NAME……Sign……
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MOCK EXAMINATIONS 2018
S.4 COMPUTER STUDIES 840/1
Theory Paper.
TIME: 2 HOURS 30 MINUTES

Marking Guide

INSTRUCTIONS:

- Write your **NAME** and **SIGNATURE** in the spaces above.
- This paper consists of three Sections A, B and C.
- Section A contains 20 **compulsory** objective type questions.
- Section B contains six compulsory structured questions
- Answers to Section B must be written in the spaces provided in the question paper.
- Section C contains three equally weighted practical theory questions. Answer only one.

For Examination Use Only

MCQ	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	TOTAL

Section A

1. Which of these computing devices used during mechanical era had characteristics almost similar to present day computers:
   A. Pascaline machine.
   B. Hand tabulator.
   C. Difference engine and analytical engine.
   D. Leibniz calculator.

2. To produce a sketch map of Uganda from a computer onto a print media, senior four students will use a ….
   A. Graphic plotter
   B. Pointing stick
   C. Joystick
   D. Light pen

3. ……. Printer has the lowest print quality with lowest running costs.
    A. Dot matrix
    B. Bubble jet
    C. Inkjet
    D. LaserJet

4. Which stage during the machine processing cycle is concerned with the interpretation of the given instruction?
    A. Storage
    B. Execution
    C. Decoding
    D. Fetching

5. P2P network functional relationship works well where computers share:
    A. Similar characteristics
    B. Different instructions
    C. Same server
    D. Different computer nodes

6. Which of these file extension names belongs to a word processor file.?
    A. .exe
    B. .xlsx
    C. .ppt
    D. .docx

7. The ethical issue that deals with the responsibility of controlling the availability and use of data is…….
    A. Access
    B. Accuracy
    C. Ownership
    D. Privacy

8. One of the following measures can help one troubleshoot a flash disk which cannot be read by the computer:
    A. Close all the running programmes
    B. Encrypt the flash disk
    C. Format the flash disk
    D. Reinstall the operating system

9. What will be the effect of transferring A$2 to K10 in a computer spreadsheet.?
   A. A$2 will remain as A$2
   B. A$2 will change to K$2
   C. A$2 will change to K10
   D. A$2 will change to K$10

10. Which type of software can be used to request for a specific resource from the server on a network?
   A. Server software
   B. Client software
   C. System software
   D. Messaging software

11. A trial version is an example of ……
   A. Share ware
   B. Free ware
   C. Commercial software
   D. System software

12. In word processing, use of a …… enables a user to apply a desired font design to a selected text.
   A. Copy and paste.
   B. Format painter.
   C. Cut and paste.
   D. Cut and copy.

13. ……Is a protocol designed to transfer electronic mail reliably and efficiently on a network.
   A. FTP.
   B. TCP.
   C. IPX.
   D. SMTP.

14. Peter has data on an external hard disk with 1 Tera byte storage capacity. How many flash disks of 2GB storage capacity does he need to store the same amount of data.?
   A. 1024. Flash disks
   B. 1000 flash disks
   C. 2000 flash disks
   D. 512 flash disks.

15. BIOS is directly concerned with one of the following computer tasks.
    A. Loading operating system into Memory
    B. Configuration of devices
    C. Keeping and determining the computer's booting procedure.
    D. Spooling of print jobs.

16. Which of these definitions is ideal for a robot.
    A. A system especially one programmable by a computer— capable of carrying out a complex series of actions automatically.
    B. An output device which can carry heavy loads in the factories.
    C. An input device which enters data into the computer.
    D. An input-output device capable or receiving data and outputting information from a computer system.

17. Private networks or computers are protected from external attacks by using
    A. Firewall B. Antivirus C. Digital signature D. Encryption

18. On the web …….. is the use of computers to simulate a real or imaged environment that appears as a three dimensional (3-D) space.

    A. Virtual reality.
    B. Audio.
    C. Video.
    D. Animation

19. An ATM is a
A. general-purpose computer
B. mechanical machine
C. special-purpose computer
D. cash storing cupboard

20. Mr. Kato wants to view all his six slides at once and rearrange them in a different order. Which of these presentation view can he use?
    A. Normal view
    B. Slide show
    C. Notes page view
    D. Slide sorter view

SECTION B (60 marks)

21. (a) Give two characteristics which define a computing device. (02 marks)
    - Accepting data
    - processing data
    - outputting data
    - storage of data
    - speed
    - accuracy
    - automation
    - Versatile
    - Diligence etc.

      NB. Give the meaning of the above terms

(b) List two reasons why hospitals need to use computers. (02 marks)

- For storage of the patients' records
- For communication within the hospital
- For research by the nurses and doctors
- For security where CCTV cameras are connected as they monitor

(c) Define the term information. (02 marks)

This is processed data. Materials which are ready for use by the user.

(d) Mention any four stages involved in information processing cycle. (04 marks)

- Input stage
- Processing stage
- Storage stage
- Output stage

22. (a). Choose which program matches with the task given in the table. (03 marks)

Desktop publishing, Disk space analyzers, Microsoft Access, Operating system, Microsoft word

	Task	Program used
1	This software is used to create, edit, format, save and print any written material.	Ms word
2	It is a software used to design and produce complicated documents that contain text, graphics and brilliant colors.	Desktop publishing

3	Is a collection of logically related instructions that manage the way a computer operates.	Operating system

(b). Outline two advantages of using high level programming languages over low level programming languages. (02 marks)

- Easy to learn and use
- Easy to debug

(c). Define the following terms in relation to computer programming:

(i). Code. (01 mark)

This is a term used for the statements written in a particular programming language

(ii). Alpha Test (01 mark)

This is the first testing done by the programmers to establish the efficiency of the program before it is taken to the end users.

(d). State three qualities of a good programme. (03 marks)

- Easy to use by the users
- Portability i.e can easily run on a variety of operating systems.
- Efficiency. A good computer program should be laid out in such a manner that it utilizes the least amount of memory and processing time.
- Proper documentation
- Generality means that if a program is developed for a particular task, then it should also be used for all similar tasks of the same domain. For example, if a program is developed for a particular organization, then it should suit all the other similar organizations.
- Flexibility: A program should be flexible enough to handle most of the changes without having to rewrite the entire program.

23. (b) Define the term software suite. (02 marks)

Programs which are bundled and sold in a single package/unit

(b) Two examples of software suite (02 marks)

- Nero suite
- Microsoft office suite
- Apple iWork suite
- Adobe suite etc

(c) List two advantages of using off the shelf software programmes (02 marks)

- They are cheap
- They are error free
- Readily available
- Documentations and literature about such program can readily be got

(d) Using spreadsheet functions given below, fill in the most appropriate function in the spaces provided. (04 marks)

Max, sum, median, mode, min, countif

(i) To determine the total of items in a given range……SUM

(ii) Determining the lowest value in a given range……MIN

(iii) Counting values which fulfill a given CONDITION……COUNTIF

(iv) Determining the value which appears more times in a given range……MODE

24. (a) Distinguish between a switch and a router as used in data communication. (02 marks)

A switch is a piece of a physical circuitry component that governs the signal flow by opening and closing for the signal flow whereas a router is hardware device designed to receive, analyze and move incoming packets to another network.

(b) Identify any three functions of communication protocols during data transmission. (03 marks)

- Determines the communication path
- Break data into transferable packets
- Reassembles the packets into a complete file after transmission

(c) Explain the importance of the following features in a school website. (03 marks)

(i) Page titles ……For summarizing what the page is about

(ii) Images……Illustrating what the page is about. The images/pictures summarize the content on the page hence attracting the attention of the visitors.

(iii) A marquee …a moving text or graphic which attracts the attention of the audience by making animated movements.

(d) Differentiate between URL and a domain name. (02 marks)

The address of a resource on the website whereas a domain name is an address of a website/name of the website.

25. (a) Distinguish between input and output as used in data processing. (02 marks)

Input refers to entered data/instructions for processing whereas output refers to produced information from a computer.

(b) Give one example of the following hardware components. (02 marks)

(i) Input hardware…mouse, keyboard, joystick, stylus pen, bar code reader, microphone

(ii) Output hardware…monitor, projector, printer, plotter etc

(c) List any three factors you consider before installing a program on a computer. (03 marks)

- Compatibility mode
- Speed
- RAM
- Cost
- HDD space

(d) Give benefits of a computer having the following specifications to the computer user. (03 marks)

(i) High processor speed……fast processing

(ii) Several USB ports……for connecting several peripherals

(iii) HDMI ports……for connecting visual display units for better output. High definition output.

26. (a) Differentiate between a database and a database management system. (02 marks)

A database is a collection of related data where as database management system is a software which creates and handles a database.

(b) Which field properties would you use to perform the following tasks. (03 marks)

(i) Limiting the number of characters to be entered in a field……Field size.

(ii) Using an expression to limit the kind of data in a field…validation rule

(iii) Putting a label on a field to be displayed during datasheet view, form or report view.

Caption

(c) List any three views in which a user can display his/her work when using a word processor. (03 marks)

- Read mode
- Print layout
- Web layout
- Outline
- draft

(d) Define the term **icons** as used in graphical user applications. (02 marks)

An **icon** is a small graphical representation of a program or file or command.

Section C

27. (a) As a computer student who has been employed to work in a computer laboratory, give a list of factors you would consider before installing a new program on a computer. (10 marks)

You should make sure that the application you wish to install is compatible with your operating system.

The speed of the CPU whether it can handle the program you intent to install

The amount of RAM to run the software you intend to install (look at system requirements)

Amount of disk space where the program will be accommodated.

Accessibility features – If these are important to the user they should be checked to ensure they are included in the software before it is installed.

Cost of the software – An organization needs to check the full cost of the software before installation. The full cost will be the cost of the licenses needed for all the computers plus the cost of setting the software up, training staff and paying for any support and maintenance.

Security features – these are important in a new operating system and includes firewalls, malware management and setting user permissions.

Any five X 02 = 10 marks

(b). Give any five possible computer malfunctions which can be solved by a computer reboot.

(10 marks)

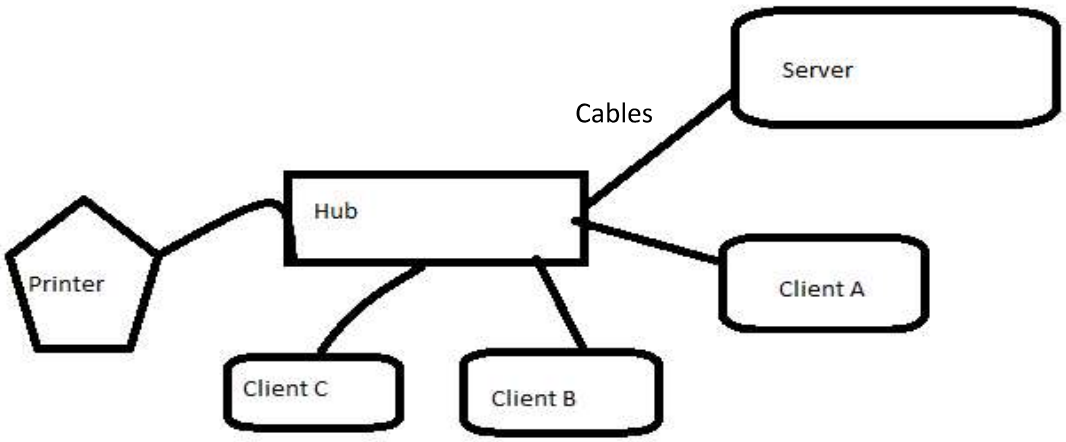
- The external storage devices can be read
- The input devices cannot be read
- The output devices like printers can be installed and cannot be configured.
- Sudden reduction in speed.
- Sudden hanging and freezing of the computer system.

Any five points X 02 = 10 marks

28. (a) Give five challenges which an organization is likely to face as a result of networking its computers.

- *File sharing – you can easily share data between different users, or access it remotely if you keep it on other connected devices.*
- *Resource sharing – using network-connected peripheral devices like printers, scanners and copiers, or sharing software between multiple users, saves money.*
- *Sharing a single internet connection – it is cost-efficient and can help protect your systems if you properly secure the network.*
- *Increasing storage capacity – you can access files and multimedia, such as images and music, which you store remotely on other machines or network-attached storage devices.*
- *Staff, suppliers and customers can share information and get in touch more easily*
- *Business can become more efficient - eg networked access to a common database can avoid the same data being keyed multiple times, saving time and preventing errors*
- *Staff can deal with queries and deliver a better standard of service as a result of sharing customer data*
- *staff can deal with more customers in less time since they have shared access to customer and product databases*
- *You can centralize network administration, meaning less IT support is required*
- *You can cut costs through sharing of peripherals and internet access*

(b) Sketch a well labeled diagram of a simple office network showing the most important devices involved in networking. Name the devices and explain how the drawn illustration works (15 marks)



In a simple office network, computers are can be connected to a central point connected by a central device called a hub.

On the network, a server can be used to control and manage the resources of the network.

Different clients are computers which serve as nodes on the network.

Such a network can have a printer which is shared by all the computers on the network.

29. (a) Computers offer different opportunities to different people in our country. Make a list of five computer professional careers clearly showing the requirements of each job. (10 marks)

- System analyst
- Data entry clerk
- Computer programmer
- Software engineer
- Information systems manager
- Database administrator
- Computer trainer/teacher
- Web master
- Computer graphics designer
- Network administrator
- Network security administrator

Etc

Explain what is involved in these professions.

Any 5pts X 02 = 10 marks

(b) Using examples, describe any five advanced technologies which show the growth of information technology in your country. (10 marks)

- Wireless connectivity
- Virtual reality in games
- Simulated learning experiments
- Use of CCTV for security with night vision facilities
- Computerized parking of cars
- Use of GPS in locating places
- Robots in factories to managing processes and maintaining quality
- Robot in homes
- Test tube babies
- Video conferencing
- Etc

  Any 5X02 = 10 marks