

CSC110

INTRODUCTION TO COMPUTER SUMMARY

PAST QUESTIONS & ANSWERS

Q - BASE PROGRAMMING

&

CALCULATION ON NUMBER BASE

JET



BY



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SHOP F4,
BASEMENT SHOPPING COMPLEX.

SUMMARY

COMPUTER

A computer is a machine or an electronic device that manipulate data, input and store programs.

HISTORY OF COMPUTER

1. In 1617, Scotman named John Napier invented logarithms or Napier's bone.
2. Leonardo da Vinci (1452 - 1519) made drawings of gear-driven calculating machines
3. Napier also invented slide rule in 1632.
4. In 1642 Blaise Pascal invented the pascaline, a one-function (only addition) calculator and also invent probability theory, syringe & hydraulic press.
5. German Gottfried Wilhelm Leibniz build a four-function i.e. addition, subtraction, multiplication and division
6. Leibniz was the first to advocate use of the binary number system.
7. 1801 Frenchman Joseph-Marie Invented the Jacquard loom, a machine for cloth weaving.
Jacquard loom uses punched cards to create the desired pattern.
8. 1822 English mathematician Charles Babbage invented a calculating machine called the difference Engine. It computes tables of numbers. e.g. logarithm tables.
9. Babbage was also the Inventor of the speedometer and Analytic Engine which comprises of two parts, the store and the mill.
10. Lady Ada Byron was the first computer programmer. She programmed the Analytic engine.
11. 1890 Herman Hollerith Invented the Hollerith desk or census tabulator.
12. Harvard Mark 1 computer was built in 1944. This was the first programmable digital computer.
13. Grace Hopper was the number one programmer for mark 1 computer.
14. 1953 Grace Hopper Invented the first high-level language, 'flow-matic' also known as COBOL.
15. A compiler translate a high-level language into the binary language of the computer.
16. Howard Aiken is the principal designer of the mark 1 computer in 1947.
17. The ABC digital computer was invented by J.V Atanasoff in 1937
18. 1941, J.V Atanasoff and Clifford Berry built a machine that could solve 29 simultaneous equations with 29 unknowns.
19. In 1936 Konrad Zuse built a sequence of general purpose computers. First Z1, Z2, Z3, Z4, built in 1941
20. Electronic Numerical Integrator and calculator (ENIAC) was built between 1943 and 1945 by two professors John Mauchly and J. Presper Eckert.
21. Eckert, Mauchly and John Von Neumann design EDVAC.
22. Von Neumann worked out the method to detonate an atomic bomb.
23. Universal Automatic computer (UNIVAC) was invented in 1950
24. Bill Gate invented inter microprocessor in 1981
25. Generations of computer
 1. First Generation (1940-1956) vacuum tube examples are UNIVAC and ENIAC. They relied on machine language to perform operations.
 2. Second generation (1956-1963) Transistor examples are COBOL and FORTRAN. They move from cryptic binary machine language to symbolic, or assembly languages. Also High-level programming language.
 3. Third generation (1964-1971) Integrated circuits.
 4. Fourth generation (1971-present). Micro processors.
 5. Fifth generation - present & beyond Artificial intelligence
Deals with voice recognition. The goal of fifth-generation computing is to develop devices that respond to Natural language input are capable of learning and self-organization. A computer is a machine or an electronics device that manipulates data, input and store programs.

S/n	Machine	Year	Developer
1	Napier's Bones, slide rule	1610, 1932	John Napier
2	Pascaline	1642	Blaise Pascal
3	L. Stepped Reckoner	1671	Von Liebniz
4	Jacquard Loom	1801	J.M. Jacquard
5	Difference & Analytical Engine	1822	Charles Babbage
6	Programmed the analytical engine		Lady Ada Bryon
7	Census Tabulator	1890	H. Hollerith
8	ABC Computer	1937	Professor. J. Atanasoff
9	Colossus (cryptography)	1943	Tommy flowers
10	Digital & programmable mark 1	1944	Harvard- IBM
11	(flowchart) 1 st computer language	1953	Grace Hopper
12	Z1 -z5, z11, 22, 23, 25, 31, 64	1943 - 1965	Comrade Zuse
13	ENIAC	1943 - 1945	Manuchy& Eckert
14	UNIVAC	1950	
15	Johnniac, Ilian, Manial, Joss	1950	Johnniac, IBM
16	EDVAC	1955	
17	EDSAC	1990	

TABLE
HISTROY OF COMPUTER

Key points

1. A computer system is made up of two main parts (a) hardware and (b) software.
 2. Hardware is the physical components of computer that is what your hands can touch.
 3. Software is a series of instructions that tell the hardware how to perform tasks. That is what you can see in a computer (monitor, television).
 4. Three main criteria can be used to classify computers: size, signal and purpose.
 5. A computer system is made up of two main parts (a) hardware and (b) software.
 6. Hardware is the physical components of computer that is what your hands can touch.
 7. Software is a series of instructions that tell the hardware how to perform tasks. That is what you can see in a computer (monitor, television).
 8. Three main criteria can be used to classify computers: size, signal and purpose.
 9. There are broad classes of computing devices (a) digital (b) analog and (c) hybrid.
 10. A digital computer is designed to process data in numerical form.
 11. Examples of analog computers are mechanical integrator, nomogram operationally amplifier, slide rule, thermostat, mechanical computer, multi-processor analog system, watt-hour meters , speedometers e.t.c.
 12. The key component of the analog computer is the operational amplifier.
 13. Hybrid computers are computers that comprise features of analog computers and digital computers.
- The digital component serves as the controller and provides logical

- operations while the analog component serves as a solver of differential equation. Example is the modern microcomputer.
14. Radar system is used to control towers of airports which are designed for tracking and mapping the path of aircrafts and other flying devices.
 15. A super computer is a computer that is at the frontline of current processing capacity, particularly speed of calculation. It is used for highly calculation-intensive tasks such as problems involving quantum mechanical physics weather forecasting, climate research etc.
 16. IBM road runner is made up of 3240 computers.
 17. The speed of a supercomputer is generally measured in FLOPS (floating point operations per second).
 18. Mainframes are computers used mainly by large organizations for critical applications, typically bulk data processing such as census, industry and consumer statistics and financial transaction processing.
 19. The microprocessor speed of a computer is measured in megahertz (MHZ) while the processing speed can be measured in millions of instructions per second (MIPS).
 20.
 - a. A keyboard and mouse for input
 - b. A monitor for input and output
 - c. A printer for displaying and output on paper
 - d. Disk drives for storage
 21. The term workstation is often used to refer to personal computer connected to a network.
 22. A computer is designed using four basic units according to the John Von Neumann's architecture. They are.
 - a. Input unit (b) the central processing unit (C.P.U). (c) control unit (d) arithmetic and logic unit (ALU).
 23. Input units or devices are used to put instructions and data into the computer. They aid communication between the computer operator and the computer

(system)/ examples are keyboard, mouse, trackball, digital cameras, scanners, e.t.c.

24. C.P.U (central processing unit) is the heart main part of the computer. It interprets the instructions in the program and execute them one after the other.
25. Control unit.
It controls and directs the transfer of program instruction and data between various units.
26. The 4 major functions performed by the control unit are fetching, decoding, executing and storing. This is called the machine cycle.
27.
 - a. Fetching: To obtain the next instruction from memory.
 - b. Decoding: Translating the program instructions to the commands the computer can process.
 - c. Executing: Carrying out the actual step of the instruction.
 - d. Storing: Writing the results to the computer memory.
28. Arithmetic operations are +, -, *, ^, ? Logical operations like AND, OR, NOT.
29. Registers are high speed temporary storage areas that are used to store data and instructions during processing. They are found in the control unit and the arithmetic and logic unit.
30. The memory of a computer refers to circuits that store programs and data. Memory could be internal or external. The Internal is the main memory of the computer.
31. The main memory of a computer is made of ROM (Read Only Memory) and RAM (random Access Memory).
32. ROM
Rom holds permanent information. It is described as non-volatile because the information in it is not lost when there is power outage. ROM are called firmware.

33. Types of ROM

- a. **PROM** (programmable Read Only Memory) Data can be written only once. The content is retained when power is turned off.
- b. **EPROM** (Erasable programmable Read only memory). It retains its content but if expose to ultra violet light the information (contents) are erase.
- c. **EEPROM** (Electrically Erasable Programmable Read Only Memory). Its contents are not lost when power is switched off; but can be erased through exposure to electrical charge.
- 34. RAM (Random Access Memory)** RAM hold data, instructions but lost it when there is power outage. Information can't keep permanently in RAM.
- 35.** The number that indicates the locations of a byte is called a memory address.
- 36.** There are two main types of RAM (a) dynamic RAM (DRAM) (b) static RAM.
- 37.** Static RAM refreshed less often than dynamic RAM and is also faster than DRAM.
- 38.** An output devices is a process, medium through which information gets to the user. E.g. monitor, printer, plotters, voice output e.t.c.
- 39.** External storage device. E.g. floppy disks, flash drives, memory cards e.t.c.
- 40.** The input unit, output unit and secondary storage devices are together known a peripheral devices.
- 41.** The components of a computer are connected by using buses. A bus is a collection of wire that carries electronic signals from one computer to another.
- 42.** The input and output devices have a standard way of connecting to the CPU and memory. These are called Interface standards.
- The places where the standard interfaces are provided are called ports.
- 43. To convert a decimal digit into its binary equivalent, the steps are;**
1. Divide the decimal number by 2 (base)
 2. Note the reminders separately as the right most digit of binary equivalent
 3. Divide the quotient again by 2
 4. Note the remainder as next left digit of binary number

5. Repeat the step 3 and 4 until quotient becomes zero (0)
- 44. To convert binary into decimal steps.**
1. Multiply each digit of binary number by 2 having power (0, 1, 2----n)
 2. Sum all the products to get the decimal equivalent.
- 45.** An input device is any hardware component that allows you to enter programs, data commands and user responses into the computer.
- 46. Examples of input device are.**
- Keyboard
 - Point devices e.g.
 - Mouse (ii) trackball (iii) touchpad (iv) joystick and wheel (v) light pen (vi) touch screen (vii) stylus (viii) graphic tablet.
 - Audio/voice input
 - Digital camera
 - Web cam
 - Video input
 - Scanners e.g. (i) flatbed scanner (ii) hand-held (iii) sheet-fed scanner (iv) Drum scanner
 - Optical mark recognition (OMR)
 - Barcode readers
 - Magnetic ink character recognition (MICR)
- 47. Explanation of some input devices.**
- 1. Keyboard:** contains a set of typewriter like keys which are press to enter data into the computer. Types of keyboard (a) the QWERTY and (b) the enhanced keyboard.
 - 2. Mouse:** is a pointing device that fits comfortably under the palm and controls the movement of the cursor on a display screen when rolled on a flat surface. Types are mechanical mouse and optical mouse (light).
 - 3. Trackball:** is just like mouse, but only rotate the ball.
 - 4. Touch pad:** they are found on note books and laptops, is a small flat surface which you slide your finger.
 - 5. Joystick:** Is a vertical level mounted on a base with one or two buttons. Joysticks are used mainly in video games and computer aided design.

6. **Barcode readers:** It uses laser beam to read barcodes.
48. **Output devices** translate bits and bytes into forms that we can understand.
Example of output devices are.
1. **Monitor**
 - Types include**
 - (a) **CRT monitors** and (b) **flat panel monitors**
 2. **Printers**
 - Types of printers**
 - (a) **Impact printers**
Dot matrix, chain, barrel, daisy wheel and line printers are examples of impact printers.
 - (b) **Non-impact printers**
Example are inkjet and laser jet printers.
 - (c) **Thermal printers.**
 3. **Plotter**
Examples are flatbed, drum, and pen plotter.
 4. **Voice output**
 5. **Sound output**
 6. **Fax**
 7. **Video output**
 8. **Multifunction printers**
 9. **Pc cards**
 10. **Smart cards**
 11. **Data projector**
49. **Explanation of some output devices.**
- a. **Monitor:**
Is a television-like display that shows programming instructions and data as they are being entered and information after it is processed.
Information on a monitor is called softcopy. Resolution describes the sharpness and cleanliness of an image. The higher the resolution, the better the image quality and the more expensive the monitor.
 - b. **Printers**
It text and graphics on physical medium, such as paper on transparency film. Printed information is called hardcopy.
 - c. **Laser printers**
The speed of a laser printer is measured in pages per minute (PPM) and resolution is measured by number of data per inch (dpi).
 - d. **Plotter:** used to produce high quality graphics in a variety of colours, e.g. building plans, charts, circuit diagrams etc.
- e. **Multifunction printers**
They combine several capabilities, such as printer, scanning, copying, and faxing.
- f. **Smart card:**
Examples of smart cards are credit or debit cards and ATM cards.
50. **Storage** refers to the media on which data instructions and information are kept.
51. The capacity of a storage device is the number of bytes of characters it can hold.
52. **TABLE**
- | | |
|------------------|------------|
| 4 bits | ½ byte |
| 8 bits | 1 byte |
| 32 bits | 4 bytes |
| 1000 bits | 1 kilobyte |
| 1 million bits | 1 megabyte |
| 1 billion bites | 1 gigabyte |
| 1 trillion bites | 1 terabyte |
53. **Types of storage media**
1. **Magnetic tape**
 2. **Magnetic disk e.g.**
 - a. **Floppy disks**
 - b. **Diskette**
 - c. **Hard disks**
 - d. **Jaz disk**
 - e. **Zip disk**
 - f. **Super disk**
 3. **Optical storage e.g.**
 - a. **CD-ROM** (compact disk read only memory)
 - b. **DVD-ROM** (digital versatile disc or digital video disk with read only memory).
 - c. **CD-R** (CD rewritable) and **DVD-R** (DVD recordable)
 - d. **CD - RW** (CD rewritable) and **DVD-RW** (DVD Rewritable).
 - e. **BLU-RAY DISC.**
 4. **Flash memory**
 5. **USB Drive**
54. **Explanation of storage media.**
- a. **Floppy disk**

- It is called floppy because the disk within the case is flexible. A floppy disk drive (FDD) is a device that can read and write data on a floppy disk.
- Read means to convert the data on a secondary storage medium to electronic signals and transmitted to primary storage. Write means that electronic information processed by the computers is transferred into secondary storage.
- b. Optical storage
Data is read from and written to optical disks by laser.
55. Hardware are useless without the instructions that control them. These instructions used to control hardware and accomplish tasks are called software.
56. Software falls into two broad categories
a. Application software (b) system software
57. Applications software enables you to perform specific tasks-solve problems perform work, or entertain yourself. Examples include games, spreadsheets, typing tutor etc.
58. System software helps the computers perform essential operating tasks and enables the application software to run.
59. Some functions of systems software include:
- a. Starting up the computer
 - b. Loading, storing and executing application programs
 - c. Storing and retrieving files
 - d. Formatting disks
 - e. Sorting data files
 - f. Translating program instructions into machine language.
60. System software can be classified into three major categories.
- a. Operating systems.
 - b. Utility programs and
 - c. Language translators.
61. An operating system (OS) is a set of one or more programs that control and coordinate all the activities of the computer system.
62. The process of loading the OS into main memory is called booting the system.
63. Functions of the operating system

1. Starting up the computer system
 2. Resource allocation
 3. Monitors system activities
 4. Disk and files management
 5. The OS creates an interface between the user and other application programs.
64. Types of operating system
1. Single user OS
Only one user is allowed to run a single program at a time.
 2. Multitasking operating system
It allows more than one program to run at the same time on one computer.
 3. Multiprocessing operating system.
It supports two or more processors at the same time. Computers that have more than one CPU are called multiprocessor system.
 4. Virtual machine operating system. It allows a single computer to run two or more different operating system.
 5. Multithreading operating system: It allows different parts of a user program to run concurrently. Multithreading is the ability of an operating system to execute different parts of a program called threads simultaneously.
65. Microsoft Windows enables user to run different applications at the same time.
66. A language translator is a special purpose software program used to convert programming language instructions to machine code.
67. Examples of language translators are;
- a. Compilers
 - b. Interpreters and
 - c. Assemblers
68. A compiler is a program that translates the instructions of a high level language program to machine code before execution.
- A compiler translates the entire source program into machine code on a single pass before execution.
69. An interpreter is a high level language program translator that translates a line of source program instruction and executes it before proceeding to the next line.

70. The advantage of interpreters over compilers is that any error on a line of code is immediately brought to the attention of the programmer to correction.
71. An assembler is special software that translates assembly language programs into machine code before program execution.
72. A programming language is a set of writer words and symbols that allow programmers to communicate with the computer.
73. Categories of programming language.
1. Machine language/first-generation languages
 2. Assembly language/ second -generation languages. High level languages (HLL) as
 3. Third generation languages or procedural-oriented.
 4. Fourth generation languages or problem-oriented
 5. Fifth generation languages or natural.
74. An assembly language is similar to machine language but uses a abbreviations called mnemonics or symbolic operation codes to represent instructions.
75. The assembly language program is referred to as source program while machine language program is an object program.
76. The third generation languages are language such as pascal, BASIC, COBOL, FORTRAN e.t.c. which are logic, the procedure, of a problem.
77. The two popular languages in 5th generation languages are LISP and PROLOG.
78. COBOL stands for Common Business Oriented Language and it was introduced in 1960 for commercial (business) applications.
79. The C programming language developed in 1972
80. Fortran was released in 1957 as a programming language for scientific application. It is considered the first high level language.
81. A linker is defined as "A utility program which brings together then object modulus, operating system routines and other utility software to produce a complete, executable program."
82. The definition of a loader is given as "A program that copies an object program held in memory into the memory area designated by the operating system for execution"
83. A utility program is a type of system software that performs specific task, usually related to managing a computer, its devices or its programs.
Examples are,
File management, disk management, memory management, backup and restore, data compression, virus protection.
84. A network of networks, or internet is a group of two or more computers that are interconnected physically. Capable of communicating and sharing data with each other and able to act together as a single network.
85. The Internet is a computer network made up of thousands of networks worldwide.
86. Email is an electronic message sent from one computer to another. Common email programs include Eudora, outlook express and Netscape messenger.
87. Internet relay chat (IRC) is a way of communicating with relatively small number of people in real time.
88. WWW means world wide web. Is another name for the Internet.
89. The language used to create web pages is known as Hypertext makeup language, often abbreviated to HTML.
90. With a dial-up account, you use your modem to convert computer bits and bytes into modulated signals that the telephone lines can transmit.
91. The capacity of an internet connection is referred to as its bandwidth. And is measured in bits of data per second.
92. A protocol is the set of rules that determine everything about the way a

network operates. Protocols govern how applications access the network.

Examples of protocols in the internets are

- a. TCP/IP (Transmission control protocol/internet protocol)
- b. FTP (file transfer protocol)
- c. Hypertext transfer protocol (HTTP)
- d. Telnet
- e. Gopher

93.

- a. TCP / IP are protocols or rules that govern the way data travels from one machine to another across networks.
- b. FTP are set of rules which enables files to be transferred between computers. It is used when downloading files from computer connected to the Internet or when you wish to upload files to such a computer.
- c. HTTP is the set of rule or protocol that governs the transfer of hypertext between two or more computers.

When you move the mouse pointer over a hypertext link, the pointer changes its shape to that of a human hand.

- d. Telnet is a protocol or set of rules that enables one computer to connect to another computer. It is also called remote login.
- e. Gopher is a protocol designed to search retrieve and display documents from remote sites on the Internet.

94. An IP (internet protocol) address is an identifier for a particular machine on a particular network. An IP address consists of 4 sections separated by periods.

95. A domain name is a way to identify and locate computers connected to the Internet. Examples of domain names are: Unibenedu, nigeriapolice.org etc.

96. Top-level domain names are:

- a. Com - commercial entities e.g. www.pake.com
- b. Edu - educational institutions, e.g. www.Uniben.com
- c. Net - organization directly involved in internet operations; e.g. www.Nigerianarmy.net
- d. Gov - government entities, e.g. www.voa.gov

- e. Bix - business organization e.g. www.Evans.blz
- f. Org - miscellaneous e.g. www.Selmienkumor.org.

97. Country codes.

- a. ng - Nigeria
- b. za - South African
- c. uk - United Kingdom
- d. eu - Europe
- e. fr - france

98. a URL (uniform resources locator) identifies a particular Internet resource.

99. Downloading means copying a file, document, instruction or information from the Internet to one's computer while uploading means copying files from one's computer onto an internet site.

100. A computer program is a list of instructions in a programming language that tells a computer to perform a certain task.

101. Programming is the designing or writing of computer programs while the person who writes and tests these programs is called a programmer.

102. Steps must be taken to design an error free programs.

1. Analysis (2) design (3) coding (4) execution and (5) document and maintain the program.

103. Coding is the technical word for writing a program. Also means to translate the algorithms into a programming language.

104. Definitions of Algorithm

- a. It is a finite set of well-defined instructions for accomplishing some task which, given an initial state, will result in a corresponding recognizable end-state.
- b. It is a sequence of precise instructions for solving a problem in a finite amount of time
- c. It is just a detailed sequence of simple steps that are need to solve a problem.
- d. It is a description of how to carry out a process.

105. Properties of an Algorithm

- a. It must be precise

- b. It must give the correct solution in all cases.
 - c. It should be expressed in a simple and clear language.
 - d. It must be finite - it must definitely end, that is it must have an end
106. Different between a program and an algorithm.

A program can be infinite i.e. no end but an algorithm must always be finite (end).

107. In developing an algorithm, the following steps must be considered.
108. In developing an algorithm, the following steps must be considered

- i. Understand the problem
- ii. Devise a plan (look for familiarity and patterns).

- iii. Carry out the plan (trace).
- iv. Review the plan (refinement)

109. Definitions of pseudocode

- a. Pseudocode is a short hand way of describing a computer program.
- b. A method for representing the instructions in a module with language very similar to computer programming code.
- c. A way of writing program descriptions that is similar to programming languages but may include English descriptions and does not have a precise syntax.
- d. A notation resembling a programming language but not intended for actual compilation.

110. Pseudo-code is one important step in the process of writing a program.

111. The pictorial representation of the programs or the algorithm is known as flowcharts.

Examples are Start & stop, output and input, decision box, process, flow of data and connector.

112. Flowcharts are of three types:

- a. System flowcharts
- b. Run flowcharts
- c. Program flowcharts.

113. System flowchart describes the dataflow for a data processing system. It provides a logical diagram of how the system operates.

114. Run flowcharts are used to represent the logical relationship of computer routines along the inputs, master files, transaction files and outputs.

115. A program flowchart represents, in detail the various steps to be performed within the system for transforming the input into output.

116. Our programs are made up of the three basic control structures of;

- a. Sequence (b) selection and (c) repetition.
- 1. The sequence control structure is defined as the straight forward execution of one processing step after another.

- 2. The selection control structure can be defined as the presentation of a condition and the choice between two actions depending on whether the condition is true or false.

- a. Simple selection: occurs when a choice is made between two alternative paths.

- b. A combined if statement is one that contains multiple conditions in the decisions symbol.

- 3. The repetition control structure can be defined as the representation of a set of instructions to be performed repeatedly, as long as a condition is true.

117. Errors encountered in programming are classified into 3 main groups.

1. Syntax/compilation errors

2. Execution/run time errors.

3. Logical error.

118. Syntax error.

Syntax is the order in which words and phrase are put together, such as a URL (web address) which consists of several phrases that are strung together to define a location or service on the Internet.

Syntax errors usually result from mis-ordering symbols within expressions and statement, missing curly brackets and semicolons are examples of syntax error.

A syntax error occurs when a user (or programmer) has put words in an order that a program does not understand. It may be caused by mistyped or

Inadvertently rearranged URL making it incomprehensible to a web browser.

119. Execution errors.

- An error that causes a program to terminate when it is being run.
- Semantic error: an error in logic or arithmetic that must be detected at run time.

Examples of execution or runtime errors are.

- a. Dividing a number by zero e.g $\frac{5}{0}$
- b. Finding the square root of a negative number e.g $\sqrt{-4}$
- c. Data mismatch
- d. Referencing an invalid file

120. Logical error.

It could have a significant impact on overall program correctness.

It is also an error in a program that makes it do something other than what the programmer intended. E.g. entering a wrong salary scale when computing the payroll of workers.

121. BASIC is an acronym for Beginners.

All-purpose Symbolic Instruction Code developed by John Kemeny and Thomas Kurtz. In 1964

122. In 1985 Microsoft released their version of BASIC called ϕ Basic.

123. A variable, simply defined, is a name, which can contain a value.

124. There are three main categories of operators. ϕ Basic they are

- a. Arithmetic operators (+ - x + = ())
- b. Relational operators (=, >, <, ≤, ≥, <>)
- c. Logical operators. (AND OR NOT).

125. Relational operators are used to connect numerical quantities or strings for comparison purpose.

126. Logical operators are used in conjunction with relational operators to carry out comparison operations and they always produce a True or False answer.

127. The ϕ Basic IDE is quite simple to understand. It is divided into two windows; the untitled window and the immediate window.

128. A loop is used to repeat a block of statement a certain number of times until a condition is met.

129. There are 4 ways to execute loops in BASIC.

- 1. The FOR NEXT statement
- 2. The DO LOOP statement
- 3. The WHILE WEND statement
- 4. The GOTO statement.

130. The FOR NEXT statement is used to repeat a block of instructions a specified number of times.

131. The GOTO statement branches to a specific line number to the first statement after a specified label.

132. It is mandatory for Nigerian Banks to inform the NDLEA immediately if an individual makes a single transaction of N 500,000 or above in an account.

133. Computer Crime

- 1. Fraud, embezzlement and theft
- 2. Stealing data
- 3. Hacking or cracking

134. Originally; the word hacker means a person who knew how to get things done on a computer. They are those who produced excellent software for computer systems.

But now hackers are individuals who abuse information technology for purposes of profit, revenge, or just plain fun. Cracker means those who break into computer systems.

135. A virus is a computer program that has been written to attach itself to other files such as programs and to replicate itself when those programs are executed.

Three main types of viruses exist;

- 1. Boot Sector Virus
- 2. File Virus
- 3. Trojan Horse

136. A boot sector virus replaces the

computer system with a modified version of the program.

137. A teletype was a monitorized typewriter that could transmit your keystrokes to the mainframe and then print the computer's response on its roll of paper.

138. A microprocessor is a computer that is fabricated on an integrated circuit (IC).

139. Semiconductors increase the speed and efficiency of computers.

140. The speed of computer is measured in Hertz.

141. Pentium II 500MHz computer process 500 million instructions per second. While a Pentium w 2.2 GHz computer can process 2.2 billion instructions per second.

142. Automation means the replacement of human works by technology.

143. Section 97 (1) of the Nigerian criminal code prescribe

1.A two-years imprisonment for any person who reveal secret in his office, or office documents to the public.

2.Crackers, hackers, those without proper authority abstracts, or makes a copy of any document the property of his employer section 97(2) criminal code prescribes a one-yearimprisonment.

3.Publishing defamatory material like damaging someone's image in the Internet is liable to imprisonment for one year.

4. Advance fee fraud (419 in Nigeria). Means obtaining property or credit by false presence, is liable to imprisonment, for, for three years.

If the thing is of value of one thousand Naira or upwards, he is liable to imprisonment for seven years. But receiving stolen property through the internet as a result of frauds, in section 427, if the person is found guilty he will be committed to life imprisonment.

5. According to the Nigeria Criminal code, if a person threatens to publish or actually publishes a defamatory material on the Internet with the intent of extorting money from his

victim, then upon conviction, such a person is liable to 7 YEARS Imprisonment

144. Computer ethics is a branch of practical philosophy which deals with how computing professionals should make decision regarding professional and social conduct. It was coined by Walter Maner.

145. Application of Computers.

1. Industry

1a. Industry using a CAD system (Computer Aided Design), a developer might design a product as a collection of geometric shapes (such as cuboids and cylinders).

1b. A CAM (Computer aided manufacturing) system can be used to organize the manufacture of products, particularly when manufacture is perform using robots.

2. Modeling

Computer modeling is the simulation of real life process by computer.

Examples are

a.Weather forecasting and economic forecasting

b Stress testing used in CAD and modeling of flow processes in oil wells.

c.Modeling of nuclear reactors, sub-nuclear processes based on theoretical physics.

3. Command and Control

Command and control systems analyze in real-time and permit a commander to take appropriate action.

Examples of command and control are the management of car's engine system, the management of nuclear reactors, ambulance dispatch, the management of nuclear reacts, ambulance dispatch, the management of defense and attack systems in battle.

4. Banking and finance.

Computers can be used to manage finances. With online banking, money can be transferred electronically from one bank account or credit card account

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to another. This is called Electronic Funds Transfer (EFT).

5. Virtual Reality (VR)

Virtual reality is a technique by which a computer simulates a three dimensional physical environment

using virtual and auditory stimuli with and within which people can interact to affect what happens in the simulation. With virtual reality, you can play games, tour a building, city or school, for engineering design and e-commerce.

Architects use VR to show clients the preview of buildings and landscapes medical schools use VR for training.

6. Defence

Computers are used in simulating the design and manufacture of weapons, targeting and firing them, keeping of records, processing of payrolls for employees, cryptographic analysis and sending of classified codes and signals. e.t.c.

7. Education

Distance learning.

Edutainment is a type of education software that combines education with entertainment.

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