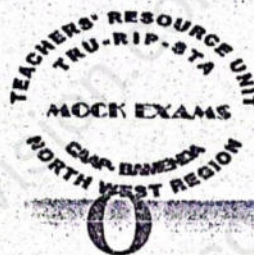


REPUBLIQUE DU CAMEROUN  
Paix-Travail-Patrie

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**ITVE**

REPUBLIC OF CAMEROON  
Peace-Work-Fatherland

MINISTRY OF SECONDARY EDUCATION

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MARCH 2023

<b>The Teachers' Resource Unit and the Regional Inspectorate of Pedagogy, in collaboration with Computer Science Teachers' Association(COSTA)</b>	<b>SUBJECT CODE NUMBER</b> 0595	<b>PAPER NUMBER</b> 2
<b>GENERAL CERTIFICATE OF EDUCATION AND INTERMEDIATE TECHNICAL AND VOCATIONAL EDUCATION REGIONAL MOCK EXAMINATION</b>	<b>SUBJECT TITLE</b> <b>COMPUTER SCIENCE</b>	
<b>ORDINARY LEVEL</b>		

Time Allowed: **TWO and a half hours**

**INSTRUCTIONS TO CANDIDATES**

Mobile phones are **NOT ALLOWED** in the examination room.

- ❖ Answer Any five Questions.
- ❖ All Questions carry Equal total Marks.

1. (a) Briefly explain the following as used in computing.
- (i) Computer network (2 Marks)
  - (ii) Data transmission (2 Marks)
  - (iii) Server computer (2 Marks)
  - (iv) firewall (2 Marks)
- (b)
- (i) State the difference between data validation and data verification (2 Marks)
  - (ii) State any two disadvantages of a computer network (2 Marks)
- (c) We can service our computers by carrying out preventive or corrective maintenance to ensure their proper functioning
- (i) State a difference between preventive and corrective maintenance (2 Marks)
  - (ii) State any two preventive ways of protecting a computer system (2 Marks)
- (d) The capacity of a video file is 8.25GB and you are asked to copy it on to a number of CDs of capacity 700MB each.
- (i) What is the approximate size of the video file in MB (2 Marks)
  - (ii) Determine the number of CDs needed to copy the entire file (2 Marks)

2. A remote-controlled model car contains RAM, ROM and a solid-state-disc. The car receives instructions from its remote control. These instructions are sent wirelessly to a receiver on a car. The instructions contained on a chip in the car cannot be modified. The owner of the model car can input their own sequence of instructions from an interface underneath the car.
- (a) Describe briefly the role of each type of memory supplied with the car
- (i) ROM (1 Mark)
  - (ii) RAM (1 Mark)
  - (iii) solid-state-disc. (1 Mark)
  - (iv) State two advantages and one disadvantage of using solid-state-disc over other types of secondary storage (3 Marks)
- (b) Compute the following in binary
- (i)  $111101 - 111$  (2 Marks)
  - (ii)  $10000 + 101$  (2 Marks)
  - (iii) Convert the binary number 1011010011 to Octal and Hexadecimal. (4 Marks)
- (c) The disposal of Computer related waste is a problem around the world today. To manage these waste, computer users are encouraged to practice Green Computing.
- (i) What is Green Computing? (2 Marks)
  - (ii) State TWO environmental impacts of digital waste (2 Marks)
  - (iii) State TWO ways of enhancing green computing (2 Marks)

3. (a) Briefly explain the following as used in computing.
- (i) bootstrap (2 Marks)
  - (ii) software (2 Marks)
  - (iii) Utility software (2 Marks)
  - (iv) Device driver (2 Marks)
- (b)
- (i) Differentiate between freeware and shareware (1 Mark)
  - (ii) State two functions of an operating system (2 Marks)
- (c) Study this algorithm and answer the questions below
- ```

BEGIN
DECLARE Mark As Integer
PRINT ("Enter your Mark")
INPUT Mark
IF Mark > 50
THEN PRINT ("You have passed")
ELSE PRINT ("You have failed")
END IF
END

```
- (i) What is an algorithm (2 Marks)
  - (ii) In what format is the algorithm above represented. State the variable in the algorithm. (2 Marks)
  - (iii) What type of control structure is implemented in the algorithm (1 Mark)
  - (iv) Draw a flowchart to represent the above algorithm. (4 Marks)

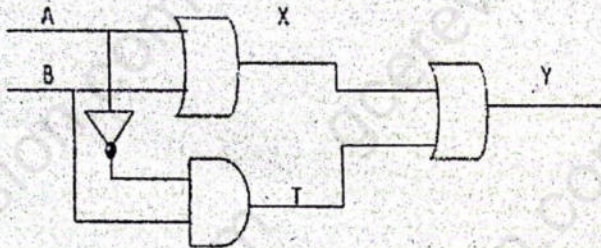
4. (a) Systems are produced by specialist following SDLC stages.
- What is the meaning of the acronym SDLC (2 Marks)
  - State two activities that will take place during the analysis stage of the SDLC. (2 Marks)
  - State three different ways a new system can be implemented. (3 Marks)

(b) Explain the role of the following html tags

<title> and </title>  
 <p>  
 <ul> and </ul>  
 <h2> and </h2>  
 <body> and </body>

(5 Marks)

(c) Consider this logic circuit



- What is a logic gate (1 Marks)
- Express the logic function of "Y" in terms of A and B (2 Marks)
- Draw the truth table of this logic circuit (4 Marks)
- State any one of De Morgan's law (1 Mark)

5. (a) A bank holds personal and financial data about its customers. The banks ensures security and integrity of the data

- Differentiate between security and integrity of data (2 Marks)
- Explain the following data security issues

Virus attack  
 Hacking

(4 Marks)

(b) (i) State the function of the following processor's parts

- control unit
- arithmetic and logic unit
- register

(3 Marks)

(ii) State and Describe the various stages of the machine cycle

(6 Marks)

(c) (i) Differentiate between the following

- Modeling and Simulation
- Monitoring system and Control system

(4 Marks)

(ii) What is a prototype

(1 Mark)

6. (a) Collected data in schools are managed using a database.

- Define the term database (2 Marks)
- What is DBMS, give an example of a DBMS (2 Marks)

(b) Consider this database

| Show Number | Type      | Title              | Date    | Sold Out |
|-------------|-----------|--------------------|---------|----------|
| SN091       | Comedy    | An Evening at Home | 01 Sept | Yes      |
| SN102       | Drama     | Old Places         | 02 Oct  | No       |
| SN113       | Jazz      | Acoustic Evening   | 03 Nov  | No       |
| SN124       | Classical | Mozart Evening     | 04 Dec  | Yes      |
| SN021       | Classical | Bach Favourites    | 01 Feb  | Yes      |
| SN032       | Jazz      | 30 Years of Jazz   | 02 Mar  | Yes      |
| SN043       | Comedy    | Street Night       | 03 Apr  | No       |
| SN054       | Comedy    | Hoot               | 04 May  | No       |

- (i) Identify the number of
- fields
  - records
- (ii) What is a primary key? State a field suitable for a primary key in the Table above.
- (c) (i) What is computer ergonomics
- (ii) Explain the following computer health hazards
- repetitive strain injury
  - computer vision syndrome
  - carpal tunnel syndrome
- (iii) State any measure to overcome the health hazards.
- (d) Differentiate between computer *output* and computer *output device*

7. (a) Differentiate between:

- (i) Impact printer and non-impact printer
- (ii) CRT and LCD monitors
- (iii) Application software and system software
- (iv) Browser and search engine

(b) Information about a certain project is summarized on the table below:

| Task | Predecessor | Duration |
|------|-------------|----------|
| A    | ---         | 6        |
| B    | ---         | 5        |
| C    | A           | 4        |
| D    | B           | 6        |
| E    | C           | 5        |
| F    | A,D         | 6        |
| G    | E,F         | 4        |

- (i) Define the following terms:
- critical path
  - slack time
  - mile stone
- (ii) Draw a PERT chart to represent the project above.
- (iii) Determine the critical path and the project duration

END