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INFORMATION AND COMMUNICATION TECHNOLOGY**0417/11**

Paper 1 Theory

May/June 2023**1 hour 30 minutes**

You must answer on the question paper.

No additional materials are needed.

INSTRUCTIONS

- Answer **all** questions.
- Use a black or dark blue pen.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen or correction fluid.
- Do **not** write on any bar codes.
- You may use an HB pencil for any diagrams, graphs or rough working.

INFORMATION

- The total mark for this paper is 80.
- The number of marks for each question or part question is shown in brackets [].
- No marks will be awarded for using brand names of software packages or hardware.

This document has **12** pages. Any blank pages are indicated.

- 1 A book has an ISBN which is 330247204X

Tick (✓) the most appropriate data type for the ISBN.

A Numeric: integer ☐

B Text ☐

C Boolean ☐

D Date ☐

[1]

- 2 Identify the hardware from the descriptions given.

(a) A volatile internal memory that stores the current instruction.

..... [1]

(b) A printed circuit board containing the CPU and other components of a computer.

..... [1]

(c) A printed circuit board that controls the output to a monitor.

..... [1]

(d) A printed circuit board that is installed in a computer so that the computer can be connected to a network.

..... [1]

- 3 A headteacher is setting up a newsletter to send to parents of pupils at a school. She has some photographs saved on storage devices that she needs to place in the newsletter.

State **two** communication methods which the headteacher could use to upload the photographs onto the school network.

1

2

[2]

- 4 (a)** Describe the purpose of a web browser.

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.....

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..... [2]

- (b)** A company may use an intranet or an extranet.

Describe the differences between an intranet and an extranet.

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.....

..... [2]

- 5** State the safety issue that is most likely to occur for each of these causes.

- (a)** Spilling drinks on computer equipment

..... [1]

- (b)** Overloading sockets by plugging in too many devices

..... [1]

- (c)** Trailing cables across the floor

..... [1]

- (d)** Placing a laser printer at the edge of a table

.....

..... [1]

- 6 A student has set up a password for his laptop computer. The password he has chosen is Px2zY!Cg3?bd

- (a)** Discuss the benefits and drawbacks of using this password.

[illegible]

- (b)** The student could have protected his laptop computer by using two-factor authentication. This could have combined his password with a biometric method.

State **two** examples of biometric methods he could use.

1

2

- 7 A systems analyst has been asked to carry out an analysis of a company's current computer system.

- (a)** State **three** methods of analysing the current system.

- 1
- 2
- 3

- (b) The systems analyst is working with a team to create some new software. The software documentation will be stored on the cloud.

Describe how the team can use the cloud to share the documentation.

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[4]

- (c) Members of the team can use video-conferencing to join business meetings from different locations around the world.

Describe, giving reasons, **three** disadvantages of using video-conferencing for business meetings rather than meeting in person.

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[6]

- 8 (a)** Compare Optical Mark Readers (OMRs) with Optical Character Readers (OCRs). Your answer must include similarities and differences.

[illegible]

- (b)** Identify **two** uses of Optical Mark Recognition (OMR).

1

2

[2]

- 9 (a)** Absolute and relative file paths are used in the content layer when creating a web page.

- (i) Explain the differences between an absolute file path and a relative file path.

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- (ii) Explain why absolute file paths should **not** be used for hyperlinks to locally-saved web pages.

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- (b)** Anchors and hyperlinks are both used in HTML.

Compare an anchor with a hyperlink. Your answer must include similarities and differences.

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[4]

- 10** Some people use dialogue-based user interfaces to operate their car audio system.

- (a)** Describe what is meant by a dialogue-based user interface.

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[2]

- (b)** Describe the benefits and drawbacks of using a dialogue-based user interface in this way.

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[4]

- 11** Portable hard drives can be Solid State Drives (SSDs) or Hard Disk Drives (HDDs).

Explain why the SSD may be better to use than the HDD.

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[4]

- 12** Many media companies now provide media streaming for users to watch their television programmes.

(a) Explain what is meant by the term media streaming.

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[2]

(b) Describe the benefits and drawbacks of media streaming.

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[4]

13 gif and jpg file formats are used to store images.

(a) Give **one** reason for using each of the file formats. Each of your reasons must be different.

gif

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jpg

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[2]

(b) Explain the differences between the two file formats.

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[6]

- (c) The file size of an image can be reduced by changing the file format of the image.

State **two** other ways of reducing the file size of an image.

1

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2

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[2]

- 14** Identify the most appropriate method for reducing data entry errors from the descriptions given.

- (a) Manually checking the data without reference to the original copy.

..... [1]

- (b) Checking that the data being entered is reasonable.

..... [1]

- (c) Preventing errors when data is copied from one medium to another.

..... [1]

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