Name_____ Index No._____/_____

2920/202A   Candidate's Signature_____
COMPUTER APPLICATIONS II (THEORY)
Paper 1   Date_____
July 2013
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:

*Write your **name** and **index number** in the spaces provided above.*
*Sign and write the **date of examination** in the spaces provided above*
*Answer any **FOUR** of the following **SIX** questions.*

For Examiner's Use Only

Question	1	2	3	4	5	6	Total Marks
Marks							

This paper consists of 12 printed pages.

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

Turn over

1. (a) Explain each the following intelligence agent system qualities.

    (i)   autonomies;   (2 marks)

    _____

    _____

    _____

    (ii) adaptivity;   (2 marks)

    _____

    _____

    _____

    (iii) sociability.   (2 marks)

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    (b) Define each of the following terms as used in financial accounting:

    (i)   capital;   (1 mark)

    _____

    _____

    (ii) balancing;   (1 mark)

    _____

    _____

    (iii) journal;   (1 mark)

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    (iv) ledger.   (1 mark)

    _____

    _____

(c)   Figure 1, Figure 2 and Figure 3 show the front, end and plan elevations in third angle projection of a solid block respectively. Sketch the *isometric view* of the solid taking X as the lowest point in the drawing.   (5 marks)
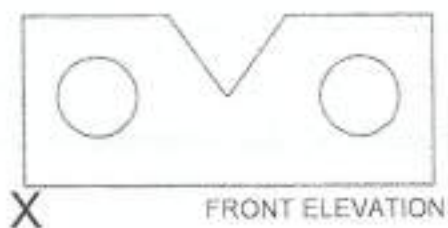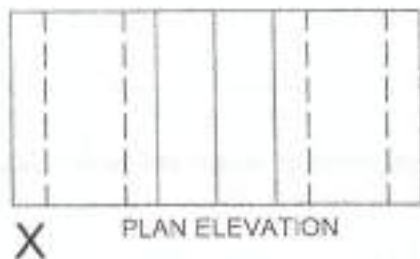
FIGURE 1

FIGURE 2

FRONT ELEVATION

END ELEVATION

FIGURE 3

PLAN ELEVATION

2. (a) (i) List **two** examples of accounting software other than quick books.

(1 mark)

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(ii) Explain **one** advantage of using *accounting software* programs in book keeping.

(2 marks)

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(b) Outline **three** differences between *vector* and *raster* data types as used in Geographic Information Systems (GIS).

(6 marks)

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(c) (i) Table 1 shows the financial status of three business ventures owned by John as at 31st July 2011. Use it to answer the questions that follow.

	Assets	Liabilities	Capital
1	25,000	14,000	A
2	35,000	B	12,000
3	C	300,000	350,000
TOTAL			

Table 1

I. Using the accounting equation, determine the values of A, B and C. (1 ½ marks)

_____

_____

_____

_____

II. Calculate the total values for each of the following: Assets, liabilities and capital. (1 ½ marks)

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(ii) The following are transactions carried out by Bissan Investment Company during the month of July 2011
- On 1 July he paid Ksh30,000 as rent in advance for the office room;
- On 2 July he paid Ksh 20,000 renovation of the stall; and on 3 July he bought two computers at Ksh. 50,000 each.
- On 7 July, received Ksh 75,000 for services he offered, with which he opened a business bank account on the same day.
- He incurred Ksh 2,000 travel expenses, which he paid from his own savings.

Prepare a summary of Bissan's income and expenses for the week ended on 7th July. (3 marks)

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3. (a) Describe **two** types of intelligent agents as used in computers. (4 marks)

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(b) Outline the function of each of the following Computer Aided Design commands:

(i) OFFSET; (1 mark)

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_____

(ii) MULTILINE; (1 mark)

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_____

(iii) PAN; (1 mark)

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_____

(iv) RECTANGULAR ARRAY, (1 mark)

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_____

(c) The following shows the ledger accounts and entries needed to record all transactions for specified dates for Yamis Bakery Company.

CASH BOOK

Bank

01-Oct	Yamis Capital	40,000	02-Oct	Purchases	20,000
08-Oct	Yamis capital	10,000	06-Oct	computer	17,000
09-Oct	Sales	8,2000	09-Oct	Drawings	1,000

Cash

| 03-Oct | Sales | 7,000 | 04-Oct | wages | 3,000 |

GENERAL LEGER

Yamis Capital

| | | | 01-Oct | Bank | 40,000 |
| | | | 08-Oct | Bank | 10,000 |

Computer

| 06-Oct | Bank | 17,000 | | | |

Sales

| | | | 03-Oct | Cash | 7,000 |
| | | | 07-Oct | Bank | 8,200 |

Purchases

| 02-Oct | Bank | 20,000 | | | |
| 03-Oct | Unga Limited | 15,000 | | | |

Wages

| 04-Oct | Cash | 3,000 | | | |
| 04-Oct | Cash | 1,000 | | | |

Drawings

| 05-Jan | Bank | 1,000 | | | |

Unga Ltd

| | | | 03-Oct | Purchases | 15,000 |

Balance all the accounts and extract a trial balance as at 31st October 2004

(7 marks)

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4. (a) Outline **two** benefits and **two** challenges that an investor would realise from the use of *Knowledge Management Systems*. (4 marks)

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(b) Differentiate between *balance carried forward* and *balance brought forward* as used in financial accounting. (4 marks)

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(c) The following are transactions for Ramio Business Enterprise for the month of April 2007.

- Owner starts business with Ksh 30,000 paid into a business bank account on 1 April.
- Business buys machinery with a cheque for Ksh 80,000 on 2 April.
- Business buys computers for Ksh 200,000 on credit from Officemart Company on 4 April.
- On 5 April, business borrows Ksh 300,000 on loan from Wakulima Bank. Money is paid into business's bank account.
- Business pays Officemart Company Ksh 80,000 by cheque on 6 April.
- Company Director takes Ksh 150,000 from bank for personal spending.

Show the effect of these transactions on the *assets*, *capital* and *liabilities* using the format indicated below. (7 marks)

Transactions	Assets Ksh	liabilities	Capital
1. Transaction Description	+30,000 (Bank)		+30,000 (Capital)

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5.   (a)   A student added the following datasets into a country map document in a
            Geographic Information Systems (GIS) application:
                 basemap: To hold the map of the country;
                 towns: To hold the county headquarters of every county in the country;
                 counties. To hold the county boundaries;
                 roads: To hold the distance between towns.

Outline the order in which these datasets should be arranged in the table of content such that each dataset is visible on the map (3 marks)

_____

(b) With the aid of a diagram, explain the circumstances under which each of the following commands are used in Computer Aided Design.

(i) TRIM; (3 marks)

_____

(ii) EXPLODE. (3 marks)

_____

(c) Describe each of the following systems as used in artificial intelligence:

(i) Neural networks; (2 marks)

_____

(ii) Generic algorithm; (2 marks)

_____

(iii) Expert system. (2 marks)

_____

6.   (a)   Distinguish between an *actuator* and *percept* as used in artificial intelligence.

                                                 (4 marks)
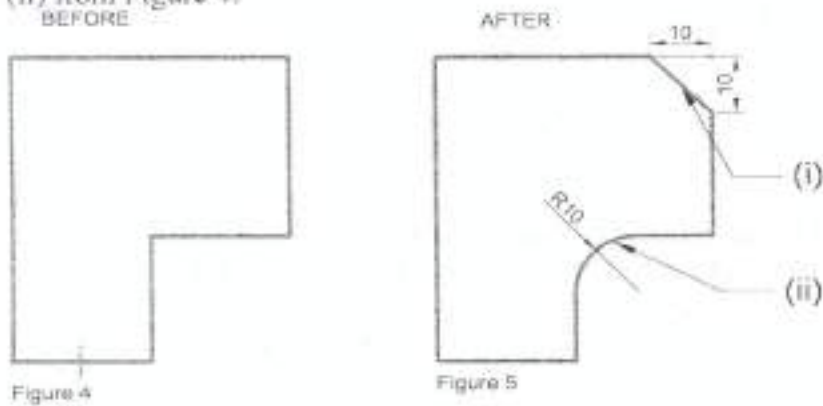
     (b)   With the aid of a diagram in each case, explain each of the following types of dimensioning commands as used in Computer Aided Design (CAD) program:

          (i)   CONTINUE   (3 marks)

          (ii)   BASELINE.   (3 marks)

(e)   Figure 4 and Figure 5 shows an object before and after modification respectively, drawn using a Computer Aided Design program. Outline the appropriate steps that one would follow to create the section labelled (i) and (ii) from Figure 4.   (5 marks)

BEFORE

AFTER

Figure 4

Figure 5