

2920/202A

COMPUTER APPLICATIONS II (THEORY)

Paper 1

November 2018

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 following SIX questions in the answer booklet provided.*

*All questions carry equal marks.*

*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.**

- 1 (a) State the meaning of each of the following terms as used in Artificial Intelligence:
- (i) environment;
  - (ii) forward chaining;
  - (iii) heuristics;
  - (iv) knowledge engineering;
  - (v) percepts. (5 marks)
- (b) Explain a reason why each of the following entities may require accounting information:
- (i) investors;
  - (ii) lenders;
  - (iii) creditors. (6 marks)
- (c) Distinguish between a *polyline* and a *spline* as used in Computer Aided Design (CAD) programs. (4 marks)
- 2 (a) Explain the effect of enabling annotative properties to a drawing in a CAD program. (2 marks)
- (b) State whether each of the following items is recorded on the *debit* or *credit* side of the trial balance. (3 marks)
- Carriage inwards, Carriage outwards, Sales, Manufacturing Expenses, Sales returns, Discount received*
- (c) Distinguish between the *latitude* and the *longitude* of a point as used in Geographic Information System (GIS). (4 marks)
- (d) Programmers at Gilko are faced with technological challenges of integrating natural language processing in their proposed internet search engine system. Explain **three** challenges that they may be experiencing. (6 marks)
- 3 (a) Outline **five** advantages of using *double entry system* in accounting procedures. (5 marks)
- (b) Outline a way in which each of the following intelligent agents perceive their environment:
- (i) a human agent;
  - (ii) a robotic agent;
  - (iii) a software agent. (3 marks)

- (c) Outline **one** role of each of the following personnel in GIS applications.
- Database managers;
  - Remote sensing analysts;
  - Spatial analysts;
  - Land surveyors. (4 marks)
- (d) Paul intends to raise capital from potential investors to expand his business. State **three** financial statements that these investors may require in order to assess the viability of the business. (3 marks)
- 4 (a) Explain the use of Artificial Intelligence in each of the following areas:
- banking;
  - call centres. (4 marks)
- (b) State **two** golden rules of accounting in respect to debit and credit. (2 marks)
- (c) Table 1 shows the financial status of three companies Wisko, Xeroy and Yoken as at 31<sup>st</sup> July 2017. Determine the values of W, X and Y. (3 marks)

	Assets	Liabilities	Capital
Wisko	20,100	15,900	W
Xeroy	41,000	X	22,000
Yoken	Y	140,000	100,000

Table 1

- (d) Sketch the *front*, *side* and *plan elevation* in first angle projection for the solid block shown in Figure 1 in the direction indicated. (6 marks)

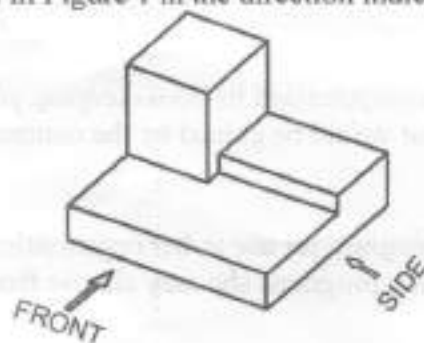


Figure 1

- 5 (a) (i) State the meaning of the term *Geographic Information System*. (1 mark)
- (ii) Explain the function of each of the following tools as used in GIS. (2 marks)
- (I) GPS;
- (II) Digital cameras.
- (b) Differentiate between *simple reflex agents* and *utility based agents* as used in artificial intelligence. (4 marks)
- (c) The following are transactions which took place at Juakali wholesalers in the month of January 2018.

<u>Date</u>	<u>Transactions</u>
1 January 2018	Deposited Ksh.700,000 into a bank account.
7 January 2018	Paid rent for Ksh.80,000 by cheque.
6 January 2018	Bought goods for Ksh.70,000 from Kliptop on credit.
10 January 2018	Sold goods worth Ksh.30,000 to Mata Retailers on credit.

Record the above transactions in a ledger accounts of Juakali wholesalers. (8 marks)

- 6 (a) Explain each of the following terms as used in Artificial Intelligence:
- (i) Artificial Neural Networks;
- (ii) Expert Systems. (4 marks)
- (b) Explain a reason why business use each of the following records in financial accounting:
- (i) Petty cash;
- (ii) Sales journal. (4 marks)
- (c) XYZ company has been advised to computerised its book-keeping and accounting procedures. Outline **four** benefits that would be gained by the company from heeding the advice. (4 marks)
- (d) Wendi intends to purchase a CAD program for use in her organisation to design drawings and objects. State **three** such programs she may choose from. (3 marks)

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