



Oxford Cambridge and RSA

Monday 11 January 2021 – Morning

Level 3 Cambridge Technical in IT

05838/05839/05840/05841/05842/05877 Unit 1: Fundamentals of IT

Time allowed: 1 hour 30 minutes

C380/2101



You must have:

- a calculator

Please write clearly in black ink.

Centre number

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Candidate number

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First name(s)

Last name

Date of birth

D	D	M	M	Y	Y	Y	Y
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INSTRUCTIONS

- Use black ink. You can use an HB pencil, but only for graphs and diagrams.
- Write your answer to each question in the space provided. If you need extra space use the lined pages at the end of this booklet. The question numbers must be clearly shown.
- Answer **all** the questions.

INFORMATION

- The total mark for this paper is **80**.
- The marks for each question are shown in brackets [].
- Quality of extended response will be assessed in questions marked with an asterisk (*).
- This document has **20** pages.

ADVICE

- Read each question carefully before you start your answer.

FOR EXAMINER USE ONLY	
Question No	Mark
Section A: 1-15	/15
Section B: 16	/6
17	/9
18	/7
19	/10
20	/20
21	/10
22	/3
Total	/80

SECTION A

Answer **all** the questions.

Put a tick (✓) in the box next to the **one** correct answer for each question.

1 Which of the following is made up of spinning magnetic storage discs?

(a) Flash Drive

(b) Hard Drive

(c) Solid State Drive

(d) USB Stick

[1]

2 Which of the following devices converts digital data to analogue data?

(a) Hub

(b) Modem

(c) Router

(d) Switch

[1]

3 Which of the following units of multiple bytes is equal to 10^{15} bytes?

(a) Mebibyte

(b) Petabyte

(c) Pebibyte

(d) Terabyte

[1]

4 A game magazine provides a link to download a new game which is initially provided as free, but has a built-in expiration date. This is an example of what kind of software?

(a) Bespoke

(b) Freeware

(c) Off-the-shelf

(d) Shareware

[1]

5 Which of the productivity software below would be the **most** suitable for storing large amounts of online shopping transaction data?

(a) Database

(b) Email

(c) Spreadsheet

(d) Word Processor

[1]

6 Which of the following allows a user to share images, text and video with a large number of recipients?

(a) Social Media

(b) Teleconference

(c) Video Conference

(d) VOIP

[1]

7 Installable troubleshooting tools may not help a software developer to detect:

(a) file corruption

(b) file deletion

(c) hardware issues

(d) user error

[1]

8 Which of the below features in the Application layer of the TCP/IP protocol stack?

(a) FTP

(b) ICMP

(c) TCP

(d) UDP

[1]

9 A permanent point-to-point link creating a pre-established WAN connection is called:

(a) ADSL

(b) ISDN

(c) Leased Line

(d) PSTN

[1]

10 In a remote area with no network coverage, which of the following connectivity methods would be **most** suitable to make a voice call?

(a) Cellular

(b) Data

(c) PSTN

(d) Satellite

[1]

11 Which of the following is **not** a feature of body language?

(a) Eye Contact

(b) Hand Gestures

(c) Posture

(d) Tone of Voice

[1]

12 Which communication technology is **most** appropriate when a short but urgent/immediate communication is required?

(a) Blog

(b) Email

(c) Instant Messaging

(d) Word Processing

[1]

- 13** An online shop selling lycra cycle clothing directs you to the payment page, but you notice that the URL does not begin with HTTPS. You do not enter your bank details. This is an example of:

(a) disability discrimination

(b) gender discrimination

(c) staying safe online

(d) whistleblowing

[1]

- 14** A user clicks on an application that they think is safe, but it actually opens a 'backdoor' to their computer. This is an example of:

(a) a trojan

(b) a virus

(c) interception

(d) phishing

[1]

15 Which of the following is the most effective way to prevent intercepted emails from being read?

(a) Anti-spyware

(b) Anti-virus

(c) Encryption

(d) Firewalls

[1]

Section A Total:
(for examiner use only)

SECTION B

Answer **all** the questions.

JDI Academy Group have acquired a new school and are looking at the ICT requirements, including hardware and software to improve the school resources.

16 The Digital Media Department computers need hardware upgrades to run movie and sound editing software.

(a) Identify **one** expansion card that could be bought. Explain why it is suitable for the Digital Media Department computers.

Expansion Card

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Reason

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[3]

(b) Each computer is connected to the main school network using an internal wireless adapter and a wireless access point. Students complain that their large media files are slow to download.

Identify and explain a more effective connectivity method to download the media files.

Connectivity method

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Reason

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[3]

- 17 (a) The JDI Academy Group IT technicians are thinking about using a ticketing system to manage faults.

Identify **two** advantages and **one** disadvantage of using a ticketing system to log reports of faults.

Advantage 1

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Advantage 2

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Disadvantage

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[3]

- (b) Convert the denary number 57 into binary and then into hexadecimal.

Show your workings out.

Answer: Binary.....

Answer: Hexadecimal.....

[2]

(c) The JDI Academy Group IT technicians have installed an integrated design environment (IDE) for the students to use.

Identify **four** features of an IDE.

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[4]

18 (a) The JDI Academy Group IT technicians run weekly disk defragmentation on the classroom computers.

Explain **two** advantages of using disk defragmentation.

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[4]

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20 (a) JDI Academy Group will install a new wired network using a fibre optic bus and ethernet star network for each classroom.

Identify and describe **three** pieces of hardware that could be used to create this network.

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[6]

- (b) The school network uses a Ring topology. Describe **one** advantage and **one** disadvantage of this network topology.

Advantage

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Disadvantage.....

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[4]

- (c) The JDI Academy Group technicians would like teaching staff to stop leaving their passwords written down on notes stuck to their monitors. The technicians would like to explain to staff that doing this is a bad idea.

Identify **one** appropriate type of communication software and explain how the technicians could use it to explain the issue to teaching staff.

[4]

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(d) The JDI Academy Group would like all of its technicians to wear a uniform.
Identify and describe **two** other ways that the technicians could demonstrate that they are ready for work.

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22 (a) JDI Academy Group IT Technicians have noticed key logging software installed on several machines in school.

Identify the most appropriate type of software that can be used to remove the key logging software.

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.....[1]

(b) Identify and describe **one** method that can be used to dispose of the school's old hard drives.

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.....[2]

END OF QUESTION PAPER

ADDITIONAL ANSWER SPACE

If additional answer space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margin(s) – for example, 16(a) or 17(b).

A large area of the page is filled with horizontal dotted lines, providing space for writing answers. A solid vertical line is positioned on the left side of this area, serving as a margin.

A series of horizontal dotted lines for writing, spanning the width of the page.



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