

Candidate's name

Signature.....

Random No.						Personal No.		

(Do not write your School/Centre Name or Number anywhere on this booklet)

840/1
COMPUTER STUDIES
Paper 1
Oct./ Nov. 2020
2 ½ hours



UGANDA NATIONAL EXAMINATIONS BOARD

Uganda Certificate of Education

COMPUTER STUDIES

Paper 1

2 hours 30 minutes

INSTRUCTIONS TO CANDIDATES:

Write your name, signature, random and personal numbers in the spaces above.

This paper consists of three section; A, B and C.

Section A contains 20 compulsory objective-type questions. The correct alternative A, B, C or D must be written in the box provided on the right hand side of each question.

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 question. Answers to section C must be written in the answer booklet(s) provided.

Any additional question(s) answered will not be marked.

For Examiners' Use Only

MCQ	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	TOTAL

SECTION A (20 MARKS)

Answer **all** questions in this section.

1. Which one of the following types of software assists a user to manage and maintain the computer?
- A. utility programs.
 - B. application software.
 - C. compilers.
 - D. interpreters.
-
2. Presentation software can be applied when
- (i) creating an organization chart.
 - (ii) creating queries and reports.
 - (iii) displaying email messages.
 - (iv) enhancing communication with visual aids.
- A. (iii) and (iv).
 - B. (ii) and (iii).
 - C. (i) and (iv).
 - D. (ii) and (iv).
-
3. A computer specialist involved in the determination of an organisation's information needs is referred to as a
- A. Systems Programmer.
 - B. Systems Administrator.
 - C. Systems Analyst.
 - D. Systems Engineer.
-
4. The following are advantages of using computers in an education institution **except**
- A. admission of students is made easy.
 - B. more job opportunities are created.
 - C. compiling of students' marks is improved.
 - D. E-learning can be applied.
-
5. The ability of a computer to handle repetitive work with the same speed and accuracy is referred to as
- A. diligence.
 - B. adaptability.
 - C. reliability.
 - D. automation.
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6. **Log off** as applied in computers refers to
- A. closing a program by a user.
 - B. switching on the computer when it hangs.
 - C. shutting down a user account then restarting it.
 - D. ending a session by a user.
7. The following are image file formats **except**
- A. Graphic Interchange Format (GIF).
 - B. Graphical User Interface (GUI).
 - C. Portable Network Graphics (PNG).
 - D. Joint Photographic Experts Group (JPEG).
8. The tags that would create a link to page 2 in HTML are
- A. `< href = "page 2. html" > click here to go to page 2 < / a > .`
 - B. `< a href = "page 2. html" > click here to go to page 2 < / a > .`
 - C. `< href = "page 2. html"> click here to go to page 2 < a > .`
 - D. `< a href = "page 2. html"> click here to go to page 2 a / > .`
9. In database software, organizing data in more than one table is known as
- A. flat file database.
 - B. referential database.
 - C. hierarchical database.
 - D. relational database.
10. The following are icons of windows operating systems **except**
- A. Mozilla Firefox.
 - B. Internet Explorer.
 - C. My Computer.
 - D. Recycle Bin.
11. How can text be selected in word processing, without using a mouse?
- A. Use the arrow keys while holding the space bar.
 - B. Use the arrow keys while holding down the control key.
 - C. Use the arrow keys while holding down the shift key.
 - D. Use the arrow keys while holding down the ALT key.

12. A program code that is in a machine readable form is referred to as
- A. an assembler.
 - B. a source code.
 - C. a translator.
 - D. an object code.
13. One method of gathering data during system development is
- A. coding.
 - B. testing.
 - C. observation.
 - D. encryption.
14. A computer can be guarded against unauthorised access using
- A. an antivirus.
 - B. a web browser.
 - C. a search engine.
 - D. a password.
15. In a computer system unit, the CPU is
- A. a storage place for data and programs.
 - B. an information base in the processor.
 - C. a device that serves as the main data processor.
 - D. a disc device with data that can be processed.
16. The phrase that is used to describe devices that work with a computer system as soon as they are connected is
- A. Plug and Play.
 - B. Point to Point.
 - C. Peer to Peer.
 - D. Start and Run.
17. The factors below affect communication speed over the Internet **except**
- A. processor of the computer.
 - B. physical size of the computer.
 - C. bandwidth.
 - D. traffic on the Internet.

18. How many characters of information can be stored by a byte?
A. 1
B. 10
C. 8
D. 2

19. The term MODEM stands for
A. Modern Decompressor.
B. Modern Demodulator.
C. Modulator Decompressor.
D. Modulator Demodulator.

20. In spreadsheets, an active cell is the
A. current cell.
B. cell which is empty.
C. cell with data.
D. cell address.

SECTION B: (60 MARKS)

Answer all questions in this section.

All answers must be written in the spaces provided.

21 (a) List **three** features of the first generation of computers. (03 marks)
(i)
(ii)
(iii)

(b) Explain the following computer classifications:
(i) Digital computers. (02 marks)
.....
.....
.....

(ii) Analog computers. (02 marks)
.....
.....
.....

(c) State any **three** areas where Artificial Intelligence is applied. (03 marks)

- (i)
- (ii)
- (iii)

22. (a) Identify an output device for each of the following tasks:

(i) Produce music or voice output. (01 mark)

.....

(ii) Display text, graphics, video or animation. (01 mark)

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(iii) Produce a photograph on paper. (01 mark)

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(iv) Print a large size architectural drawing. (01 mark)

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(b) Suggest any **two** factors you should consider when buying a printer. (02 marks)

(i)

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(ii)

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(c) Distinguish a **computer alert** from an **error message**. (04 marks)

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23. (a) The worksheet below shows scores for different houses in a school. Use the worksheet to answer the questions that follow.

	A	B	C	D	E	F
1	HOUSE	CLEANLINESS	BED MAKING	COMPOUND	TOTAL SCORE	POSITION
2	Cranes	40	20	70		
3	Bats	80	10	100		
4	Eagles	90	11	90		
5	Spirals	80	15	80		
6	Rwenzori	80	16	100		
7	Elgon	10	18	55		
8	Kilimanjaro	100	20	40		
9						
10	Mode					

- (i) Suggest an application program that can be used to manipulate the given data. (01 mark)
-
- (ii) How many columns are in the given worksheet? (01 mark)
-
- (iii) Write the formula for determining the modal score for COMPOUND. (01 mark)
-
- (iv) Write the formula for finding the position of each house using the TOTAL SCORE. (01 mark)
-
- (b) Outline two advantages of applying a primary key to a database table. (02 marks)
- (i)
-
- (ii)
-
- (c) Distinguish between **Text** and **Memo** data types in relation to databases. (02 marks)
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-
-
-

- (d) Give **two** features of a good database table design. (02 marks)
- (i)
 - (ii)

24. (a) Explain the terms below as used in computer studies. (02 marks)
- (i) Internet. (02 marks)

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.....

- (ii) Internet Service Provider. (01 mark)

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.....

- (iii) E-mail software. (02 marks)

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- (b) Differentiate between a website and a homepage. (02 marks)

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.....
.....
.....

- (c) Using the URL: <http://www.armyschools.edu/news/sports.htm>, identify the:

- (i) Protocol
- (ii) Domain name
- (iii) Path

(03 marks)

25. (a) State any **two** uses of a ruler in a word processing application. (02 marks)

- (i)
- (ii)

(b) Give the meaning of each of the following terms as used in word processing:

(i) Text Alignment. (02 marks)

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.....

(ii) Print Preview. (02 marks)

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(c) Explain the following features in a presentation software:

(i) Speaker Notes. (02 marks)

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(ii) Slide Master. (02 marks)

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.....

26. (a) Explain the term Computer Software. (02 marks)

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.....

(b) State the two main categories of computer software and give one example of each.

(i) Category:.....(02 marks)

Example:

(ii) Category:.....(02 marks)

Example:

(c) Define the term **Syntax** as applied in programming. (02 marks)

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.....

(d) Give the difference between an interpreter and a compiler. (02 marks)

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SECTION C: (20 MARKS)

Answer only one question from this section. Answers to the question must be written in the answer booklet provided.

27. Describe any **five** computer faults and suggest ways to overcome them. (20 marks)

28. You are provided with seven computers to be networked. Describe the layout and any five devices you would need to set up the network. (20 marks)

29. Seka secondary school has some students who are fees defaulters. The school charges Shs500,000 as fees but the headteacher dismisses all the students whose fees deposits are less than Shs300,000 and the rest are allowed to sit for exams.

(a) Design an algorithm that will prompt the headteacher to:
(i) Enter the students' names and fees.
(ii) Determine the names of the students to be dismissed and those to sit for exams.
(iii) Display **Dismiss** or **Sit** exams on the screen. (10 marks)

(b) Using a programming language of your choice, write a simple program code to implement the algorithm. (10 marks)