

CAMEROON GENERAL CERTIFICATE OF EDUCATION BOARD
General Certificate of Education Examination

0795 COMPUTER SCIENCE 1

JUNE 2018

ADVANCED LEVEL

Centre Number	
Centre Name	
Candidate Identification Number	
Candidate Name	

Mobile phones are NOT allowed in the examination room

MULTIPLE CHOICE QUESTION PAPER

One and a Half hours

INSTRUCTIONS TO CANDIDATES

Read the following instructions carefully before you start answering the questions in this paper. Make sure you have a soft HB pencil and an eraser for this examination.

1. USE A SOFT HB PENCIL THROUGHOUT THE EXAMINATION.
2. DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.

Before the examination begins:

3. Check that this question booklet is headed "**0795 Computer Science 1 - Advanced Level**".
4. Fill in the information required in the spaces above.
5. Fill in the information required in the spaces provided on the answer sheet using your HB pencil:
Candidate Name, Exam Session, Subject Code and Candidate Identification Number.
Take care that you do not crease or fold the answer sheet or make any marks on it other than those asked for in these instructions.

How to answer the questions in this examination

6. Answer **ALL** the **50** questions in this Examination. All questions carry equal marks.
7. Each question has **FOUR** suggested answers: **A, B, C** and **D**. Decide on which answer is correct. Find the number of the question on the Answer Sheet and draw a horizontal line across the letter to join the square brackets for the answer you have chosen.
For example, if **C** is your correct answer, mark **C** as shown below:
[A] [B] [C] [D]
8. Mark only one answer for each question. If you mark more than one answer, you will score a zero for that question. If you change your mind about an answer, erase the first mark carefully, then mark your new answer.
9. Avoid spending too much time on any one question. If you find a question difficult, move on to the next question. You can come back to this question later.
10. Do all rough work in this booklet using the blank spaces in the question booklet.
11. **At the end of the examination, the invigilator shall collect the answer sheet first and then the question booklet. DO NOT ATTEMPT TO LEAVE THE EXAMINATION HALL WITH IT.**

Turn Over

1. When CPU is executing a program that is part of the Operating System, it is said to be in:
 A Interrupt mode.
 B System mode.
 C Boot mode.
 D Set-up mode.
2. Inter-process communication:
 A is required for all processes.
 B is usually done through disk drive.
 C is not usually necessary.
 D allows process to synchronize activity.
3. Logic gates with a set of input and output is an arrangement termed as:
 A Combinational circuit.
 B Logic circuit.
 C Design circuits.
 D Register.
4. The communication between the components in a microcomputer takes place via the address and:
 A Input/output bus.
 B Data bus.
 C System bus.
 D Control lines.
5. What is the binary equivalent of the decimal number 368:
 A 101110000.
 B 110110000.
 C 111010000.
 D 111100000.
6. The hexadecimal number for $(95.5)_{10}$ is:
 A 5F.8
 B 9A.B
 C 2E.F
 D 5A.4
7. What is the minimum number of bits required to address a 32 K memory?
 A 10 bits.
 B 12 bits.
 C 14 bits.
 D 16 bits.
8. At least how many two-input AND and OR gates respectively are required to realize

$$Y = CD + EF + G?$$

 A 2, 2
 B 2, 3
 C 2, 1
 D 2, 0
9. Decoded instruction is stored in:
 A MDR.
 B IR.
 C PC.
 D MAR.
10. The fastest data access is provided using:
 A DRAM's.
 B SRAM's.
 C Registers.
 D Caches.
11. HTTP is a(n) _____ protocol.
 A Application layer.
 B Transport layer.
 C Data layer.
 D Network layer.
12. Data shared in the application layer is a:
 A Message.
 B Datagram.
 C Packet.
 D Frame.
13. Fiber optics possess the following properties:
 A Immunity to electromagnetic interference.
 B Very reduced rate of signal attenuation.
 C Very hard to tap.
 D All of the above mentioned.
14. Tables in second normal form (2NF):
 A Eliminate all hidden dependencies.
 B Eliminate the possibility of a insertion anomalies.
 C Have a composite key.
 D Have all non-key fields depend on the whole primary key.
15. Which of the following is NOT a database administrator's function?
 A Database design.
 B Backing up data of specific data users.
 C Performance monitoring of applications.
 D None of the above.
16. A foreign key in a relational database table is a(n):
 A Set of attribute values in a table.
 B Combination of attributes in a table.
 C Attribute in one table that is an attribute in another table.
 D Column of a table.
17. The attribute, **name**, could be structured as an attribute consisting of first name, middle initial, and last name. This type of attribute is called:
 A Simple attribute.
 B Composite attribute.
 C Distributed attribute.
 D Multivalued attribute.
18. The attribute AGE is calculated from DATE_OF_BIRTH. The attribute AGE is:
 A Single valued.
 B Multivalued.
 C Derived.
 D Composite.

19. The descriptive property possessed by each entity set is a(n):
 A Attribute.
 B Instance.
 C Relation.
 D Model.
20. The "turn-around" time of a user's job is the:
 A Time since its submission to the time its results become available.
 B Time duration for which the CPU is allotted to the job.
 C Total time taken to execute the job.
 D Time taken for the job to move from assembly phase to completion phase.
21. Which module gives control of the CPU to the process selected by the short-term scheduler?
 A Dispatcher.
 B Interrupt.
 C Scheduler.
 D None of the above.
22. Before proceeding with its execution, each process must acquire all the resources it needs. This is described as:
 A Hold and wait.
 B Non pre-emption.
 C Circular wait.
 D Starvation.
23. A technique of temporarily removing in-active programs from the memory of a computer system is:
 A Swapping.
 B Spooling.
 C Semaphore.
 D Scheduler.
24. A reusable resource is one that:
 A Can be used by one process at a time and is not depleted by that use.
 B Can be used by more than one process at a time.
 C Can be shared between various threads.
 D All of the above.
25. A problem encountered in multitasking when a process is perpetually denied necessary resources is:
 A Deadlock.
 B Starvation.
 C Inversion.
 D Aging.
26. A pointer variable cannot be:
 A Passed to a function as argument.
 B Changed within the function.
 C Returned by a function.
 D Assigned as an integer value.
27. If the processor is executing a main program that calls a subroutine, then after executing the main program up to the CALL instruction, the control will be transferred to the:
 A Address of main program.
 B Subroutine address.
 C Address of the CALL instruction.
 D Address of data.
28. Which of the following allows many users to use the computer simultaneously?
 A Time Sharing operating system.
 B Real Time operating system.
 C Interactive operating system.
 D Batch operating system.
29. One of the following is NOT a memory performance parameter:
 A Access time.
 B Cycle time.
 C Transfer rate.
 D Time location.
30. If a node having two children is deleted from a binary search tree, it is replaced by its:
 A In order predecessor.
 B Post order successor.
 C Pre order predecessor.
 D Post order predecessor.
31. A mathematical model with a collection of operations defined over its values is called:
 A Data Structure.
 B Abstract Data Type.
 C Primitive Data Type.
 D Algorithm.
32. A complete binary tree with $2n+1$ nodes contain:
 A N leaf nodes.
 B N non-leaf nodes.
 C $N-1$ leaf nodes.
 D $N-1$ non-leaf nodes.
33. A sort which searches through a list to exchange the first element with any element less than it and then repeats with a new first element at subsequent positions is called:
 A Insertion sort.
 B Selection sort.
 C Bubble sort.
 D Quick sort.
34. The data structure required to evaluate a postfix expression is:
 A Stack.
 B Queue.
 C Tree.
 D Array.

35. The feature of the object oriented paradigm which explicitly helps code reuse is:

- A Object
- B Class
- C Inheritance
- D Aggregation

36. The main advantage of a multiprogramming system is

- A More than one job can be processed at a given time.
- B CPU utilization can be increased.
- C Jobs can be completed faster.
- D All of the above.

37. An object encapsulates:

- A Data.
- B Behaviour.
- C State.
- D Data and behaviour.

38. If a program in its functioning has not met user requirements in some way, then it is:

- A An error.
- B A failure.
- C A fault.
- D A defect.

39. A key concept of quality control is that all worked products:

- A Are delivered on time and within budget.
- B Have complete documentation.
- C Have measurable specifications for process outputs.
- D Are thoroughly tested before delivery to the customer.

40. Which of the following data structures is used for holding jobs waiting to be run by the computer?

- A Binary tree.
- B Queue.
- C Stack.
- D Linked list.

41. The term module in the design phase refers to:

- A Functions.
- B Procedures.
- C Sub programs.
- D All of the above.

42. Which of the following is also known as Pre-Order traversal of a binary tree where a given Node has children Left and Right

- A Left Node Right.
- B Node Right Node.
- C Node Right Left.
- D None of the above.

43. In software engineering projects, what is informally called "SOFTWARE" consists of:

- A Set of instructions + operating procedures.

- B Programs + documentation + operating procedures.
- C Programs + hardware manuals.
- D Set of programs.

44. If the state of the database no longer reflects a real state of the world that the database is supposed to capture, then such a state is called a(n).

- A Consistent state.
- B Parallel state.
- C Durable state.
- D Inconsistent state.

45. If the objects focus on real world entities then we are concerned with:

- A Object Oriented Analysis.
- B Object Oriented Design.
- C Object Oriented Analysis & Design.
- D None of the above.

46. A linear collection of data elements where the linear node is given by means of a pointer is called:

- A Node list.
- B Linked list.
- C Primitive list.
- D None of the above.

47. Software deteriorates rather than wears out because:

- A Software suffers from exposure to hostile environments.
- B Defects are more likely to arise after software has been used often.
- C Multiple change requests introduce errors in component interactions.
- D Software spare parts become harder to order.

48. A main technique to make a software package portable is to:

- A Isolate system dependent components.
- B Increase the overall performance.
- C Have an independent platform for the software.
- D Have a dependent platform.

49. In system design, we do the following:

- A Hardware design after software.
- B Software design after hardware.
- C Parallel hardware and software design.
- D No hardware design needed.

50. A factor in the selection of a source language is:

- A Programmer skill.
- B Language availability.
- C Program compatibility with other software.
- D All of the above.

STOP: GO BACK AND CHECK YOUR WORK