IGCSE Cambridge Topical Past Papers

ICT

0417   Paper 1

2017 — 2023

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2017 → 2023
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TOPICAL PAST PAPERS

ICT 0417 P1

ICT 0417

TOPICAL PAST PAPER WORKSHEETS

2017 - 2023 | Questions + Mark scheme

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P1
751 Questions

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1 - (0417/11_Summer_2017_Q1) - *Types And Components Of Computer Systems, Input And Output Devices, Storage Devices And Media*

Complete the following sentences using the most appropriate words from the list below.

hard disk drive	hardware	microphone	OCR	printer
scanner	screen	software	speaker	virus

(a) The physical components of a computer are called.. [1]

(b) The programs and data of a computer are called.. [1]

(c) The device used to input sound is called a.. [1]

(d) The device used to store data is called a... [1]

1 - (0417/11_Summer_2017_Q1) - *Types And Components Of Computer Systems, Input And Output Devices, Storage Devices And Media*

2 - (0417/13_Summer_2017_Q2) - *Types And Components Of Computer Systems*

Tick whether the following statements are **true** or **false**.

	true (✓)	false (✓)
An actuator is an item of software.		
Hardware is the physical components of a computer system.		
Software controls the operation of the computer.		
A spreadsheet is an example of systems software.		

[2]

3 - (0417/12_Summer_2017_Q5) - *Types And Components Of Computer Systems, Ict Applications*

The managers of a nuclear power plant need to check the radioactivity levels in a chimney stack which needs to be demolished. They intend to use a robot. This device has sensors to read the radioactivity levels.

(a) Explain why the data from the sensors cannot be read directly by the microprocessor and name the device needed to change the data into a form that the microprocessor can understand.

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.... [3]

(b) The managers have been told they can use this robot for other tasks by replacing the existing sensors with different ones.

Give **three** advantages of using an existing robot device rather than developing a new one.

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.... [3]

3 - (0417/12_Summer_2017_Q5) - *Types And Components Of Computer Systems, Ict Applications*

4 - (0417/11_Summer_2017_Q8) - *Types And Components Of Computer Systems, Ict Applications*

A company is setting up a video-conference.

(a) Name **three** computer hardware devices they would need.

1..

....

2..

....

3..

....

[3]

(b) The company could have set up a web-conference rather than a video-conference.

Describe what is meant by a web-conference.

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.... [4]

4 - (0417/11_Summer_2017_Q8) - *Types And Components Of Computer Systems, Ict Applications*

5 - (0417/12_Summer_2017_Q8) - *Types And Components Of Computer Systems, The Effects Of Using It*

Expert systems are used in medical applications.

(a) From the list below, tick **two** components of an expert system.

	tick (✓)
Control unit	
Graphics program	
Inference engine	
RFID	
Rules base	
Search engine	

[2]

(b) Describe **three** benefits of the doctor using an expert system to help diagnose a patient's illness.

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.... [3]

ANSWERS

1 - (0417/11_Summer_2017_Q1) - *Types And Components Of Computer Systems, Input And Output Devices, Storage Devices And Media*

(a)	Hardware	1
(b)	Software	1
(c)	Microphone	1
(d)	Hard disk drive	1

2 - (0417/13_Summer_2017_Q2) - *Types And Components Of Computer Systems*

	true (✓)	false (✓)	2
An actuator is an item of software.		✓	
Hardware is the physical components of a computer system.	✓		
Software controls the operation of the computer.	✓		
Spreadsheet is an example of systems software.		✓	

2 marks for 4 correct ticks
1 mark for 3 or 2 correct ticks
0 marks for 1 or 0 correct ticks

3 - (0417/12_Summer_2017_Q5) - *Types And Components Of Computer Systems, Ict Applications*

(a)	The sensor reads analogue data The microprocessor can only process digital data Analogue to Digital Converter is needed to convert the data	3
(b)	Any **three** from: – More likely to be reliable as it is known that the device will work – It is cheaper than paying full development costs – It is quicker to get into operation as the device has been built – Lower maintenance costs as faults will be known – Lower costs for training staff	3

4 - (0417/11_Summer_2017_Q8) - *Types And Components Of Computer Systems, Ict Applications*

(a)	Any **three** from: – Video/digital camera/webcam – Microphone – Keyboard – Large screen/monitor/data projector – Remote control – Speakers/headphones	3
(b)	Any **four** from: – A conference held over the internet using TCP/IP connections – Examples webinars/webcasts/VOIP – Can be point to point (VOIP) or multicast – Allows text communication – Allows voice communication – Allows video communication – Uses a web browser	4

5 - (0417/12_Summer_2017_Q8) - *Types And Components Of Computer Systems, The Effects Of Using It*

(a)		tick (✓)	2
	Control unit		
	Graphics program		
	Inference engine	✓	
	RFID		
	Rules base	✓	
	Search engine		

(b)	Any **three** from: – An expert system may help the doctor make a more accurate diagnosis – An expert system uses data from many experts therefore it contains more knowledge than a single doctor – Cheaper than regularly re-training the doctor – The expert system's knowledge may be more up to date than the knowledge of a single doctor – Cheaper than employing many specialists – The diagnoses given are more consistent	3

6 - (0417/11_Summer_2017_Q10) - *The Effects Of Using It, Ict Applications, Types And Components Of Computer Systems*

(a)	Any **three** from: – Cheaper than building the real thing – Quicker to see results rather than building it – Safer than building the real thing – Easier to change variables in the model/can use what ifs	3
(b)	Any **four** from: – The sensors are out in the bay therefore there is a faster response to floods – Safer as flood watchers are not put in danger from rising waters – Data collected is more accurate – The data readings can be taken more frequently – Data collection can be continuous – The town's people can be alerted faster of the danger – Predictions can be made from the data easily	4
(c)	Any **five** from: – The microprocessor reads the data from the sensor – The microprocessor has a set of pre-set values stored – The microprocessor compares the readings from the sensors with the pre-set values – If higher the microprocessor sends a signal… – …to the actuator to close the barrier – If lower the microprocessor sends a signal… – …to the actuator to open the barrier	5