GENERAL CERTIFICATE OF EDUCATION BOARD

General Certificate of Education Examination

JUNE 2025

ORDINARY LEVEL

ser, ou any two evaluates of biometric data.

) Bright opinion all an eparatiful system,

ii) Should be gote to be toy out multitusking.

Should be the first software to be installed in a computer system.

Describe any one advantage of using the technology of means

Subject Title	COMPUTER SCIENCE	STEPOTOR DEST TO THE STATE OF THE	days are are a land and
Paper No.	2		Service from the period
Subject Code No.	0595		and the second of the second second
iem LV mai			Strate and thought of the factorial

Duration: Two Hours

identity a scalable retworking device and briefly explain its role in raiving the following acts are ing problem

Answer any FIVE questions. Les VT les of an audit uniformula mont line exemple montainement along a VT gainsolfo l'uniformula de la company de

(salaget S)

All questions carry 20 marks each. For your guidance, the approximate mark for each part of a question is indicated in brackets.

You are reminded of the necessity for good English and orderly presentation in your answers.

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

Calculators or Phones are NOT allowed.

Identify and because the role of any five (05) basic hardware components for devices as to all and a components for devices as to all and a components for the following chear working.

Consume that of the following chear working.

(i) The hardeninal (base 16) number B2A₁₆ to Sinary (base 2).

(2 practis)

(3) The fact (base 8) number 6257₈ to devaded and (base 16).

(ii) Describe any two (82) basic requirements of cloud compating.

(iii) fixadala say two advunages of cloud compactes.

Statety describe each after following file protection mechanism.

(a) Para encryption:

(ii) Para encryption:

(iii) March Object

(iii) Mich Object

(iii)

(c) A project scene consisting of persons living in different localities, decide to hold an online or, congressioning the mework greaters are not been also do a presentation of work progress.

00/0595/2 Question of section of the contract of the contract

1. (a) (i) State any three (03) health concerns associated with prolonged use of the computer.	12
(11) Briefly describe measures that can be taken to reduce or prevent each of the health concerns	(3 marks)
you identified in a(1) above.	(3 marks)
(b) Briefly explain what is meant by;	(5 marks)
(i) Database normalization.	(2 marks)
(ii) Data consistency.	(2 marks)
(iii) Data redundancy.	(2 marks)
(c) Briefly describe the following computing terminologies.	
(i) Client-server network	(2 marks)
(ii) Peer to peer network	(2 marks)
(d) (i) What is a biometric system?	(2 marks)
(ii) Describe any two examples of biometric data.	(2 marks)
2. (a) Identify a suitable networking device and briefly explain its role in solving the following networking proble	
(i) Linking a LAIV to the Internet.	
(ii) Linking two large LANs of an institution.	(2 marks)
(iii) Controlling the communication signals in and out of an institution's extranet	(2 marks)
(IV) Collecting IV signals from different sources and then channelling them to local TV sets	(2 marks) (2 marks)
(c) In each of the following scenarios, identify the Data Transmission Mode and explain how it applies in the gi	ven context
out watching a 1 v and listening to the commentaries of a football match in his house	(2 marks)
(ii) John and Mary carrying out a conversation using cell phones.	(2 marks)
(III) Paul and Peter sharing information through a walkie talkie	(2 marks)
(c) (1) State the reason why technically, 1kilobyte (KB) = 1024 Bytes (2 ¹⁰ bytes) instead of 1KB = 1000 Bytes	(2 marks)
nence convert LUGB to, in applying they griphe a high and they are with the could be seen and the	(2 marks)
(ii) Megabytes (MB)	(2 marks)
(iii) Kilobytes (KB)	(2 marks)
3. (a) Briefly explain why an operating system,	/
(i) Should be the first software to be installed in a computer system.	(2)
(ii) Should be able to carry out multitasking.	(2 marks)
(iii) Creates virtual memories.	(2 marks)
(b) Identify and briefly describe the role of any five (05) basic hardware components (or devices) that are invol	(2 marks)
from the moment data is input to a computer system until, when a hardcopy is generated from the system.	10 marks)
(c) Convert each of the following snowing clear working,	io marks)
(i)The hexadecimal (base 16) number B2A ₁₆ to Binary (base 2).	(2 marks)
(ii) The octal (base 8) number 62578 to Hexadecimal (base 16).	(2 marks)
	(2 marks)
4. (a) (i) What is cloud computing?	(2 marks)
(ii) Describe any two (02) basic requirements of cloud computing.	(4 marks)
(iii) Explain any two advantages of cloud computing.	(2 marks)
(b) Briefly describe each of the following file protection mechanism, (i) Backup	
(ii) Data encryption	(2 marks)
(iii) Archiving	(2 marks)
	(2 marks)
(c) A project team consisting of persons living in different localities, decides to hold an online meeting.	
During the meeting each person is to do a presentation of work progress.	
(i) State a technology that will enable the team members to hold a successful meeting.	(1 mark)
(ii) State and explain the roles of any two tools that will enable each team member to participate effectively in the meeting.	A STATE OF THE STA
	(4 marks)
(iii) Describe any one advantage of using the technology or means you stated in c(i) above to the participants.	(1 mark)
00/0595/2 Go on to the next page.	

			3		
5. (a) Study	the algorithm below and a	nswer the questio	ns that follow		
	1. Start				
\	2. Get marks for test1 an	d test 2: Mark 1.	Mark 2		
IV-	If Either Mark1 is less	than zero OR Me	ark 2 is less than 7	ero	
4	4. Display "Mark canno	t be negative"	in 2 is tess than 2	er o	
eyab (5. Else		Red Arthur	ruley:	S
	6. Average mark = (Mar	kl + Mark 2)/2			
	7. Display Mark1, Mark	2, Average mark	a Maria Jena Jena		
8	S. End	and the			
(i) I	Define the term algorithm.		da e e e e e da devint	A BUILDING	a deprivation (2 monto)
(ii) (Copy and complete the tabl	e below by carryi	ng out a dry run o	f the above algorithm	(2 marks)
		Mark 1	Mark 2		(2 marks)
	9	14	10	Display	
B. trom D		-20	15	le ive	
(iii) I	Represent the above algorit			The state of the s	Soften ingali di
(iv) I	Locate by stating the line n	umbers of any on	nart.		(5 marks)
b) Briefl	y describe the roles of the f	following basis to	control structure	used in the algorithm.	(2 marks)
(i)		onowing basic ta	gs in HTML		_0)
(ii)					(2 marks)
(iii)	<hr/>				(2 marks)
	y explain the difference be	turon			(1 mark)
	An algorithm and a program				
(ii) A	A compiler and an interpret	n code.			(2 marks)
(11) 1	r complici and all interpre	er.			(2 marks)
6. (a) An org	ganization intends to link a	Il its branches wit	thin a town in a ne	twork for bottor communic	office and desire of
resou	irces.	ar its standing wi		swork for better community	ation and sharing of
(i) Base	d on geographical scope, s	tate the network t	vne that can be set	un by the organization Gi	s structure to the 14d in
ansv	wer.	are the network t	ype mat can be sen	up by the organisation. Of	
(ii) Give	en that the computers within	n each branch are	linked in a star to	pology Sketch and label th	(2 marks)
dev	vices in the network with for	our computers	miked in a star to	pology. Sketch and label th	
	e two other network topol		ised by the organi	zation Justify your analyse	(4 marks)
(b) Figure	1 shows a four-level pyran	nid model of type	es of information s	vetem	(4 marks)
(i) Copy	and complete the pyramic	lusing the follow	ing categories of	ystems placed in their com	
Executive	Information System (EIS)	Decision Sunna	rt Suctam (DCC)	and Managament Information	ect positions: (4 marks)
[You may u	ise the abbreviations as inc	icated]	Hussian (DBB),	ara management injorma	uton System (MIS)
(Add that the	\	iouteu]		Sten.	A Marin Carlotte
t contra				Charles (Charles	The armen' You have
The American Control of the				S, Cana D	(iii) A internet of 3.
) for the *;					
	Transaction				
Figure 1	processing system				
20-1		6.4 11.66			
(II) Brie	fly explain the main purpo		categories of info	ormation system in the pyra	mid.
	- Executive information	•			(2 marks)
	- Decision support syste				(2 marks)
	 Management informat 	ion system			(2 marks)

7. (a) Table 1 is a description of a project for the development of a new information system. Study the project layout carefully and then answer the questions that follow.

Table1

(ENT

maris) (Frank)

(Zamarks)

I marks)

Task	Task description	Other information	Duration in days		
A.	Create system specification	None CVE word and dended an Arms	3		
B.	Trial system	Cannot start until specification is completed	2 200		
C.	Customize and test software	Commences after system trial	4 565 2		
D.	Purchase of hardware and test	Cannot start until specification is completed	(i) Define the C.		
E.	Installation of software	Hardware and software test has to be completed	2 bno ygod (i)		
F.	Training of staff	As soon as software is customized	1		

(i) Outline three (03) main roles of a Gantt chart in project management.

(3 marks)

(ii) Represent the project outline given in Table 1 on a Gantt chart by completing a copy of the table below. (5 marks)

Task	No. of days	T	W	Th	F	М	u T lo	w Hai	Th	₹F°	M	d T	W	Th	F	М
A.	3			9				- 6							11'-	
B.	2		7	and the second			Z Z							1	Sgir	
C.	4			2/1	122							11	Y	7.5	har g	
D.	3		10				Y				η,	0001	rd 50.	oroil	ib er	riisl
E.	2			7.10							1.5	n con	16190	gsb	rus ur	dirio
F.	-1		10							11		.79.	eriq is	gri ng	bna	DHe

note and with four cormuters

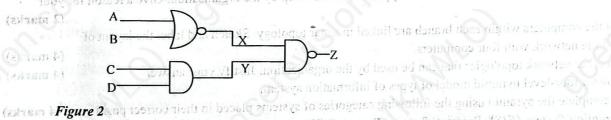
State the critical path of the project and give your reason. If y and burn and the project and give your reason.

(2 marks)

State any one Predecessor task and give your reason.

(2 marks)

(b) Figure 2 represents a logic circuit.



injornation System (EUS), Decision Support System (DSS), and Management Study the circuit carefully and write down logic expressions for the indicated outputs.

X in terms of A and B

(2 marks)

(ii) Y in terms of C and D

(2 marks)

(iii) Z in terms of A, B, C and D

(4 marks)