



REPUBLIQUE DU CAMEROUN

PAIX – TRAVAIL – PATRIE

.....

MINISTRE DES ENSEIGNEMENTS
SECONDAIRES

.....

REGION DE CENTRE



REPUBLIC OF CAMEROON

PEACE – WORK – FATHERLAND

.....

MINISTRY OF SECONDARY EDUCATION

.....

CENTRE REGION

CENTRE REGIONAL MOCK EXAMINATION IN PARTNERSHIP WITH CASPA	SUBJECT CODE NUMBER 796	PAPER NUMBER 2
	SUBJECT TITLE INFORMATION AND COMMUNICATION TECHNOLOGY	
CANDIDATE NAME: CANDIDATE NUMBER: CENTRE NUMBER:		
ADVANCED LEVEL	DATE: Tuesday, 28 March 2023	

Two and a half hours (2½ hours)

Answer any SIX Questions.

All questions carry 17 marks each. For your guidance, the approximate mark for each part of a question is indicated in brackets.

You will be marked on your ability to use good English, to organize information clearly and to use specialist vocabulary where appropriate.

In calculations, you are advised to show all the steps in your working, giving your answer at each stage.

Question 1

(a) State the function of each of the following parts in the computer

- (i) PCI slot (1 mark)
- (ii) Mother board (1 mark)
- (iii) VGA port (1 mark)

(b) Explain the following specifications below

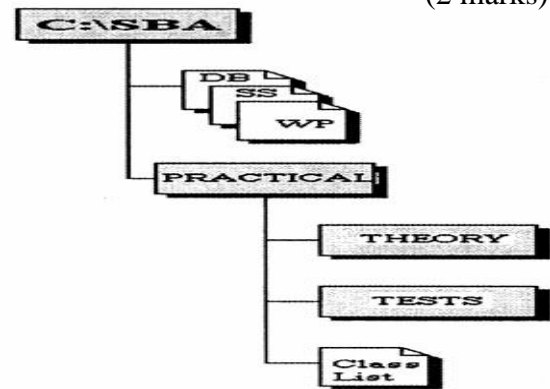
- (i) 3GHZ Processor: (1 mark)
- (ii) 3.00GB RAM: (1 mark)
- (iii) 320GB HDD: (1 mark)
- (iv) 17" LCD Monitor (1 mark)

(c) Explain two uses of computers in each of the following domains

- (i) Election (2 marks)
- (ii) Education (2 marks)
- (iii) Military (2 marks)

(d). Consider the structure on the right

- (i) Name the folders found in the PRACTICAL directory. (2 mark)
- (ii) Explain what would happen if the PRACTICAL directory is deleted. (1mark)
- (iii) Write the path required to reach the Class List. (1mark)



Question 2

- (a) Define the term Data communication (2 marks)
- (b) Outline TWO elements of data communication and explain their functions (2 marks)
- (c) Software types have been given in the table. Possible use suggestions are found in another table. In your answer booklet, match the software to its corresponding possible use. (5 marks)

Software
Desktop publisher
CAD program
Spreadsheet
Inference engine
Database

Possible Use
suggesting medical diagnoses
storing pupil records in a school
producing a school magazine
preparation of blueprints and other engineering plans.
managing personal finance

(d) The spreadsheet below shows the number of students attending a local University for the past 5 years.

	A	B	C	D	E	F	G
1	Programs	2001	2002	2003	2004	2005	Total
2	Masters	20	18	12	10	13	
3	Degree	300	350	400	387	213	
4	Diploma	700	680	600	500	450	
5	Certificate	130	211	345	678	212	
6	Professional	#####	311	234	367	412	
7	Total						
8							
9							
10							

- (i) Explain why there is a value ##### in cell B6 and propose a solution (2 marks)
- (ii) State the range that contains the name of the various programs offered by the University (1 mark)
- (e) Write the formula that can be used to calculate the total number of students for the year 2004 (1 mark)
- (f). Consider the URL: <http://www.youthalive.org/index.html>
- (i) What part of this address would be considered the website? (1 mark)
- (ii) What part of the address would be the webpage? (1 mark)
- (iii) What does the abbreviation 'html' represent (1 mark)
- (iv) Create a URL for an educational Institute called Rising Kids (1 mark)

Question 3

- (a) What is a network operating system (NOS)? Give two examples of NOS. (3 marks)
- (b) Give the functions of the following networking devices
- i. Repeater (1 marks)
 - ii. Gateway (2 marks)
 - iii. Router (2 marks)
- (c) Data is represented within computers using different number systems. Convert the following data to the number system specified. (Show all the steps)
- i) 89.75_{10} to binary (2 marks)
 - ii) 1001011.1011_2 to octal (2 marks)
- (d) Cameroon has just finished a campaign of **Digital Migration**.
- i. Explain what you understand by the term Digital Migration (2 mark)
 - ii. Give one advantage of Digital Migration to Cameroon (1 mark)
 - iii. What do you understand by the term Digital Divide? (2 marks)

Question 4

- (a) A hairdresser uses a relational database to keep records of his clients and their appointments. The hairdresser uses an off-the-shelf DBMS to set up the structure of the database, add data and manage the database.
- (i) State what is meant by off-the-shelf DBMS. (2 marks)
- (ii) State three tasks the hairdresser can perform using the DBMS, once the database is in use. (3 marks)

- (b) Give one role of each of the following ICT specialists
- (i) Database administrator (2 marks)
 - (ii) Programmer (2 marks)
- (c) Explain the meaning of the following terms as used in computing.
- (i) Cold booting (1 mark)
 - (ii) Warm booting (1 mark)
- (d) What is the importance of a protocol during data communications? (2 marks)
- (e) Differentiate between encoding and encryption as used in data transmission: (2 marks)
- (f) Outline two components of Information System and explain their functions (2 marks)
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Question 5

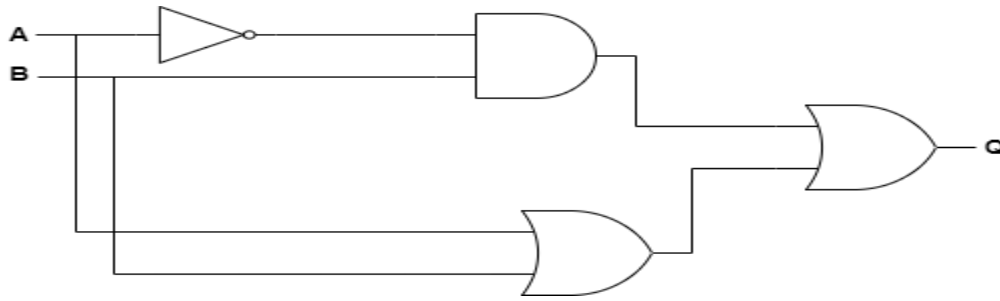
- (a) A group of car mechanics has decided to buy a new printer for their workshop. The different options which are available are a laser printer, inkjet printer and dot matrix printer. How would you advise them to choose an appropriate printer for their work? (3 marks)
- (b) i) Define the term e-commerce. (1 mark)
- ii) State TWO types of e-commerce business models (2 marks)
- (c) Give two reasons why a hard disk's access time is faster than that of a floppy disk. (2 marks)
- (d) An office has a fast Internet connection for transferring information. However employees sometimes complain that the Internet is running slowly.
- (i) Give two reasons why this could be the case. (2 marks)
- (ii) Mention two internet services the staff need to do office work. (2 marks)
- (e) Explain how artificial intelligence relates to robotics. (2 mark)
- (f) To handle goods in a warehouse, an online retail business is switching to using computer-controlled robots instead of using human workers. Give two ways how this would affect the local community? (2 marks)
- (g) What is Biometric data?(1mark)
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Question 6

- (a) What is Computer Architecture? (2marks)
- (b) List two components of Von Neumann Architecture (2marks)
- (c) State the meaning of the following machine cycle processes (3marks)
- (i) Fetching
 - (ii) Decoding
 - (iii) Executing
- (d) Differentiate between Pseudo code and Flowchart (2marks)
- (e) Write a pseudocode to check the greatest of two numbers given a and b and transform the pseudo code to flowchart (6 marks)
- (f) What is SDLC (2 marks)
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Question 7

- a) Use the digital circuits below to answer the questions that follow.



- i) Write out the Boolean expression of the digital circuit above. (3 marks)
- ii) Draw a corresponding truth table for the circuit above. (3 marks)
- iii) Given the inputs A and B, state De Morgan's laws (2 marks)
- (b) i) Briefly describe the concept of "green computing" (2marks)
- ii) State any two advantages of green computing (2marks)
- (d) Mention any two forms of unauthorized access (2marks)
- (e) Define the following terms as far as databases are concerned: (3 marks)
 - a) Primary key
 - b) Candidate key
 - c) Attribute

Question 8

- (a) What do you understand as Bluetooth? (2 marks)
- (b) Which two registers are needed in the communication between the main memory and the processing unit (2 marks)
- (c) Define the following:
 - (i) Ergonomics (2 marks)
 - (ii) Project (1marks)
- (d) Give two responsibilities of a Project Manager (2 marks)
- e) A software development schedule is shown in the table below.

Activity	Predecessor	Duration(Days)
A	-	3
B	A	4
C	A	2
D	B	5
E	C	1
F	C	2
G	D,E	4
H	F,G	3

- (i) Draw the PERT chart for this project. (3 marks)
- (ii) Determine the critical path of this project. (2 marks)
- (iii) What is the project duration (1 mark)
- (f) What is Outsourcing? (2 marks)