

2920/202A
COMPUTER APPLICATIONS II
June/July 2023
Time: 2 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL
DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY

MODULE II

COMPUTER APPLICATIONS II

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 3 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) Outline the function of each of the following commands as used in a Computer-Aided Design (CAD) program:
- (i) erase;
 - (ii) regen;
 - (iii) join. (3 marks)
- (b) A company was tasked to develop a Geographical Information System (GIS) to manage information about schools in the country. Outline **four** data attributes that this system is likely to use. (4 marks)
- (c) Outline **four** reasons that may necessitate a business to use computer systems in recording financial transactions. (4 marks)
- (d) Outline **two** characteristics of job categories that are harder to replace with robotic technologies, giving **two** examples in each case. (4 marks)
2. (a) State **six** source documents used to record financial transactions in accounting. (3 marks)
- (b) A city management ordered that all commuter vehicles in the city be self-driven. Explain **two** benefits that these type of vehicles are likely to bring. (4 marks)
- (c) Distinguish between *absolute* and *relative* coordinates systems as used in a CAD program. (4 marks)
- (d) Distinguish between *reference map* and *thematic maps* as used in GIS. (4 marks)
3. (a) Outline **three** reasons that make relational database management system (DBMS) suitable for storing data in GIS. (3 marks)
- (b) With the aid of an example, describe the *Polar Coordinates system* as used in a CAD program. (4 marks)
- (c) Explain **three** ethical concerns that may arise as a result of introduction of robots to support operations in the society. (4 marks)
- (d) Explain **two** rules of double entry in accounting. (4 marks)
4. (a) Outline the mouse operation that would be carried out to achieve each of the following view options in a CAD program:
- (i) zoom in;
 - (ii) zoom extents;
 - (iii) pan. (3 marks)
- (b) Outline **three** of advantages *raster data* models in Geographical Information System (GIS). (3 marks)

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- (c) Describe **two** features of a stores ledger as used in accounting. (4 marks)
- (d) Figure 1 shows components of an expert system used in artificial intelligence. Use it to answer the questions that follow

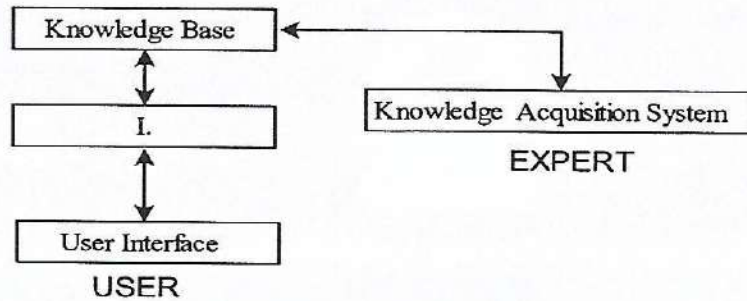


Figure 1

- (i) Identify the component labelled I. (1 mark)
- (ii) Explain the function of each of following components in the system:
 (I) knowledge base;
 (II) user interface. (4 marks)
5. (a) Outline **three** ways that GIS could be used in public health industry. (3 marks)
- (b) Explain each of the following terms as used in artificial intelligence:
 (i) Chatbots;
 (ii) neural networks. (4 marks)
- (c) Explain a circumstance that necessitates the use of each of the following commands in a CAD program:
 (i) blocks;
 (ii) splines. (4 marks)
- (d) State **two** differences between a *cash book* and a *bank statement* as used in accounting. (4 marks)
- 6 (a) State the ledger that is used to record each of the following transactions:
 (i) withdrawal of cash from the bank for personal use;
 (ii) purchase of a motorcycle on credit-general;
 (iii) payment of a creditor by cheque. (3 marks)
- (b) Distinguish between a *multileader* and *multiline text* as used in a CAD program. (4 marks)
- (c) With the aid of an illustration, explain the following terms as used in Artificial Intelligence:
 (i) agent;
 (ii) environment;
 (iii) percepts. (8 marks)

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