

2920/202A

COMPUTER APPLICATIONS II (THEORY)

Paper 1

November 2016

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.

All questions carry equal marks.

Candidates should answer the questions in English.

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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) Define each of the following terms as used in financial accounting:
- (i) cash account; (2 marks)
 - (ii) balance sheet. (2 marks)
- (b) When Jane was browsing through a financial accounting application folder, she noted the files named KIKOTI.QBB and KIKOTI.QBW. Distinguish between the information in the two files. (4 marks)
- (c) DesignBlue is an architectural design company for houses. The company uses computer-aided design (CAD) templates for their new tasks.
- (i) Define the term template; (2 marks)
 - (ii) Explain benefits that the company is likely to gain from using this approach. (2 marks)
 - (iii) Outline **three** advantages the company would gain by using computer-aided design (CAD) programs instead of the manual system. (3 marks)
2. (a) Explain the role of each of the following types of accounting in an organisation.
- (i) financial accounting; (2 marks)
 - (ii) management accounting. (2 marks)
- (b) An organisation is tasked to map all the natural resources in a region using a geographic information system (GIS) application. Explain a reason that would make the company to use each of the following types of data in the system:
- (i) Point data; (2 marks)
 - (ii) Linear data; (2 marks)
 - (iii) Areal data. (2 marks)

- (c) Figure 1 shows structure of a classical knowledge processing system. Use it to answer the questions that follow.

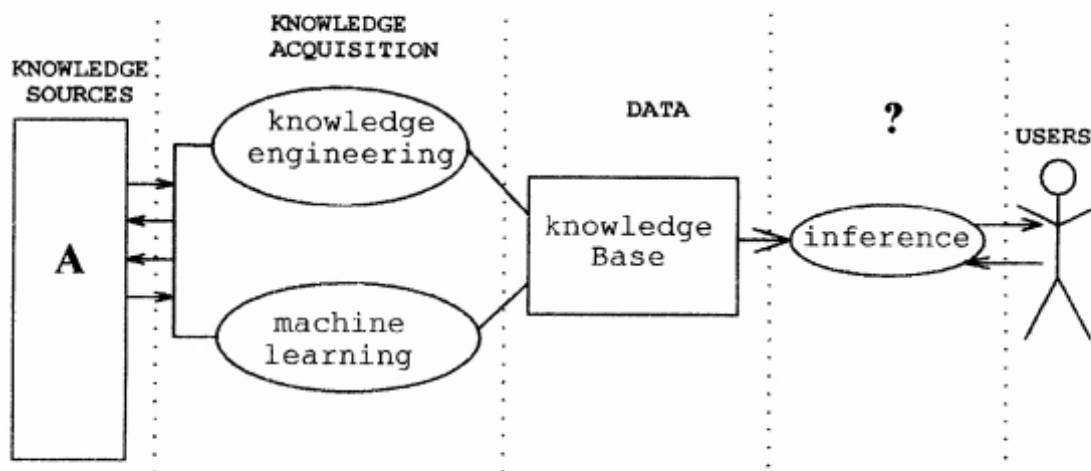


Figure 1

- (i) Explain how a user interacts with the system. (2 marks)
- (ii) Explain the function of the section labelled inference. (2 marks)
- (iii) List **two** examples of knowledge sources represented by A. (1 mark)
3. (a) List **four** stake holders who may have interests in financial accounting reports produced by a bank. (2 marks)
- (b) Determine the owner's equity for a company which has the following balances in their books of accounts. (3 marks)
- Land worth Ksh.1,000,000
 - Machinery worth Ksh.2,050,000
 - Cash amounting to Ksh. 2,900,000
 - Loan borrowed worth Ksh.5,000,000
- (c) Explain how artificial intelligence is used in each of the following areas.
- (i) Planning. (2 marks)
- (ii) Scheduling. (2 marks)

- (d) Figure 2 shows a geometrical diagram drawn using a computer-aided design (CAD) program. Use it to answer the questions that follow.

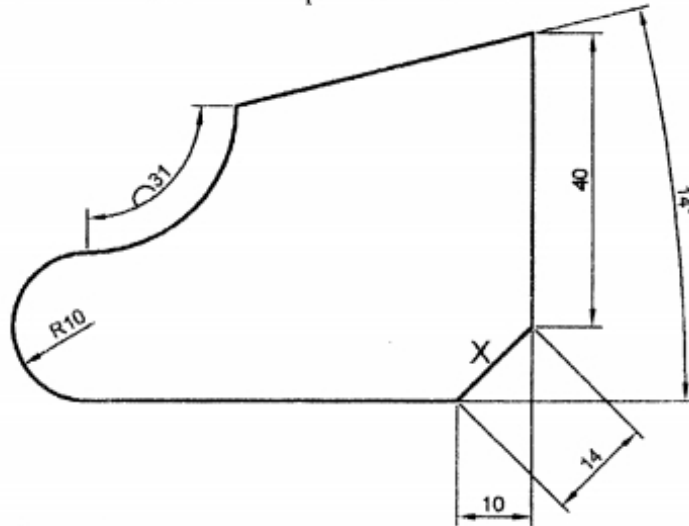


Figure 2

- (i) Identify **four** types of dimensions applied in the drawing. (2 marks)
- (ii) Outline the steps taken to create portion of the drawing labelled X. (2 marks)
- (iii) A copy of the drawing is required to be enlarged by factor 2. Describe the procedure to be followed. (2 marks)
4. (a) Explain **two** reasons why organizations prepare trial balances in their financial accounting procedures. (4 marks)
- (b) The Ministry of Education intends to develop a geographic information system (GIS) system that would be used to study the distribution of schools in the country. Outline **three** ways in which they would get spatial data into their system. (3 marks)
- (c) Figure 3 shows two views of a 3-dimensional block. Use it to answer the question that follows.

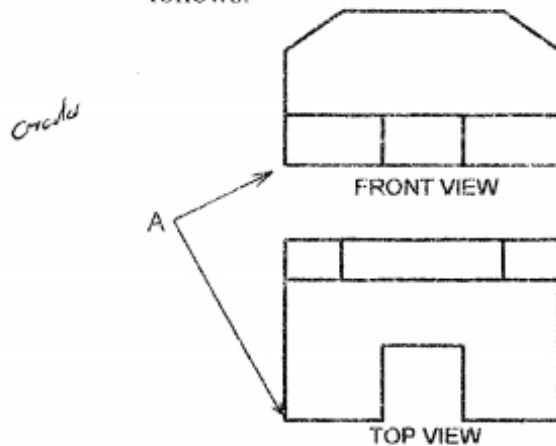


Figure 3

Sketch an isometric drawing of the object taking the point A as the lowest point in the drawing. (5 marks)

- (d) Distinction between *intelligent agents* and a *percept* as used in artificial intelligence. (3 marks)
5. (a) A new college has been advised to record their financial transaction using journals. Explain **three** benefits gained from this approach. (6 marks)
- (b) Explain **two** models used to represent spatial data digitally in geographic information systems (GIS). (4 marks)
- (c) Distinguish between *inductive reasoning* and *deductive reasoning* as used in artificial intelligence. (3 marks)
- (d) Describe the shape that would be formed from the following sequence of computer-aided design (CAD) commands and input. (2 marks)
- Line Specify first point: 0,0
Specify next point or [Undo]: 50,0
Specify next point or [Undo]: 50,30
Specify next point or [Close/Undo]: 0,30
Specify next point or [Close/Undo]: c
6. (a) In the following list of computer-aided design (CAD) program commands.
Explode Viewport Join Spline UCS
- (i) identify those which do not alter the shape of the drawing. (1 mark)
- (ii) In each case, state the use of the commands identified in (i). (1 mark)
- (d) Describe each of the following pricing methods used in inventory controls.
- (i) FIFO; (2 marks)
- (ii) LIFO; (2 marks)
- (c) Distinguish between a *note* and *an invoice* as used in accounting. (3 marks)
- (d) Describe each of the following search techniques used in Artificial Intelligence.
- (i) breadth-first search; (2 marks)
- (ii) bidirectional search; (2 marks)
- (iii) hill-climbing search; (2 marks)

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