JOINT INTERSCHOOL EVALUATION TESTS
JISET 2009

MARKING SCHEME

COMPUTER
Paper 1
July August 2009

1. In each of the following situations state the most appropriate data processing mode. (2 marks)
   a). Hotel reservations
   - online data processing
   b). Pay roll preparations
   - batch data processing

2. a). What is a page description language? (I mark)
   - it is a resident program that translates commands from the printing program into instructions to the printer
   b). State two types of page description languages in the market today (2 marks)
   -postscript
   - true type

3. State two consequences of a poorly implemented system change over strategy (2 marks)
   - failure to obtain anticipated benefits
   - un expected time slippage
   - cost overruns that vastly exceed budgets
   - technical shortfalls resulting in performance that is significantly below the estimated level
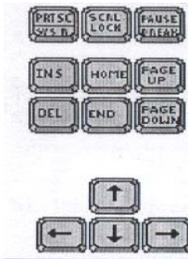
4. a). What is a section break as used in word processing? (2 marks)
   - a section break marks the end and beginning of a section in a document
   b). State two section breaks that can be used in a word processor (2 marks)
   - Odd
   - Even
   - Continuous
   - Next

5. State four levels of system testing (2 marks)
   - unit testing
   • system testing
   - user acceptance testing
   b). In relation to programming, what is meant by:

   i). Language syntax (1 mark)
   - The grammatical rules that govern the way in which words, symbols, expressions and statements may be formed and combined.

   ii). Semantic
   - These are rules that govern the meaning of the statements, symbols — what happens when the program is executed.

6. Distinguish between Job scheduling and job sequencing (2 marks)
   - Job scheduling — can only handle one task at a time therefore, the operating system has to determine which
   task will be processed first and makes sure that the one that is currently being processed is closely monitored to
   avoid wasting time in the processor.
   - Job sequencing — the operating system keeps a list ofjobs or tasks currently being run and clocks them in and
   out of the processor.

7. The diagram below represents a set of keys on the computer keyboard. Study it and use it to answer the questions that follow

a). Give the appropriate name given to the first set of keys in the diagram (1 mark)
b). State what the following key combination will do when pressed in
Microsoft word 2003
i). Ctrl + END (1 mark)
- moves the cursor from the current position in the document to the end
ii). Ctrl + DEL (1 mark)

8. Distinguish between central processing unit (CPU) and microprocessor (2 marks) The central processing unit is an area of the computer system that manipulates symbols, numbers and letters and controls the other parts of the computer system while a microprocessor is a semiconductor chip that integrates the computer's memory, logic and control on a single chip.

9. Suppose that i and j are integer type variables that have been assigned the values of 3 and -5 respectively. What
is the value of the following Boolean expressions? (2 marks)
a). (iDIV2)>=(j+6)
- false
b). i - 3=j+5
-true

10. a). State two characteristics of Rom (2 marks)
- can only be read but can not write on it
- it is non volatile
- stores permanent instructions from manufacturer
b). Name two devices other than the typical computer where ROM may be used (2 marks)
- microwaves
- cell phones
- videos

11. State the functions of the following devices: (2 marks)
a). Net work interface card
- creates a physical link between the computer and the transmission media
b). Expansion slot
- is a socket in the mother board into which an expansion board can be connected using one or two comb like
plugs in the expansion board.

12. For each of the following printers state the print modes
a). Dot matrix (2 marks)
- Draft, which is of relatively poor appearance
- Near letter quality (NLQ)
- Super letter quality (SLQ) which is nearly as good as the letters produced on a typewriter or a

full character
printer.
b). Inkjet printer (2 marks)
- Draft quality
- Standard quality
- High quality

13. a). what is meant by disk defragmentation? (1 mark)
- refers to arranging of scattered folders and files on a storage media for access of files and folders
b). State the purpose of disk defragmentation (2 marks)
- put the files back together so that they are contiguous
- consolidate the free space together after all of the files

14. Expert systems provide explanations for their solution while neural networks do not always explain why they
arrived at a particular solution
Expert systems' designers try to emulate a human expert's way of solving problems while the designers of neural
networks seek to put intelligence into the hardware in the form of generalized capability to learn
Expert systems can not be easily retrained while neural networks can easily be retrained

15. Define the following terms
- Bluetooth is a networking standard for high speed, radio based communication within a small area between
wireless handheld devices and computers
- MP3 (Motion Picture Experts Group Layer 3)
- Compression standard that can compress audio files for transfer over the internet with virtually no loss in quality.

16. a). write a pseudo code for this program (5 marks)
b). draw a flowchart for this program (6 marks)
c) Give two differences between procedural and non procedural programming languages (4 marks)

17. A student at Kula Mawe High school was asked to name four computer consumables. The student responded by naming the following; Toner, ink cartridge, plotter pen, ink ribbon.
a). Which of the items mentioned is likely not to be actively used in a school situation (1 mark)
- Plotter pen
b). Explain to the rest of the students what is meant by:
i). Toner cartridge (2 marks)
- is a fine powder of carbon that is used by photocopying and laser printers to produce printed text and images on paper. The powder is usually carried inside a cartridge, which also contains a photosensitive drum onto which the image to be printed is first reflected.
ii). Ink cartridge (2 marks)
- These are small containers of solid that is heated to boiling point when in use; the ink is then forced into very thin jets of a print head and sprayed onto paper
iii). Ink ribbon (2 marks) It is a narrow but long piece of fine cloth, which is soaked in ink and its ends fixed onto two spools inside a sealed ribbon cartridge.
c). Output devices are classified as either hard copy or softcopy devices.
i). Name two hard copy output device that can be used in a busy architectural firm (2 marks)
- Plotter

- Printers
- Computer Output on Microform (COMs)
ii). State two reasons why the user may prefer softcopy to hard copy output device (2 marks)
- to save on space and stationery
- the display of output is almost instantaneous
- some of the output, reading is not necessary
d). Use the two's binary compliment method of subtraction to work out the following (4 marks)
4561.558— 10011111.0012

18. a). Explain the meaning of the following field properties;
    i). Validation rule (1 mark)
    - It is a logical expression that relates values to be entered in a field.
    ii). Validation text
    - This is the message that appears once the validation rule is violated
    b). Below are two table structures of files in a database
    TableA Table B
    Field Data type Field Data type

Employee name	text	Employee no	Number
Employee number	Auto number	Data employed	Data/time
DOB	Date/ Time	Department	Text
Address	Text	Salary	Currency

    i). Which of the two tables is likely to be the parent table (1 mark)
    - Table A because it has employee information
    ii). It is advisable to 'enforce referential integrity' when creating a relationships. What do you understanding by the term referential integrity?. (2 marks)
    - To ensure all records entered in the related table exists in the primary table.
    iii). The field 'employee no' in table B likely to be the foreign key. What is a foreign Key? (2 marks)
    - Is a unique field that identifies each record in the secondary table in a relationship.
    iv). Which fields in both tables is most appropriate for creating a relationship? (I mark)
    - Employee number
    v). What would make the relationship between the table fail to work? (2 marks)
    - The data type is not similar

    c) i). In databases the field properties specify finer details related to the fields and the table entries
    expected. State **THREE** field properties. (3 marks)
    - input mark
    - Validation Rule
    - Required
    - Indexed
    ii). State THREE functions of a database (3 marks)
    - To enhance security of data
    - To share file between departments
    - To reduce redundancy
    - To enable updating and deleting of data
    - In faster searching of data

19. a). I). Explain three communication services offered through internet (3 marks)
    - Chatting
    - E-mails
    - Video conferencing
    ii). Describe the following internet terms (2marks)
    Sign Up
    Download
    b). The following is a spreadsheet relating to a farmer.

i). a function 1F(B2<200 "Not Viable"), IF(B2>300," Moderate"), IF (B2>1000, "Viable"))). Give the appropriate result returned in cells C2, C3, C4 and C5 (2 marks)
ii). Text can easily be selected using a mouse in word processing. How do you select
a). Multiple paragraph
- Triple click (2marks)
b). Vertical block of test
- Hold down Ctrl as you drag the mouse pointer
c). Distinguish between (2marks)
i). A window and an orphan in word processing

	A	B	C
1	Crop	Amount	Remark
2	Maize	*150*	Not viable
3	Bean	300	Not viable
4	Cashew nuts	*850*	Moderate
5	Cabbages	1036	viable

- A window is a heading without the appropriate body part while an orphan is the body without the heading.
  ii). Computer Crime and Computer abuse
  d) i). Give one purpose of drop caps on a text paragraph (mk)
  - To emphasize the beginning of a paragraph
  ii). What is meant by artificial intelligence? (1 mark)
  - This is the ability of computers to think and reason like human beings
  ii). Give two application of artificial intelligence (2mks)
  - Expert systems
  - natural language processing
  - voice recognition
  - voice synthesis
  - computer vision
  - neural networks
  - robotics

20. You were typing a document on the computer and the power of the computer was abruptly interrupted. When the computer was restarted, the document was no longer in memory.
    a). i). explain why the document was not in memory (1 mark)
    - since the document was still in RAM, it disappeared when power was interrupted.
    - The document was still in main memory which is characterized by being volatile i.e. the contents disappear when there is a power interruption.
    ii). Give **TWO** precautions that can be employed to ensure that a document is not completely lost in the event of a power interruption. (2 marks)

- frequently or regularly save the document in the secondary storage device or storage media.
- Connect the computer to the UPS

b). The two diagrams below represent two softcopy output devices.

Figure 1