

1. People who work in front of a computer monitor for long periods usually expose themselves to some health hazards.

(i) Name four health hazards that could directly be linked to prolonged use of computers.

(4marks)

(ii) List and explain four actions you would take to avoid the four different computer-related health hazards.

(8 marks)

iii) a) What is a robot?

(2marks)

b) State three advantages of robots over human workers.

(3marks)

2. (i) The following flowchart shows how the barcode written on an item is used to find the price, do stock control and produce an itemized bill. Select statements from the list below to match the letters A to G in the flowchart (You may not draw the flowchart).

I.C.T

796

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Advanced level

LIST OF STATEMENTS 1.

Any more barcodes to read?

2. Has barcode been found in the file?

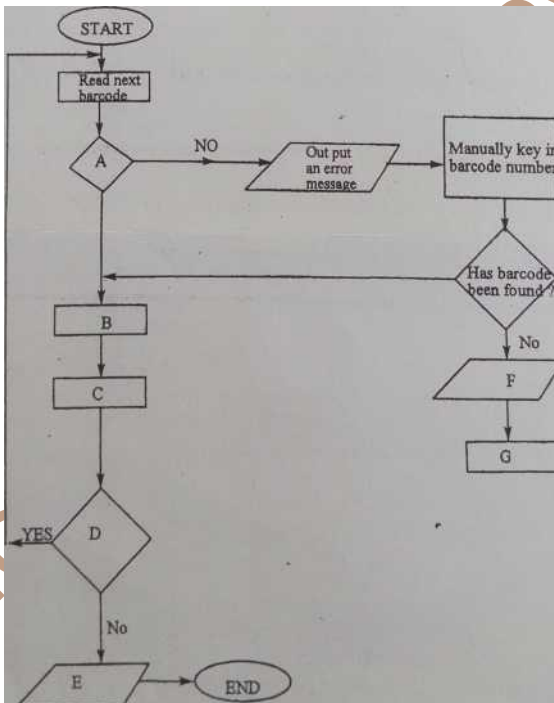
3. Look up the price of item in the file?

4. Output error report

5. Output itemized bill

6. Reject item

7. Update stock file



(7 marks)

iii) A system analyst is hired to carry out a feasibility study.

(6 marks)

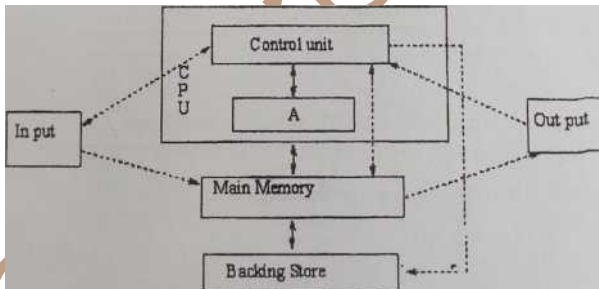
a) List and describe three areas that the system analyst should report on in the feasibility study.

b) Describe the methods that the system analyst could use in order to collect information about the current system being used in the organization.

(4 marks)

3. (i) Describe the following, stating an example where applicable in each case.
- Expert systems (12marks)
 - Geographical information systems
 - Simulation systems (2marks)
 - Reservation systems (3marks)
- (iii) (a) Give two implications of e-commerce to society (2marks)
- (b) List THREE reasons why e-commerce may not be a good business strategy in Cameroon. (3marks)
4. On-line banking has improved banking in most developed countries. It allows customers to access their accounts 24 hours a day without the need to open the doors of branches. The central computer runs most of the banking processes.
- (i) What do the following terms mean?
- Online
 - Central computer (4 marks)
- (ii) Give one advantage and one disadvantage of online banking the
- Bank
 - Customer (4 marks)
- (iii) Briefly state and describe the main function of each the following computer hardware components:
- CPU
 - RAM
 - Motherboard (6 marks)
- (iv) Draw the truth table for the following Boolean expression: (3 marks)
- $X \text{ AND } (X \text{ OR } Y)$

5. i) The diagram below shows the logical structure of a computer system. It shows the CPU, the main memory, backing store, input and output.



- Give the name of the component labeled A and state its main function, (3 marks)
 - Give another name for the main memory and state its major function. (3 marks)
 - How does the size of the main memory influence the computer's performance? (3 marks)
 - Give two other components found in the CPU that are not shown in the diagram. (2 marks)
- ii) Complete the table by stating the basic principle by which the given printers operate

Inkjet	Sprays ink through tiny nozzles on to the paper
laser	
Dot Matrix	

(4 marks)

- (iii) State two advantages of dot matrix printers. (2 marks)

- (i) What is the main difference between a floppy disk and a compact disc taking into consideration method of storage? (3 marks)
- (ii) a) What is the storage capacity of a standard 3 floppy disk? (1 mark)
b) How many floppy disks can contain the same amount of information in a standard 750MB CD? (3 marks)
- (iii) Define the following disc terminologies.
a) Tracks
b) Sectors (4 marks)
- (iv) Why is data storage on a hard disk organised in cylinders? (2 marks)
- (v) Why should a hard disk be defragmented regularly? (2 marks)
- (vi) Why is it necessary to format a magnetic disk before it can be used? (2 marks)
7. (i) In a school, teacher-student after school communication is by wireless network of laptop computers.
a) State two advantages for teachers using this system rather than desktop computers located in a computer laboratory. (4 marks)
b) Give two disadvantages of using laptop computers rather than desktop computers. (2 marks)
- (ii) A university provides on-line training courses.
a) Give two uses of each of the following to help the university run these courses.
- Spreadsheet package
- Database package
- Desktop publishing (6marks)
- b) A leaflet designed using a word processing software to advertise a course is currently too big to fit on a single printed page. State how you will use three features of the word processing software to alter the design so that it can fit on one page. (3marks)
- c) Give two advantages of a database package over a spreadsheet to manage school information. (2marks)
8. (i) a) What is SDLC? (1 mark)
b) List 4 phases in the SDLC (2 marks)
c) Choose two phases from (b) above and state 2 activities for each phase. (4 marks)
d) Describe 2 methods by which you can implement a completed computer system. (4 marks)
- (ii) Explain each of the following project management terminologies,
X a) Project
b) Critical path
c) Task (6 marks)
9. (i) Define computer network. (2 marks)
- (ii) Distinguish between Computer Network topology and computer network configuration. (2 marks)
- (i) Name and describe one network configuration. (3 marks)
- (iii) With the help of annotated diagrams name and describe two computer network topologies. (4 marks)
- (iv) Two types of network connecting media are cables and wireless standards. Name two types of network cables and two wireless network standards. (4 marks)
- (v) Give the main difference between a hub and a switch. (2 marks)