

Candidates answer on the Question Paper. No additional materials are required.

No calculators allowed.

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name on all the work you hand in. Write in dark blue or black pen. You may use a soft pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, highlighters, glue or correction fluid. DO **NOT** WRITE IN ANY BARCODES.

Answer all questions.

No marks will be awarded for using brand names for software packages or hardware.

At the end of the examination, fasten all your work securely together.

The number of marks is given in brackets [] at the end of each question or part question.

This document consists of **10** printed pages and **2** blank pages.



		the www.xt	rapa
(a)	Des	2 cribe the purpose of storage devices.	aCan
			[2]
(b)	Stat	udent has a computer at home as well as using computers at school. e two different storage devices that the student would use on her computer a ain what she would use each for.	and
	1		
	2		
			 [4]
(c)	The	operating system controlling the student's home computer is a single-user, m ing operating system.	ulti-
	(i)	Describe a single-user, multi-tasking operating system.	
	(ii)	Explain how the student can use this type of operating system.	
			[4]
			۲.٦

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	3	
	202	
(a)	In the systems development life cycle, describe what is involved when design system.	For iner's
	3 In the systems development life cycle, describe what is involved when design and the system.	139e.co.
		133
	[4]	
(b)	When a new system has been developed it must be installed into the organisation for which it has been produced.	
	Describe the tasks involved in installation planning and of implementing the system into the organisation.	
	[4]	

2

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	4	-
3	A navigation system is designed to be mounted in a car in order to show the driver	For
	4 A navigation system is designed to be mounted in a car in order to show the driver reach the destination. Describe the characteristics of the user interface and why they are appropriate to the application.	hidge.
		50
	[5]	
4	Explain how a knowledge based (expert) system can be set up and used to help oil companies search for oil-bearing rocks.	
	[6]	

			5 Describe the structure of a one-dimensional array.	. C (
F	(-)	(1)	5	
5	(a)	(1)	Describe the structure of a one-dimensional array.	r ner's
			19gg	C
				0
			[2]	
		(ii)	Explain how a simple serial search can be carried out to locate a specific item in a one-dimensional array.	
			[4]	
	(b)	Des	scribe how a queue is implemented using an array.	
			[4]	
		•••••		

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		6
6	State a	6 onditioning system is used to control the temperature in a room. In example of each of the following types of peripheral which would be used on giving a use for each. An input device
	(i)	An input device
		[2]
	(ii)	An output device
		[2]
7		ank has a customer file containing the transactions made by its customers. a file is used to
	•	produce a bank statement for each customer once a month answer customer queries when the customer telephones the bank
	(i)	Explain why the telephone operator uses a forms-based interface when taking details of the query from the customer.
		[3]

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		7
	(ii)	Explain why an indexed sequential file is used to allow access to the data For customer file.
		7 Explain why an indexed sequential file is used to allow access to the data customer file.
		[3]
(b)	Dat	a in the customer file is regularly backed up.
	(i)	Explain why taking back-ups is necessary.
	(ii)	Describe a procedure for doing back-ups.
		[4]

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		8	
8		8 e computers in a school classroom are networked. It is decided that this network inked to the Internet. State two items of hardware and one type of software which would be necessary to connect this network to the Internet. Hardware 1	For iner's
	(a)	State two items of hardware and one type of software which would be necessary to connect this network to the Internet.	Tage co
		Hardware 1	177
		Hardware 2	
		Software	
		[3]	
	(b)	When a video file is accessed on a network it can be watched as it is downloading or it can be stored for watching at a later date. Explain the relationship between the required bit rates and the data being transmitted.	
		[4]	

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		9	
(c)	Wh	en communications are required across a network a protocol is necessary.	For
	(i)	9 en communications are required across a network a protocol is necessary. Explain the need for a handshake as part of a protocol, giving examples of who occurs during a handshake.	Ge .
			COM
		[3]	
	(ii)	Explain why a protocol consists of a number of layers.	
		[2]	
(d)	The	e school uses off-the-shelf software.	
	(i)	State what is meant by off-the-shelf software.	
		[1]	
	(ii)	Explain the advantages of using off-the-shelf software.	
		[3]	

uit. 10 (a) Complete the table to show the outputs for the possible inputs to this circuit. 9 A · B · С OR NOT -D С А В D 0 0 0 1 1 0 1 1 [2] (b) Complete the table to show the outputs for the possible inputs to this circuit. А OR NOT - E OR NOT - F B -А В Е F 0 0 0 1 1 0 1 1

[4]



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