

**BORABU INTER - SECONDARY SCHOOL  
JOINT EVALUATION TEST - 2009  
451/1**

**COMPUTER STUDIES**

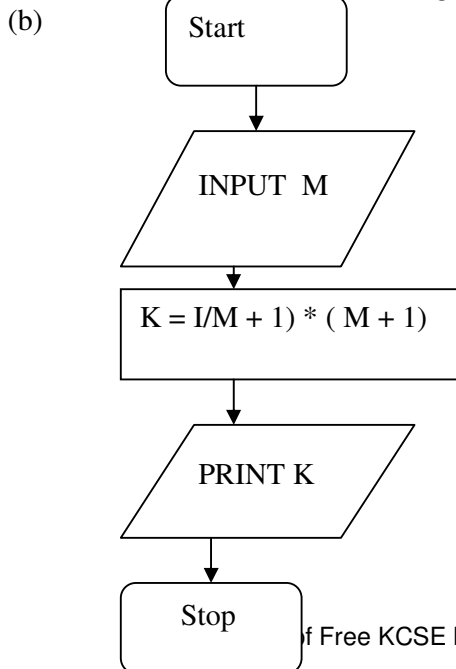
**PAPER 1**

**(THEORY)**

**MARKING SCHEME**

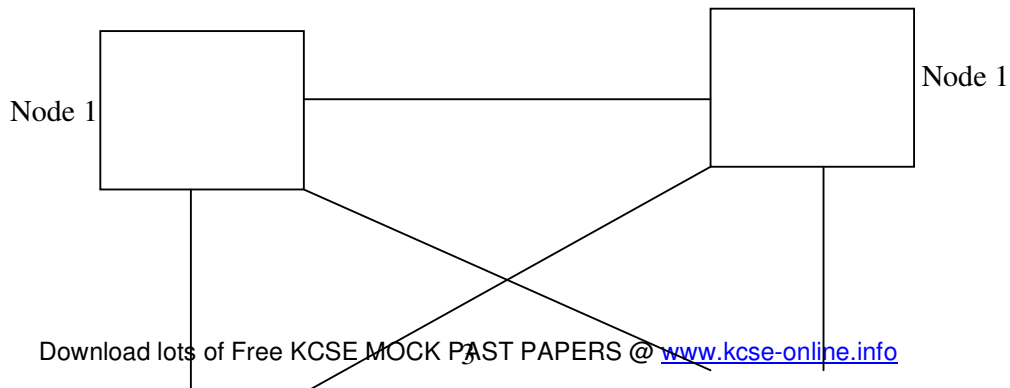
1. (a) (i) Computer programmer  
Accept – write, test and maintain detail instruction of program  
Design and test logical structures for solving problems *(award 1mk)*
- (ii) Software engineers often work on team that design how hardware/ software/  
systems analysis and solving programming problems *(award 1mk)*
- (b) (i) Electronic point of sale – device of bar code that detect prices of items when in  
contact with items in retail store *(award 1mk)*
- (ii) Advantages of EPOS  
Fast  
Accurate *(award 1mk each)*
- (iii) Retail/ supermarket *(award 1mk)*
2. (a) Back up – file used to hold information for security purpose *(award 1mk)*
- (b) Reference – hold information for future and look up purposes *(award 1mk)*
3. (a) 11101.011  
$$\frac{111.111 + 100101.010}{1000} = (37.25)_{10}$$
 *(award 2mks)*
- (b) - Training of pilots  
- Architectural designing  
- Sea diving
4. (a) RD – used to rename a directory *(award 1mk)*
- (b) DIR \*.\* - view all files and directories *(award 4mks)*
- (c) CD – change directory *(award 1mk)*
5. (a) Difference between WAN and LAN  
WAN - cover large geographical area than LAN  
Difficult to configure/ trouble shoot then LAN  
Supports many users *(award 1mk each)*
- (b) Point – to point - data transmission from one to another  
Broad cast – transmission from one to many computers  
*(award 1mk each)*
6.
  - Type
  - Element
  - Size *(award each 1/2mk)*
7. (a) USB
- (b) Serial
- (c) Parallel
8. L 23 + Q\$18 *(award 2mks)*
9.
  - Logical file – viewed in term of what data item contain and processing to be done
  - Physical file – viewed in terms how data is stored and processing is done
10. (a)

- Installation disk
  - Service pack
  - User manual
- (award 1/2 each)
- (b)
- Memo
  - Cv
  - Letters
  - Projects
  - Reports
11. (a) H/l
- Uses words/ l/l uses mnemonic/ symbolic language
  - H/l uses friendly (learning/ understanding)
  - H/l – occupies large memory
  - H/l – easy to program
  - L/l – machine dependant
- (award 1mk each)
12. (a) Nibble – grouping 4 bits
- (b) Bit - binary digit of O<sup>s</sup> and I<sup>s</sup>
- (c) Word – group of two or more bytes
13. (a) (i) R – task manager
- (ii) S – system tray
- (award 1/2 mark each)
- (b) R – hold currently running application tasks
- S – display application running on the background
- (award 1mk)
14. (a)
- System file
  - Application file
- (b) (i) Use of bulgar proof/ alarms/ watchmen etc
- (ii)
- Use of correct shutting down computer after use
  - Passwords/ log files/ firewalls
15. (a) (i) Algorithm – steps defining of solving a problem (award 1mk)
- (ii) Pseudo – code - writing of an algorithm similar to real programming language (award 1mk)
- (iii) Flowchart – Diagrammatic representation of an algorithm (award 1mk)



*(award each correct symbol 1/2mk each) & data direction arrow flow 1/2 each)*

- (c) Var  
K, M: Real;  
Begin  
Write (input M);  
Readln(M);  
K = 1/ (M+1) \* (M+1)  
Writeln (k);  
End.
- (award 1mk each step)*
16. (d) Purpose of compilation is to trace the syntax errors that due committed during program coding *(award 2mks)*
- (a) (i) Label  
(ii) Value  
(iii) Label represent text value represents numbers
- (b) = ES + ES \* 10% *(award 2mks)*
- (c) = count (B2 : B6), ">300") *(award 2mks)*
- (d) (i)
- Does not have control structures
  - Does not have declaration of start and stop
- (ii) Examples subscripting
- UB script
  - Java script
  - HTML
  - PHP
  - XML
  - ASP
- (e) Verification - ascertain of data is correct  
Validation – check of appropriateness of data
- (f) Advantages of modules
- Debugging of errors is easy
  - Easy to follow programs & understand
  - Simplifying program development *(accept any two each 1mk)*
17. (a) (i)
- Assist schools in learning/ teaching
  - Examination Analysis
  - Student record management
  - Time tabling & administration functions *(award 1mk each)*
- (ii) Mesh topology





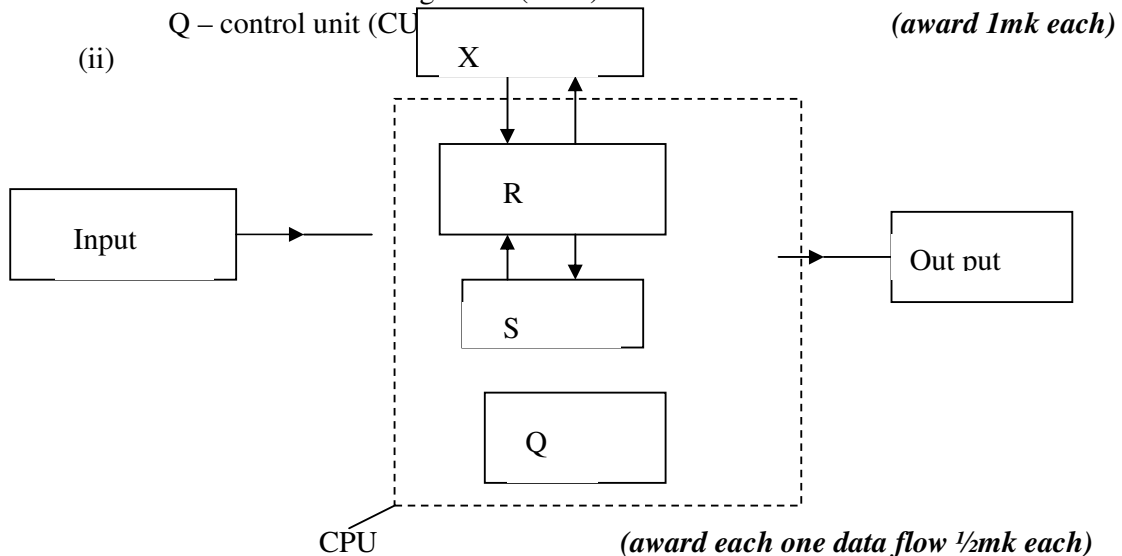
**Advantages**

- Reliable and efficient
- Failure of one node does not halt communication with other node
- Improves sharing of jobs by the nodes

**Disadvantages**

- Expensive to install and maintain
- difficult to trouble short faults due to absence of central control unit

- (b) Data encryption
- (i) Distorting data to prevent un authorized disclosure  
Password – secret code for prevention of unauthorized access to data in a computer
- (ii) Dry run – is where the program is tested in paper before it is typed  
Walkthrough – style of evaluating a program by a team which reports to programming term
- (c) (i) X – secondary storage/ backup/ external  
R – primary memory  
S – arithmetic and logic unit (ALU)  
Q – control unit (CU)



18. (a) (i) Combination of video, audio text and images to provide interactive, creative and effective way of producing & communicating information
- (ii)
- CD- ROM drive
  - Speakers
  - DVD
  - Sound cards
  - SVGA monitor
- (b) (i) Warranty – documentation agreement showing terms and conditions of selling a product incase product fail to function
- (ii)

- Product duration coverage
  - Callout response and liability agreement
  - Preventive maintenance. *(award 1mk each)*
- (c)
- Buffers
  - Registers
  - Cache memory
- (award 1mk each)*
- (d) Read - transfer of data from external storage device to primary memory  
Write - transfer of data from primary to secondary memory. *(award 1mk each)*
- 19 (a) (i) Job sequencing  
Keeping list of jobs or tasks converting running and clock them in and out of the processor  
Job scheduling – enables the processor to handle one task at a time by monitoring it to avoid time wastage
- (b) Graphical based  
Designed to edit and format a graphic object like pictures
- Examples**
- Adobe photoshop
  - Corel draw
  - Harard graphics
- Layout based**  
Design to create different page layout design for text and pictures
- Example**
- Adobe page maker
  - Microsoft publisher
- (c) (i) Chatting – exchange of ideas freely through discussions in a room networked Computers
- (ii) Website – vast virtual space on the internet where information pages for easy access by external world
- (iii) Search engine – special websites that maintain a list of hyperlink to the next when they find new material
- (d) (i) Employment
- Job creation
  - Job replacement
  - Job displacement *(explain any 2 award each 1mk)*
- (ii) Environment
- Pollution (from computer parts)
  - Energy consumption *(explanation of each award 1mk)*