



Cambridge International Examinations

| Cambridge IGCSE | Cambridge International Examinations Cambridge International General Certificate of Secondary Education |
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| CANDIDATE NAME | |
| CENTRE NUMBER | CANDIDATE NUMBER |

INFORMATION AND COMMUNICATION TECHNOLOGY

0417/01

Paper 1 Theory For Examination from 2016

SPECIMEN PAPER

2 hours

Candidates answer on the Question Paper.

No Additional Materials are required.

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces at the top of this page and any additional pages you use.

Write in dark blue or black pen.

Do not use staples, paper clips, glue or correction fluid.

DO NOT WRITE IN ANY BARCODES.

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

Answer all questions.

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.

The syllabus is accredited for use in England, Wales and Northern Ireland as a Cambridge International Level 1/Level 2 Certificate.



| 1 | Several items of data are input to a computer using direct data entry methods. Who most appropriate input device to input each item of data. (a) data written in special ink at the bottom of bank cheques |
|---|---|
| | (a) data written in special ink at the bottom of bank cheques |
| | [1 |
| | (b) information on the label of a supermarket product |
| | [1 |
| | (c) shaded in boxes on a student's examination answer sheet |
| | [1 |
| | (d) debit card details input at an ATM |
| | [1 |
| 2 | Circle two items which are used as output devices. |
| | bar code reader joystick laser printer multimedia projector |
| | PIN pad scanner temperature sensor touch pad [2 |
| 3 | Tick true or false next to each of these statements. |
| | true false |
| | Computer programs are examples of hardware. |
| | A Command Line Interface is a form of operating system. |
| | A tablet computer is larger than a desktop computer. |

A compiler is an example of applications software.

www.PanaCambridge.com A new computer system storing examination results out of 20 is to be tested using a data. Tick whether each of the marks is an example of **normal** data, **abnormal** data of data.

| | normal | abnormal | extreme |
|--------|--------|----------|---------|
| 18 | | | |
| 21 | | | |
| twenty | | | |
| 20 | | | |

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| ı | 41 | |

| 5 | A desktop computer | is already used in | n an office which | does not have a | in internet connection. |
|---|--------------------|--------------------|-------------------|-----------------|-------------------------|
|---|--------------------|--------------------|-------------------|-----------------|-------------------------|

| (a) | Name two items | of hardware | which | would | enable | the | computer t | o be | connected | to a | local |
|-----|----------------|-------------|-------|-------|--------|-----|------------|------|-----------|------|-------|
| | area network. | | | | | | | | | | |
| | | | | | | | | | | | |

| 1 | |
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| 2 | [2] |

| (b) | Name one item of hardware which would enable the network to be connected to the internet. |
|-----|--|
| | [1 |

(c) Tick whether these statements are true or false.

| | true | false |
|---|------|-------|
| Booking a theatre ticket is an example of online processing. | | |
| Producing utility bills is an example of online processing. | | |
| An internet browser is used by web designers to test web pages. | | |
| An internet browser uses an inference engine. | | |

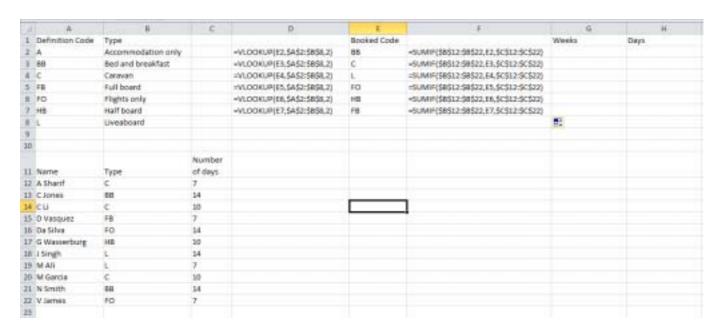
| | | 4 scribe three types of medical aid which can be produced using a 3D printer. | |
|---|-------|--|-------|
| 6 | Des | scribe three types of medical aid which can be produced using a 3D printer. | 1 |
| | 1 _ | | 76rio |
| | 2 | | |
| | | | |
| | 3. | | |
| | ***** | | [3] |
| 7 | (a) | Explain what is meant by GPS. | |
| | | | |
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| | | | |
| | | | |
| | | | [3] |
| | (b) | Give two examples of the use of GPS. | |
| | | 1 | |
| | | | |
| | | 2 | |
| | | | [2] |

| 8 | Cor ser | npare and contrast the use of magnetic tapes with removable magnetic disks to note that we have backups. |
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| 9 | type | ann is going on holiday to a different country. He will need to take his passport. He has a new e of passport which has an RFID chip in it. He will be passing through automated passport trol gates. |
| | (a) | Describe what an RFID chip consists of. |
| | | |
| | | |
| | | |
| | | [2] |
| | (b) | Describe how RFID will be used as he passes through passport control. |
| | ` , | |
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| | | [3] |
| | | |

www.PapaCambridge.com 10 A holiday company uses spreadsheets to organise the holidays they offer for scuba first two columns, there is a list of holiday codes together with the accommodation offerd

Also in the spreadsheet, there are formulae to manipulate the data stored elsewhere in spreadsheet.

There is also space to calculate the number of weeks and days each type of holiday has been booked for.



| (a) | Explain what the formula in cell D2 does. (Do not refer to column headings.) | |
|------|---|-----|
| | | |
| | | |
| | | |
| | | [3] |
| (ls) | What there of boliday would not a see in DCO | |
| (D) | What type of holiday would you expect to see in D5? | [1] |
| | | |

| (c) | Expl | ain what the formula in cell | F2 do | pes. (Do not refer to column headings.) | 5. |
|-----|------|--|----------|--|-----|
| | | | | | TOE |
| | | | | | |
| | | | | | |
| | | | | | [3] |
| (d) | Wha | t value would you expect to | | | |
| (, | | | | | [1] |
| (e) | Wha | t formula would you expec | t to se | e in G2? | |
| | = | | | | [2] |
| (f) | Wha | t formula would you expec | t to se | e in H2? | |
| | = | | | | [2] |
| (g) | | three appropriate features using computer models. | s of sp | oreadsheet software which make it suitable for creat | ing |
| | | | ✓ | | |
| | | what ifs | | | |
| | | queries | | | |
| | | automatic recalculation | | | |
| | | internet browsing | | | |
| | | animation | | | |
| | | data replication | | | |
| | | emails | | | |
| | | changing fonts | | | |

MMM. Papac

| 11 | Describe the differences between RAM and ROM. |
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12 Paul employs Jane, a systems analyst, to create a new database system for his supermarket business. He stocks a selection of foods.

Paul needs to know quickly when his stock is low so he can send for more products. He needs to record each product so it is unique. He also needs to know the date that each product was last ordered.

(a) Complete the data dictionary table, giving the field names which would be used in the database and describing the most suitable validation check which could be carried out on each field. Do **not** use spaces in the field name.

| Field name | Validation check |
|-------------------|------------------|
| | None |
| | |
| | |
| Last_ordered_date | |

[6]

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| | (b) | Name and describe two methods of verification. | | | | |
|----|-----|--|---------|--|--|--|
| | | 1 Name | Cambrid | | | |
| | | Description | | | | |
| | | | | | | |
| | | | | | | |
| | | 2 Name | | | | |
| | | Description | | | | |
| | | | | | | |
| | | | [4] | | | |
| | | | | | | |
| | (c) | After the system is developed it will be implemented. Describe three methods by which a new system can be implemented. | | | | |
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| | | 3 | | | | |
| | | | [3] | | | |
| 13 | Doo | ctors often use expert systems to diagnose illnesses of patients. | | | | |
| | (a) | Describe how an expert system diagnoses illnesses. | | | | |
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| (b) | Give two other uses of expert systems. | CON |
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| | 1 | BH. |
| | 2 | Ae C |
| | | YM. |

14 A company uses robots to manufacture cars.

Tick **three** advantages for the company of using robots rather than humans to manufacture cars.

| | √ |
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| Robots produce the same standard every time. | |
| Robots don't cost very much to buy. | |
| Robots don't need programming to perform a task. | |
| Robots are more accurate. | |
| Workers are no longer employed. | |
| Robots don't take breaks. | |
| Robots can think for themselves. | |
| Robots never make mistakes. | |

| 15 | Exp disa | chool has a cabled LAN. The head teacher of the school wants to replace it wollain the differences between a cabled LAN and a WLAN, giving two advantages advantages of having a WLAN. | brio |
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| 16 | (a) | Describe the differences between physical safety and e-safety when using computers. | |
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| | | | [2] |
| | (b) | Describe three measures which should be taken in order to maintain e-safety. | |
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| | | 3 | |
| | | | [3] |

| 17 | There are many microprocessor controlled devices in the modern home. Discuss these on people's lifestyles. |
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| | [6] |

| 18 | Multi-national comp disadvantages of ho | oanies often use Iding video-conferenc | video-conferencing. es rather than face-to- | Discuss the face meetings. | adval *Cannon | 1 |
|----|--|---|--|----------------------------|---------------|----|
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