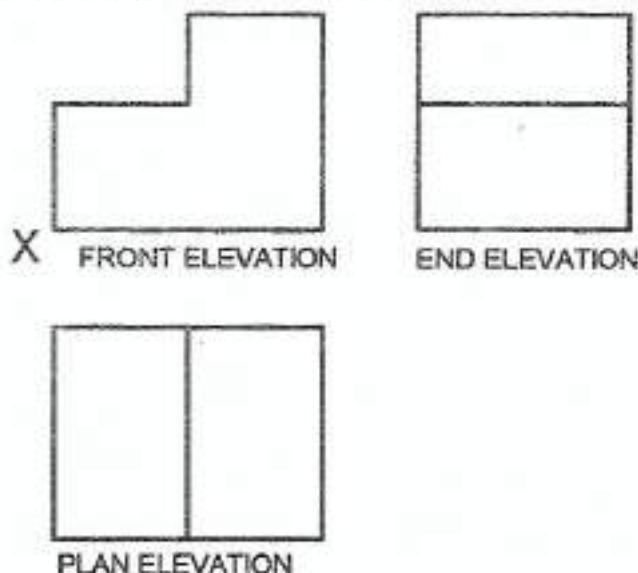
**This paper consists of 4 printed pages.**

**Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.**

*2021 copy to the answer that is what attached*

*7/1/2021 11/11*

1. (a) Outline **three** advantages of using *Geographic Information Systems* to manage disasters in a region. (3 marks) ✓
- (b) Differentiate between *best-first search* and *breadth-first search* as used in artificial intelligence. (4 marks) ✓ ⊕
- (c) Kalili Warehouses Ltd. has incurred the following expenses for the year 2020.
- (i) Construction of an extension to the current warehouse;
  - (ii) Repainting the exterior of the current warehouse;
  - (iii) Replacing the main entrance door to the warehouse after the old one was damaged by a delivery truck;
  - (iv) Transport for materials for constructing the warehouse extension;
- Identify the type of expenditure incurred by the business in each case. (4 marks)
- (d) A user intends to remove some of the quick access toggle commands on a Computer-Aided Design interface. Outline **four** such commands that the user is likely to remove. (4 marks) ⊕
2. (a) Explain the meaning of the term *robot* as used in artificial intelligence. (2 marks) ✓
- (b) Distinguish between the *explode* and *offset* commands as used in Computer-Aided Design. (4 marks)
- (c) The following drawings are elevations of a solid block in third angle projection. Sketch the block in isometric view taking X as the lower most position. (6 marks)



- (d) Outline **three** reasons for integrating database management systems in *Geographic Information System*. (3 marks)

*Handwritten calculations:*

0.5 487,920  
Add prime 21,257,640  
Less return 2  
21,060,340  
C: Goods sold 21,584,060  
Less closing stock 30,900,000  
11,316,290

2

26,745,600  
+ 4,391,740  
33,640,530

Less return 2  
33,250,210

G.A = 21,584,260  
22,957,240  
+ 1,316,290 = 21,584,260 - 2

3,900,550  
10,267,000  
5 = 2 - 3  
11,316,290

21,584,260



507 600

- 3 (a) With the aid of an example, explain the meaning of the term *machine learning* as used in artificial intelligence. (3 marks) 20h  
13
- (b) Explain the use of artificial intelligence as applied in each of the following areas: (4 marks)
- (i) natural language processing;
  - (ii) gaming.
- (c) Distinguish between *spatial data* and *attribute data* as used in a Geographical Information System. (4 marks) 4  
24
- (d) The balances in the commission income account of Pesa Agents is as indicated. wants  
more  
from  
examiners

Date	01.01.2020	31.12.2020
Balance due (Ksh)	45,260	85,200

The business received Ksh 507,600 as commission during the year. Show the necessary entries in the commission income account of Pesa Agents for the year 2020. (4 marks)

- 4 (a) Outline three main components of Geographic Information Systems. (3 marks)
- (b) State the sequence of Computer-Aided Design commands to draw a line with starting point coordinates of 0,0 and terminating 8 units on the X axis and 5 units on the Y axis using the absolute coordinate system. (3 marks)
- (c) Describe each of the following systems as used in artificial intelligence: 20
- (i) Neural networks; (2 marks) 34
  - (ii) Genetic algorithm. (2 marks)

(d) The final balances relating to Jalani Traders for the month of June 2020 are as follows:

Item	Ksh
Credit Purchases	11,405,230
Cash Purchases	9,852,410
Opening stock	487,920
Credit Sales	28,745,620
Cash sales	4,895,210
Returns outwards	415,620
Returns inwards	197,300
Gross profit	11,316,290
Drawings Stock	81,900
Drawings cash	870,200

Opening stock 487,920  
 Add purchase 11,405,230  
 + 9,852,410  
 Add return 21,257,640  
 + 197,300  
 1,940

Determine the closing stock for the business

G.P = (cost of sales) - sales  
 Goods available

- 5 (a) Explain the term *deep learning* as used in artificial intelligence. (2 marks)

sales 28,745,620  
 4,895,210  
 415,620

11,316,290 = x - 33,225,210  
 x = 44,541,500

11,316,290 = 21,548,260 - x  
 44,541,500 = 21,548,260 - x  
 10,231,240

(b) Outline **two** types of each of the following attribute data in a Geographic Information Systems: (6 marks)

- (i) Categorical data;
- (ii) Numeric data.

(c) The following is a list of application software:

*Adobe InDesign, CorelDraw, FreshBooks, Intacct, Microsoft Publisher, Notepad++, QuickBooks, Quicken, Sage50, Virtual C, Wavepad, Xero, Zoho Books,*

Identify **six** accounting software from the list. (3 marks)

(d) When a transaction takes place, it is first recorded in a book of original entry. Outline **four** such books used in accounting. (4 marks)

6 (a) Outline **four** types of precision errors associated with information from a Geographic Information System. (4 marks)

(b) A Computer-Aided Design user has a drawing which is to be modified. Outline **six** commands in the program that he is likely to use. (3 marks)

(c) Outline **three** factors to consider when selecting a *search algorithm* to be used in artificial intelligence. (3 marks)

(d) With the aid of an example, distinguish between *accounts payable* and *accounts receivable* as used in accounting. (5 marks)

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