DRAFT MARKING GUIDE 2018
UCE COMPUTER STUDIES 840/1

SECTION A: MULTIPLE CHOICE QUESTIONS

1. C	7. B	14. D
2. D	8. A	15. D
3. C	9. C	16. C
4. A	10. B	17. A
5. D	11. A	18. B
6. A	12. B	19. D
	13. B	20. C

SECTION B: STRUCTURED

21. (a) A computer is an electronic device which accepts, processes, stores and outputs data/information

Or.
An electronic device that manipulates data.

Or.
An electronic device with hardware and software.

Or.
An electronic device with a monitor, system unit, printer, keyboard, mouse, etc.

Or.
An electronic device which accepts data & output information.

Or.
It's a programmable machine/device.

(b) (i) - Enter key.
- Return key
- Arrow key
- Tab key

Any 1 x 1 = 1 mark

(ii) - Caps lock key

1 mark

(iii) - Backspace key

1 mark

(c) Contributions of computers in teaching and learning

- Computer aided research
- Computer aided teaching and learning/distance learning
- Computer aided assessment for grading and positioning of learners
- Computer aided academic planning for timetabling, scheming, lesson planning, drawing of academic budgets, etc
- Edutainment
- Storage of academic records
- Monitoring students and teachers attendance and academic programs
- Creation of visual learning aids
- Loss of productive academic time in playing computer games
- Loss of educational materials
- Promotion of examination malpractices

Any 2 x 1 = 2 marks

(d) (i) Tasks done by a computer programmer

- Create software/designs programs/writing codes/coding
- Debug
- Test programs
- Upgrade programs
- Educate and advise on which program to use
- Install /uninstall/implementsprograms
- Program consultancy
- Writing program manuals(documentation)

Any 1 x 1 = 1 mark

(ii) Tasks done by a computer technician

- Service and repair (e.g upgrades software/hardware/trouble shooting/dust blowing *any other activity done in service and repair)*
- Maintain standards like rules and regulations (e.g locking the lab)
- advise users on basic procedures, regulations and specifications to use
- Writes reports on computer performance to managements

Any 1 x 1 = 1 mark

(iii) Tasks done by a database administrator

- Creates databases/linking databases
- Maintains/updates/delete/backup/restore/manages/decodes databases/controls archives
- Ensure database security(ensures data integrity/data redundancy)
- Availing required data/information to users
- Decides on the specific database software to use

Any 1 x 1 = 1 mark

22. (a) (i) **Explanation of functions of an input device**

- To feed/enter/give/capture/input data/information and instructions/commands to the computer

Any 1 x 2 = 2 marks

(ii) **Examples of input devices**

- Scanner(OCR, OMR, Barcode reader)
- Microphone
- Light pen
- Joystick
- Keyboard
- Mouse
- Touch pad
- Tracker ball
- Digital cam
- Dance pad
- etc

Any 1 x 1 = 1 mark

Examples of output devices

- Monitor
- Printer/plotter
- Speaker
- LED
- Projector etc

Any 1 x 1 = 1 mark

(b) **Definition of a device driver**

- A program that allows the operating system to communicate/interact with specific system devices/peripherals e.g. printer driver, scanner driver, VGA drivers, System board drivers etc.

2 marks

(c) **System considerations before installing windows operating system**

- System type based on bit/bus architecture (Type, Function, Purpose, Nature) e.g 64bit/32 bit
- CPU specification (type, speed)
- System manufacturer
- Size of hard disk
- Internal memory (RAM) size or capacity
- Disc drive and other ports

Any 3 x 1 = 3 marks

(d) Reasons why a computer may be restarted

- To clear a malware from memory/check for a virus
- To configure new software settings such that they interact well with the operating system
- To enable the system to recognize new hardware specifications/settings after installation
- Refresh the system
- To enable a hanging program to reorganize itself for a task

Any 1 x 1 = 1 mark

23. (a) **What is a formula in spreadsheet**
A user defined expression/statement used to manipulate data for returning some desired output/result.

2 marks

(b)**Describing how to sort names in ascending order**

- Highlight/select content to sort
- select data on main menu
- click on A-Z sort icon

Or.
- Highlight/select content to sort
- select data on main menu
- select sort
- on the sort interface/ dialog box select name from column
- select A-Z order
- click ok

Or.
- Select data to sort
- select home from main menu
- select sort & filter from home ribbon
- click option A-Z

Or.
- Highlight data to sort
- right click on the selected data
- select sort
- click sort A-Z /ascending order

2 marks
Or
1 mark

(c)

(i) 5 records ***1 mark***

(ii) 4 fields ***1 mark***

(iii) 0027200190653 ***2 marks***

(iv) Number in stock ***1 mark***

(v) - Because it would uniquely identify the specific products and procedures.
- No different item would share a barcode

Any 1 x 1 = 1 mark

24. (a) **Describing the terms**

(i) **Repeater**

Devices with ability to regenerate/amplify/energize/electronic signals along a transmission channel in a LAN or WAN.

2 marks
Or
1 mark

(ii) **Gateway**

A device with the ability to link/interconnect/enable interface between networks of different configuration/protocols.

2 marks
Or
1 mark

(b) **Types of transmission media**

- Wired/cabled/bounded or guided (Coaxial, fiber optics, twisted pair/untwisted pair)
- Wireless/unbounded or unguided (radio waves, infrared & micro waves)

Any 2 x 1 = 2 marks

(c)**Website design considerations**

- Layout/frames/layers(banners, content areas)
- Navigation provisions
- Content
- Graphics/images
- Feedback
- Site management tools (hit couters, tracking of site visitors etc)
- Color/font contrasts
- Number of pages
- Security provisions
- Type of website

Any 4 x 1 = 4 marks

25. (a) A footnote is a referencing feature that appears in the last line of the page where the referenced text or phrase is located.

2 marks
Or

1 mark

(b) **Types of page orientation**

- Landscape orientation
- Portrait orientation

2 marks

(c) **Action cut and paste**

Refers to moving/transferring/changing/relocating selected content from one place to another

1 mark

(d)**Presentation software**

- Ms. power point
- Apple keynote
- Open office impress
- Corel presentation
- Adobe persuasion
- K-presentation
- Lotus freelance **etc**

Any 2 x 1 = 2 marks

(e) (i) **Differentiating slide transition from slide animation**

Slide transition is movement/control/effects from one slide to another.

while

Slide animation is effects/controls of elements within a slide

Or.

Slide transitions link one slide to another **while** slide animations manage effects within a slide.

Any 1 x 2 = 2 marks
For both sides corrects

(ii) **Purpose of slide sorter view**

- Delete or to add slides
- To give an over view of the whole set of slides in a presentation
- Reorganize or rearrange slides

Any 1 x 1 = 1 mark

26. (a) (i) **Explanation of application software**

A program designed to meet specific end user or user tailored tasks.

2 marks

(ii) Examples of application software

- Word processors e.g Ms. word, Abi Word, Word perfect

- Spreadsheets software e.g Ms Excel, Lotus 1-2-3, VisCalc, SuperCalc, Calc
- Presentation software e.g Ms. PowerPoint, Apple Keynote, Open Office Impress, Corel Presentation, Adobe Persuasion
- Database management software e.g Ms. Access, DBase I, II or III, SQL, MySQL, Sea Sharp, MS Visual Basic
- Web authoring software e.g Dream weaver, Ms Publisher
- Communication software e.g Yahoo mail, Hotmail, WhatsApp
- Desktop publishing software e.g Ms. Publisher, Adobe PageMaker, Corel Draw
- Gaming software
- Video editing software
- Photo editing software
- Accounting software
- Architectural software e.g Arch card, AutoCAD

Any 2 x 1 = 2 marks

(iii) **Factors to consider before buying application software**

- Upgradeability
- Purpose
- Security/safety provisions
- Free bugs/errors
- Flexibility
- Cost of the application program
- Compatibility
- easy to learn
- documentation
- self-help menu
- Accuracy/efficiency (how fast the **sw** is)
- After sales service (delivery, install)
- Storage space (portability)
- reliability
- Past experience of the app.**sw**
- Nature of organisation

Any 2 x 1 = 2 marks

(b) **Define the terms given in relation to computer programming**

(i) **Source code**

- A collection of computer instructions (possibly with comments) written using some human readable and usable language such as text.
- A collection of computer instructions ready for compiling and are written in text format.
- Is a raw form (not yet changed into machine readable format) of a computer program in text form.

Any 1 x 2 = 2 marks

(ii) **Keyword**

A word that is reserved by the program because it has a special meaning/purpose.

2 marks

SECTION C

27. **Specification to consider when buying a laptop computer**

- CPU specifications e.g type and speed
- Provisions for a local disc and local disk specifications e.g type, disc space
- RAM size or capacity
- The brand
- Generation
- Nature of operating system
- Networking capabilities
- Nature of the monitor and specifications (Size, touch capability, VGA card specifications)
- Nature and number of ports
- Provision and number of pointing devices
- Laptop color
- Provision for data capture
- Laptop size
  - Removable drives/storage capabilities
  - Battery life
  - Documentation
  - Safety and security

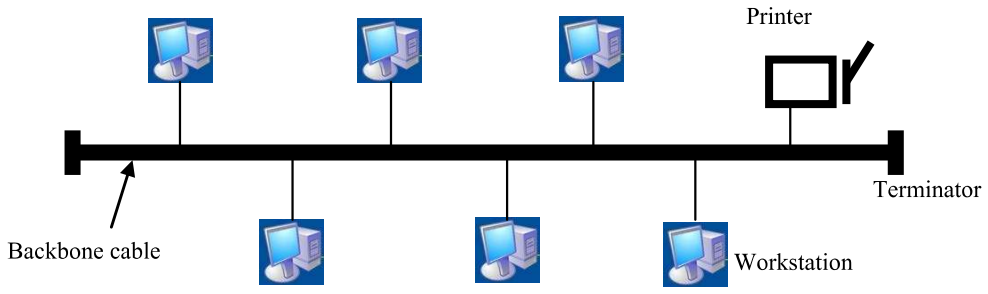
Any 5 x 4 = 20 marks
Mentioning a specification = 2 marks
Relevant Explanation = 2 marks
Total = 4 marks per specification

28. **Sketch and explanation of network layouts**

Bus or linear topology

A topology in which each node is connected in series along a single conduit or main cable called a bus.

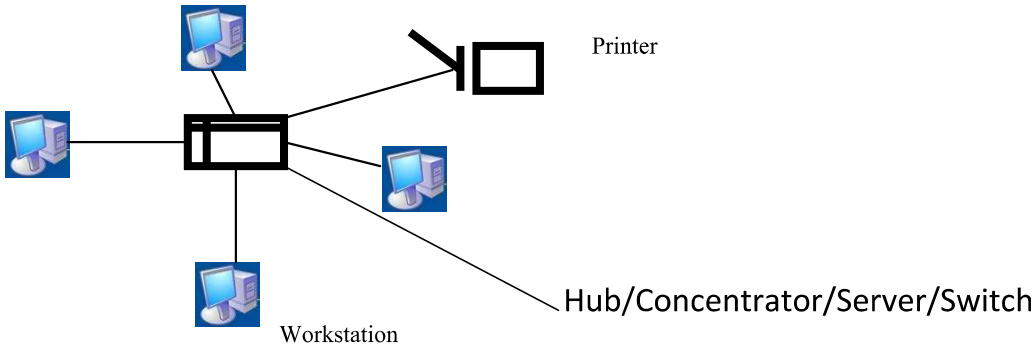
A sketch diagram of a bus topology



Star topology

A topology in which all the nodes are connected to a central hub. Each node has an equal right of transmission of data.

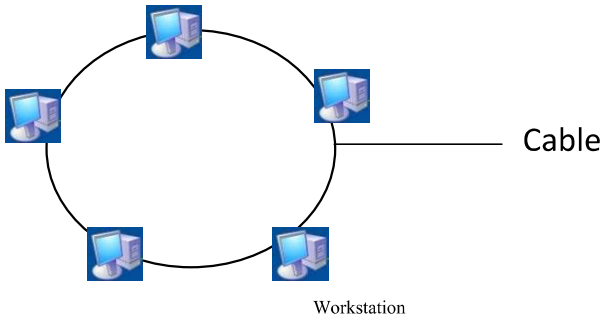
A sketch diagram of a star topology



Ring Layout/topology

A ring topology is a network layout in which each node has exactly two neighbours connected to it for communication purposes. For each node to communicate, it must make a request for a token be able to send a signal along the path.

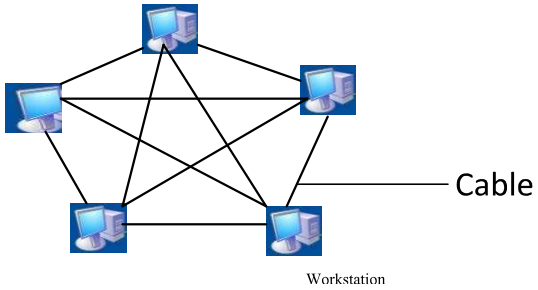
A sketch diagram of a ring topology



Mesh network layout/topology

A network topology in which at least each node has two or more paths between them.

A sketch diagram of a mesh topology



Any 4 x 5 = 20 marks
Mentioning = 1 mark
Sketch diagram = 1 mark
Labeling = 1 mark
Explanation = 2 marks
Total = 5 marks per topology

- **Extended Star/Tree/Hybrid topology**
  - It's a combination of two or more topology
  - The same network topology to be distributed in different segiments
  - It's the extended star Or a combination of two or more star topology
    Or. it's a combination of two or more topologies

29. (a) **Reasons for using a flowchart other than a pseudo code for solving a problem**

- A flowchart is easy to interpret and understand
- A flowchart provides a better/easier understanding of the problem processing logic Flowcharts provide more detail yet readable structure of analyzing a problem.
- Are more capable of showing the overflow of instructions or data from one process to another.
- One can easily conceptualize the whole program at just a glance from a flowchart.
- A flowchart provides an easier way of error identification and rectification. They offer/give more efficient program maintenance as they give the programmer which part of the program logic to put emphasis on and can be edited to suite new changes.
- With flowcharts information needs or problems are analyzed in a more effective way that reduces costs and time wastage
  - Makes results look attractive and organized

Any 3 x 2 = 06 marks

(b) **<u>AN ALGORITHM /A PSEUDO CODE TO PROMOTE, MAKE REPEAT OR DISMISS A STUDENT</u>**

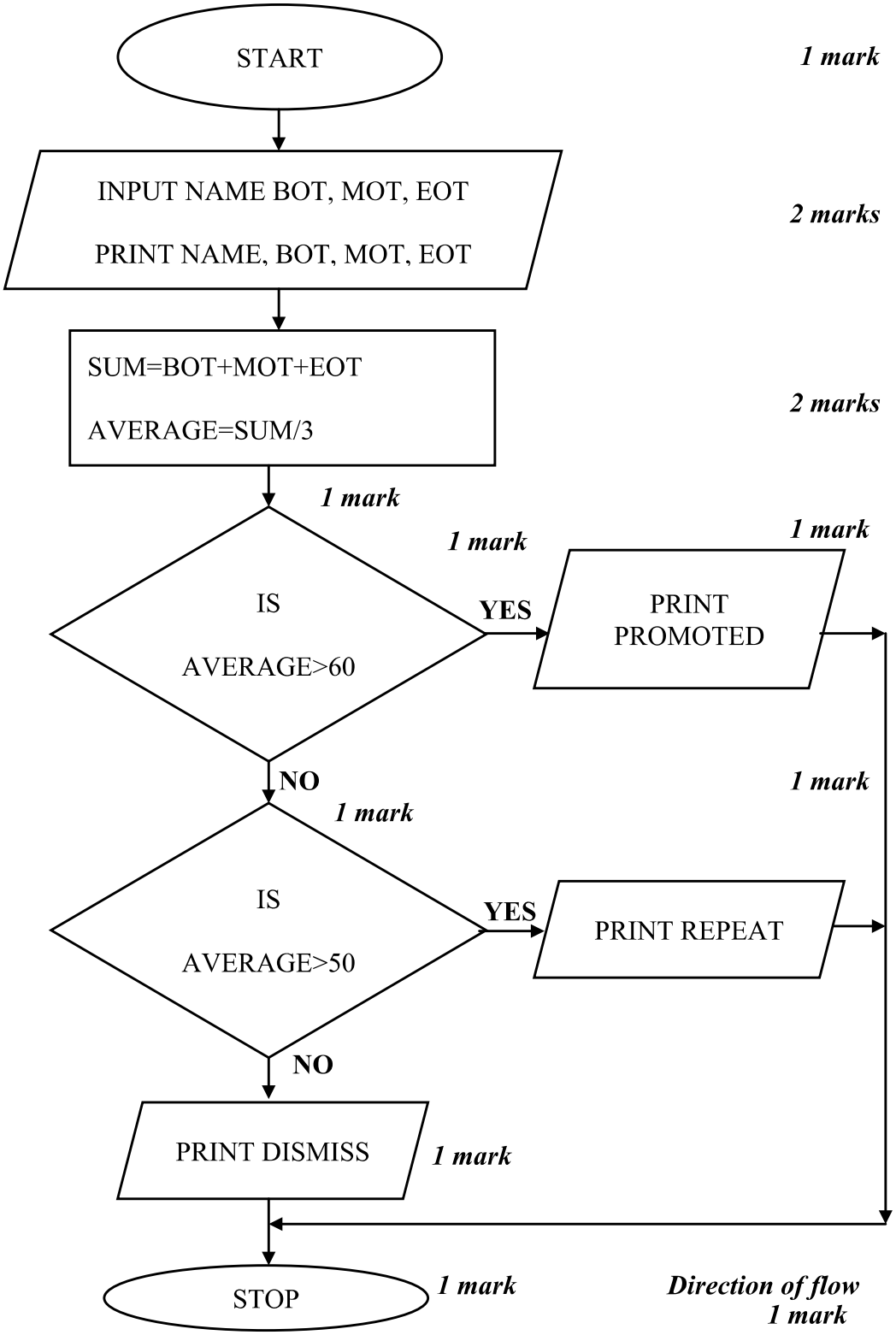
1 mark

```
1.  START                                                    1 mark
2.  INPUT NAME, BOT, MOT, EOT                                1 mark
3.  PRINT NAME, BOT, MOT, EOT                                1 mark
4.  PRINT BOT, MOT, EOT                                      1 mark
5.
6.  SUM = BOT + MOT + EOT                                    1 mark
7.   AVERAGE = SUM/3                                         1 mark
8.            IF AVERAGE > 60,                               1 mark
9.                  PRINT “PROMOTED”                         1 mark
10.           IF AVERAGE > 50,                               1 mark
11.                 PRINT “REPEAT”                           1 mark
12.          ELSE
13.               PRINT “DISMISS”                           1 mark
14.         END IF                                           1 mark
15.   END IF
16. STOP                                                     1 mark
```

OR.

(b) **AN ALGORITHM/A FLOW CHART TO PROMOTE, MAKE REPEAT OR DISMISS A STUDENT**

1 mark



1 mark

2 marks

2 marks

1 mark

1 mark

1 mark

1 mark

1 mark

1 mark

1 mark

1 mark

Direction of flow
1 mark