

KIRIMA JOINT EVALUATION TEST-2009

451/1

COMPUTER STUDIES

PAPER 1

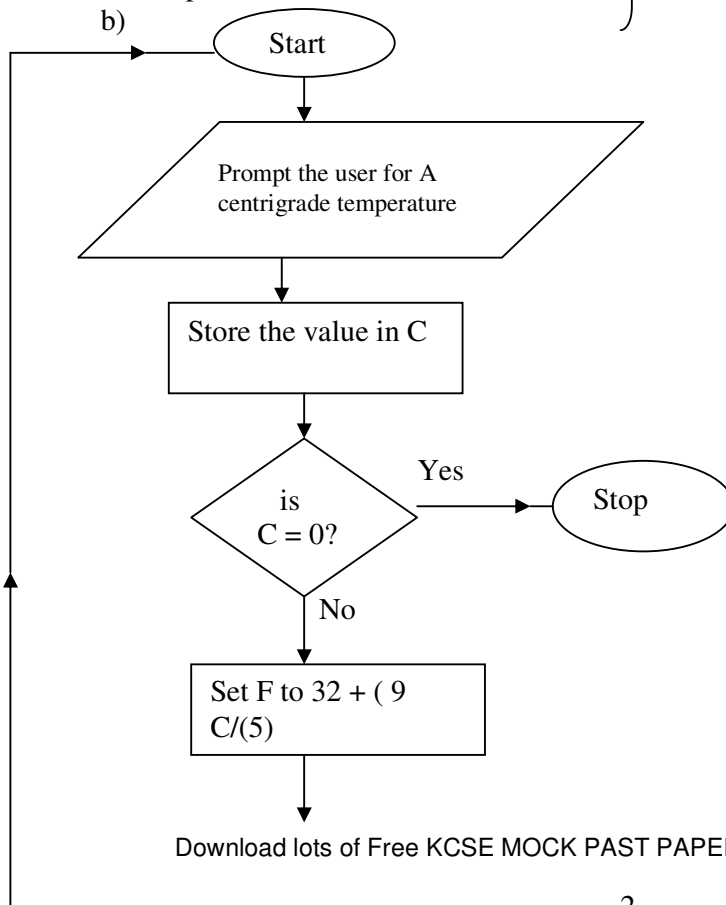
MARKING SCHEME

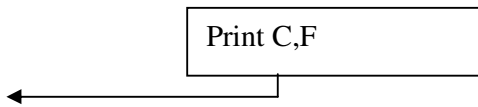
1.
 - i) Pocket calculator
 - ii) Video recorder
 - iii) Washing machine
 - iv) Petrol pump Any two = 1mks
2.
 - i) Marking of multiple - choice question papers
 - ii) Questionnaire ½ mk
 - iii) Meter reading sheets – marked by the meter reader ½ mk
3.
 - a)i) Console input (keyboard) 1mk
 - ii) Voice input –(microphone)
 - b) To store information temporarily to cope with the difference in speeds of the various peripherals (input / output) devices. **Explanation = 1 full mark**
4.
 - i) ROM:- Storing the computers start up program – boot strap and O.S **1mk**
 - ii) RAM- Stores data and instructions which are currently being processed by the computer 1mk
5. Are devices that are attached to, and controlled by the CPU, but are not contained inside the CPU. 1mk
6.
 - i) For permanent storage of information 1mk
 - ii) To store more information which cannot be accommodated in the main storage 1mk
7.
 - a) i) Basic (½mk) ii) FORTRAN (½mk) iii) COBOL (½mk) iv) PASCAL(½mk)
 - v) C,C++(½ mk)
 - b) Compiler:- Translates entire program (source code) to machine code(object code).
1mk for correct explanation
 - Interpreters:- Translates the source programme line – by – line, allowing CPU to execute on line before translating their next. 1mk for correct explanation
8.
 - a) Is an instruction booklet and paper work that comes with a computer program, and explains the purpose of the programme and tells you what to do if any errors occur.(2mks) **for correct explanation**
 - b) System trouble shooting and diagnosis 1mk
9.
 - i) Research of drugs ½ mk
 - ii) Monitoring intensive care patients ½ mk
 - iii) Providing preliminary diagnosis ½ **Any 4 = (2mks)**
 - iv)Automating nurses stations ½ mk
 - v) Scheduling lab times and operating root times ½ mk
 - vi) Controlling devices that care for the handicapped ½ mk
 - vii) Patients records ½ mk
10. CAI- Use of computers to learn, drill and practice a particular education principle
1mk for correct explanation
CAL – Is the use of computers and appropriate computers software to allow students to learn at their own pace / and / or create a more interesting learning environment in which teaching material is presented. **1mk for correct explanation**
11.
 - a) Sorting of records according to the values in the field **Any 1 correct = 1mk**
 - b) Speeds up storage, retrieval and running of queries
 - c) Enables a relationship between tables for easy joining.
12.
 - a) Simulation :- Science of representing the behaviour of a real life situation by use of a computerised model. **Correct explanation= (2mks)**
 - b) Virtual reality:- A condition in which a person becomes psychologically immersed in an artificial environment generated by a computer system. **3mks for correct explanation**

- The systems include hardware and interactive graphics software which can replicate sensations that imitate real world.
- c) i) Customers are billed correctly – correct prices used **1mk each**
 ii) Faster – no manual entry of details **1mk each**
- 13. a) i) Portrait **1mk**
 ii) Landscape **1mk**
 b) i) Backspace key **1mk**
 ii) Del(delete) key **1mk**
- 14. a) i) Recording of marks **1mk**
 ii) Preparing a school budget **1mk**
 b) i) Recording of marks – it would use a formulae to calculate the total marks per student and would use the ability to 1mk the data to place the student in rank order or alphabetical order.
Formulae
Sorting 1mk
 ii) Preparing a school budget would also use formulae 1mk to calculate total and charts to present the budget to the school managers - **Formulae**
 - **Charts 1mk**
- 15. Binary 10001110_2 (1mk)
 Denary 142_{10} (1mk)
students to show clear working / procedures in their conversions

SECTION B 60 MARKS

16. a) Start
 Print "Enter temperature (centigrade)"
 Input C
 $F = 32 + (9 * C) / 5$
 Print " centigrade" , Fahrenheit
 Print c, F
 Stop
- } **Each step = 1mk**
Correct procedure
Steps = 1mk

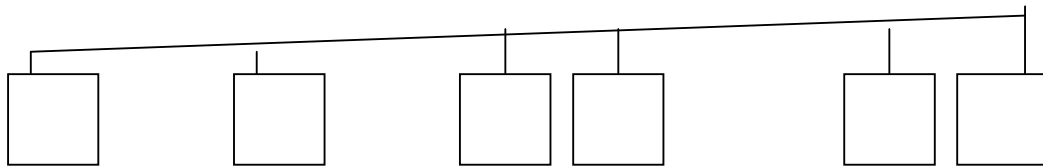




Start- stop = 1mk
Correct symbols used = 1mk
Correct flow indicated = 1mk
Looping general neatness of the diagram = 1mk

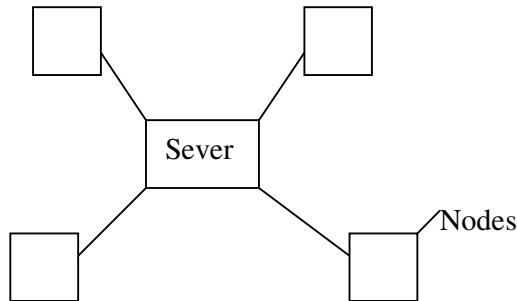
- c) i) Case construct – used when multiway branching is needed
- ii) The repeat --- until construct – Tasks repeated until a certain condition is met.
- iii) The for construct - Task executed for a given number of times.
- iv) While – Task executed while a condition is either true / false.
- v) If - then - Else – for any given test of the condition, one set of statements is selected for execution

17. a) i) Bus



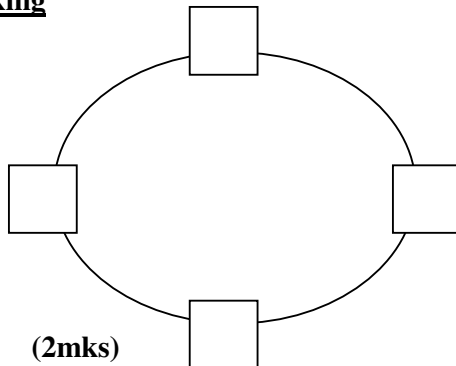
Correct drawing & explanation = (2mks)

ii) Star



(2mks) correct drawing and explanation

iii) **Ring**



(2mks)
Correct drawing and
Explanation

- b) i) **Print server** – Allows the users of the network to share the printers, maintains a print queue and ensures that print outs from different users do not get mixed up. **(2mks) for correct explanation.**

ii) Internet server- Will connect to the internet through an ISP. Will deal with request for information from the www.

iii) Intranet server. Will hold web pages that can be accessed by the users.:

Local information that the teachers wish to be available to students will be placed there.

(2mks) for correct explanation

c) An editor or word processor is used to prepare the message. The e-mail address of the receiver is added and the message is sent.

Detailed explanation on e-mail writing is required and can earn a student full marks

18. a) i) Fire in the computers-Take regular backups and store them away from the computer.

ii) Hacker – Use / employ passwords to access the system. *(2mks)*

iii) Virus attack – virus checker (antivirus) should be installed and updated regularly

iv) Disgruntled ex employees – passwords locking the computer room *(2mks)*

(2mks) for correct explanation

b) **Private data** – Data / information that belongs to an individual and is not accessed by or disclosed to any person unless with direct permission from the owner.*(2mks)*
Confidential data:- Data / information held by a govt or organization about people
Can be seen without necessarily informing the owner.

c) **Sources of virus**

i) Contact with contaminated systems

ii) Pirated software

iii) Freeware and shareware

iv) Updates of software and distributed via networks

19.a) Problem definition / recognition – identification the problem by the user. *(2mks)*

ii) **Requirements analysis** – losses and benefits of the new system and requirements specification will then be produced

iii) **System analysis**- Existing system is analysed in detail using interviews, questionnaires. E.t.c *(2mks)*

iv) **System design** – Reports, files, inputs and processing stages are designed in detail and document *(2mks)*

v) **Construction** – Writing of programs, debugging and documentation *(2mks)*

vi) **Testing** -Each part of the system will be tested individually followed by full system tests. *(2mks)*

b) Is because the evaluation of the project finally leads to suggestions for improvements to be made. The improvements can only be put in place by starting the system life cycle once again.

20. a) i) Card holder bank account

i) Amount of cash

ii) Name/ personal details

Any two = (2mks)

b) Customer inserts card, ATM reads the information from strip and communicates with the CPU to access the customers account.

- Customer is prompted for a pin number, then customer is required to select a transaction to be made / carried out .

- If sufficient funds are available, then the transaction is completed.

Correct explanation

Correct steps and procedures (5mks)

c) The computer will check the customers account to determine if sufficient funds are available for the transaction. If funds are not sufficient, a message will appear on the screen, similarly, if the daily ATM withdrawal limit is reached the computer will send a message to the clients over the same. *Correct explanation = 3mks*

i) **Telecommuting** : A situation whereby a person uses a computer and a communication channel to establish a link with a remote computer- Individuals stays at home and work.

Correct explanation = (2mks)

ii) Computer, digital camcorder, microphone, telephone teleconferencing

1mk each for any three = 3mks