

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 31st 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)

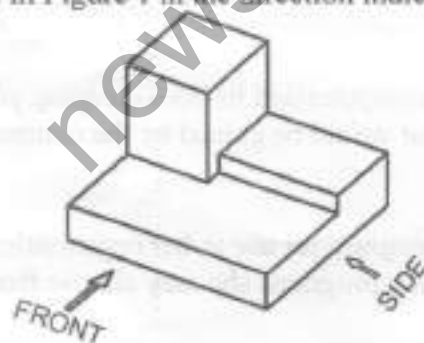


Figure 1

- 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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