## CAMBRIDGE IGCSE CS

0478 CS













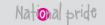
## **LESSON OBJECTIVES**

Part 1

- Understand Command Words
- Do past paper practice.
- Develop past paper techniques.











#### **SUCCESS CRITERIA**

Part 1

MOST students should be able to

Do past paper practice

**ALL** students should be able to

Understand Command Words

**SOME** students should be able to

Develop past paper techniques.

Key words: All vocabulary words















# **Cambridge IGCSE Computer Science**

**0478 Examination Preparation** 















#### **COMMAND WORDS**

What is your understanding about command words used in Cambridge IGCSE CS/ICT Examination?

Analyse Annotate Apply Classify

Compare & Contrast Describe Evaluate

<u>Identify</u> <u>Label</u> <u>Examine</u> <u>Determine</u>







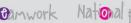


#### **COMMAND WORDS**

## What is your understanding about command words used in Cambridge IGCSE CS **Examination?**

It is important to understand the command words, misunderstanding command words will lead to a wrong answer or incorrect approach in solving a problem.











#### **COMMAND WORDS**

Go to <a href="https://joinmyquiz.com">https://joinmyquiz.com</a> and let's find out on your understanding about command words.

**CODE:** \_\_\_\_\_



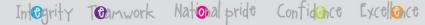




## **Understanding Command words in exams** (cambridgeinternational.org)

Log-in to <a href="https://www.febstar.com">https://www.febstar.com</a> and check the posted command words you must know and its meaning.











### **Examination Strategies**

#### When answering the IGCSE CS/ICT examination, remember:

- To check the stated question full marking first, then from there, give the exact number of full marking key points to discuss as answers.
- That when exam questions asks to exactly identify by ticking the correct answers, it has the option of being marked either zero mark for 1 correct answer or full mark for all correct answers. That formulas/functions as answers are marked by sections and in order according to the standard syntax.
- 3. That a question that pertains to comparing and contrasting is the same with giving the similarities and differences of things in question.
- That a question on benefits and drawbacks is the same with giving an answer 4. on advantages and disadvantages of thins in question.
- 5. That formulas/functions as answers are marked by sections and in order, according to the standard syntax.











#### CLASS ACTIVITY

Be an Independent Learner. You must start to be use your ICT stock knowledge and skills. Remember, during the ACTUAL Cambridge Examination, your friend is not with you to help. Make your parents proud of your IGCSE ICT Achievement this time.

Your participation in very important, give an answer in our meeting chat when I ask you to do so, I will give you time to answer the question and we will discuss the answer.







### Tips and Strategies

When answering the IGCSE CS examination, remember:

1. To check the stated question full marking first, then from there, give the exact number of full marking key points to discuss as answers.











#### **Exam Question:**

A Company uses solid state and optical secondary storage

- a.) Explain why a computer needs a secondary storage (2)
- b.) Describe three differences between solid state and optical storage (6)















## Past Paper Question

A company uses both solid-state and optical secondary storage.

Explain why a computer ne	eds secondary storage.	
		[2]

Describe **three** differences between solid-state and optical storage.



(a)









## Paper Question MS

Question Marks Answer 9(a) Any two from: 2 To store data/files permanently otherwise, data/programs would need to be downloaded/entered/installed every time the computer was used To allow software to be installed on the computer For the creation of virtual memory 9(b)Any six from (Max 3 for one type only):





















### Tips and Strategies

When answering the IGCSE ICT examination, remember:

- To check the stated question full marking first, then from there, give the exact number of full marking key points to discuss as answers.
- 2. That when exam questions asks to exactly identify by ticking the correct answers, it has the option of being marked either zero mark for 1 correct answer or full mark for all correct answers.









Exam Question: A desktop computer consists of both hardware and software. The software is either applications software or system software.

Tick (✓) whether the following are examples of **applications** software or **system** software.

	applications (✓)	system (√)
Measurement software		
Linker		
Database		
Utility software		





[2]

## **Exam Question Answers:**

Question	Answer			Mark
1(a)		applications (✓)	system (✓)	2
	Measurement software	✓		
	Linker		✓	
	Database	<b>*</b>		
	Utility software		✓	
	4 correct ticks = 2 marks 2 or 3 correct ticks = 1 mark 1 correct tick = 0 marks			















## Tips and Improvements

When answering the IGCSE CS/ICT examination, remember:

- To check the stated question full marking first, then from there, give the exact number of full marking key points to discuss as answers.
- That when exam questions asks to exactly identify by ticking the correct answers, it has the option of being marked either zero mark for 1 correct answer or full mark for all correct answers.
- 3. That a question that pertains to comparing and contrasting is the same with giving the similarities and differences of things in question.









## **Exam Question:**

Compare and contrast Bluetooth and WIFI. (6 Marks)















#### **Exam Question Answers**

Maximum four from:

Similarities

Both WiFi and Bluetooth use wireless communications

Both WiFi and Bluetooth use radio frequencies for communication/radio waves

Both WiFi and Bluetooth allow several devices to be connected

Both use security when sending data

#### Maximum five from:

Differences

WiFi has faster data transfer rate

WiFi has a greater range of transmission

WiFi uses key matching encryption

Bluetooth uses WEP and WPA security together

WiFi can be broadcast

Bluetooth has more channels

Wifi connects more devices











6



## Tips and Improvements

#### When answering the IGCSE ICT examination, remember:

- To check the stated question full marking first, then from there, give the exact number of full marking key points to discuss as answers.
- That when exam questions asks to exactly identify by ticking the correct 2. answers, it has the option of being marked either zero mark for 1 correct answer or full mark for all correct answers.
- That a question that pertains to comparing and contrasting is the same with **3**. giving the similarities and differences of things in question.
- That a question on benefits and drawbacks is the same on giving an answer 4. on advantages and disadvantages of things in question.







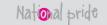
#### **Exam Question:**

The manager of a company is planning to create a computerised system and has asked a systems analyst to research the current system. The systems analyst could do this by using a number of different methods but has chosen to create and send out a questionnaire to members of the company.

(a) Discuss the <u>benefits and drawbacks</u> of sending out questionnaires to members of the company. (6 Marks)











#### **Exam Question** Answers

6(a)

Six from:

Benefits

Faster to complete all questionnaires than using interviews Cheaper to produce questionnaires than pay/employ an interviewer Individuals can remain anonymous therefore they are more truthful More people can answer the questionnaire than can be interviewed They can fill it in in their own time therefore quicker to complete overall

## Disadvantages

Advantages

Drawbacks

Tend not to be popular with users Too inflexible cannot ask follow up questions Users tend to exaggerate their responses as they are anonymous As it's anonymous people may not take it seriously Cannot expand on their answers/limited in their responses

To gain full marks at least one benefit/drawback must be given











## Tips and Improvements

When answering the IGCSE ICT examination, remember:

- 1. To check the stated question full marking first, then from there, give the exact number of full marking key points to discuss as answers.
- 2. That when exam questions asks to exactly identify by ticking the correct answers, it has the option of being marked either zero mark for 1 correct answer or full mark for all correct answers. That formulas/functions as answers are marked by sections and in order according to the standard syntax.
- 3. That a question that pertains to comparing and contrasting is the same with giving the similarities and differences of things in question.
- 4. That a question on benefits and drawbacks is the same with giving an answer on advantages and disadvantages of thins in question.
- 5. That Pseudocode syntaxes and solutions are marked according to rubrics and requirements specified.











13 The 1D array StudentName[] contains the names of students in a class. The 2D array StudentMark[] contains the mark for each subject, for each student. The position of each student's data in the two arrays is the same, for example, the student in position 10 in StudentName[] and StudentMark[] is the same.

**Exam Question:** 

The variable ClassSize contains the number of students in the class. The variable SubjectNo contains the number of subjects studied. All students study the same number of subjects.

The arrays and variables have already been set up and the data stored.

Students are awarded a grade based on their average mark.

Average mark	Grade awarded
greater than or equal to 70	distinction
greater than or equal to 55 and less than 70	merit
greater than or equal to 40 and less than 55	pass
less than 40	fail

Write a program that meets the following requirements:

- calculates the combined total mark for each student for all their subjects
- calculates the average mark for each student for all their subjects, rounded to the nearest whole number
- outputs for each student:
  - name
  - combined total mark
  - average mark
  - grade awarded
- calculates, stores and outputs the number of distinctions, merits, passes and fails for the whole class.

You must use pseudocode or program code and add comments to explain how your code works.

You do **not** need to initialise the data in the array.

















Question		Answer	Marks
13	Marks are ava AO2 (max) AO3 (max) The technique function from to the techniques received and the techniques receiv	le answer, award a mark from both of the following tables and add up the total.  ilable for: kimum 9 marks) kimum 6 marks).  is and the data structures required are listed below. The requirements may be met using a suitable built-in the programming language used (e.g. Python, VB.NET or Java).  equired: total mark for each student (iteration and totalling).	15
	R3 Selection R4 Output for R5 Calculate	average mark for each student rounded to the nearest whole number. of grade for each student (selection). r each student name, total mark, average mark, grade awarded (output with appropriate messages). , store and output the number of distinctions, merits, passes and fails for the whole class (iteration, and output with appropriate messages).	
	Data structures required: The names underlined must be used as provided in the scenario.		
	Arrays or lists	StudentName, StudentMark, (TotalMark and AverageMark may be seen but no requirement to store)	
	Variables	ClassSize, SubjectNo, SubjectCounter, StudentCounter DistinctionNo, MeritNo, PassNo, FailNo could be an array or list	
	Constants	Distinction, Merit, Pass could be variables	















Question	Answer	Marks
13	Example 15 mark answer in pseudocode.	
	<pre>// meaningful identifier names and appropriate data structures (variables, constants and the // given arrays) to store all the data required</pre>	
	DECLARE TotalMark : ARRAY[1:50] OF INTEGER	
	DECLARE AverageMark : ARRAY[1:50] OF INTEGER	
	DECLARE SubjectCounter: INTEGER	
	DECLARE StudentCounter: INTEGER	
	DECLARE DistinctionNo : INTEGER	
	DECLARE MeritNo : INTEGER	
	DECLARE PassNo : INTEGER DECLARE FailNo : INTEGER	
wer	DECEMBER 1411NO . INTEGER	
WCI	CONSTANT Distinction = 70	
	CONSTANT Merit = 55	
	CONSTANT Pass = 40	
	// initialisation processes for this scenario, initialising the running totals used for	
	// grades and combined totals	
	DistinctionNo ← 0	
	MeritNo ← 0	
	PassNo ← 0 FailNo ← 0	
	ralino ← 0	
	FOR StudentCounter ← 1 to ClassSize	
	TotalMark[StudentCounter] ← 0	
	NEXT StudentCounter	
	// programming techniques of iteration, selection, totalling, counting and output are used	



	Question	Answer	Marks	
	13	FOR StudentCounter   1 to ClassSize		
		FOR SubjectCounter ← 1 to SubjectNo		
		$TotalMark[StudentCounter] \leftarrow TotalMark[StudentCounter] + StudentMark[StudentCounter,$		
		SubjectCounter]		
		NEXT SubjectCounter		
		AverageMark[StudentCounter]   INT((TotalMark[StudentCounter] / SubjectNo) + 0.5)		
		OUTPUT "Name ", StudentName[StudentCounter]		
		OUTPUT "Combined total mark ", TotalMark[StudentCounter] OUTPUT "Average mark ", AverageMark[StudentCounter]		
		IF AverageMark[StudentCounter] >= Distinction		
		THEN		
		DistinctionNo ← DistinctionNo + 1		
		OUTPUT "Grade Distinction"		
Δ		ELSE		
Ans	weri	<pre>IF AverageMark[StudentCounter] &gt;= Merit</pre>		
		THEN		
		MeritNo ← MeritNo + 1		
		OUTPUT "Grade Merit"		
		ELSE		
		<pre>IF AverageMark[StudentCounter] &gt;= Pass</pre>		
		THEN PassNo ← PassNo + 1		
		OUTPUT "Grade Pass"		
		ELSE		
		FailNo ← FailNo + 1		
		OUTPUT "Grade Fail"		
		ENDIF		
		ENDIF		
		ENDIF		
		NEXT StudentCounter		
		OUTPUT "Number of Distinctions ", DistinctionNo		
112 222		OUTPUT "Number of Merits ", MeritNo		
O TOP I		OUTPUT "Number of Passes ", PassNo		
140		OUTPUT "Number of Fails ", FailNo		
				i

### Tips and Improvements for Students

## The difference between ordinary and extraordinary is practice.

Practicing not only at school but also during your personal time will give you an edge in getting good marks during the actual examination.

Good luck and wishing you all the best.









## Marking Key points on IGCSE ICT Examination

- General marking principles are followed as stated in the Mark scheme.
- When marking theoretical examination questions. Mark the candidate's answer not according to what you think his/her answer says but what's the answer on paper.
- Marking practical examination should be straightforward marking, section by section as stated in the mark scheme.









# Thank You













