OCR
Oxford Cambridge and RSA

Level 3 Cambridge Technical in IT
05838/05839/05840/05841/05842/05877

Unit 1: Fundamentals of IT

Monday 14 May 2018 – Morning
Time allowed: 1 hour 30 minutes

You must have:
- a calculator

First Name						Last Name					

Centre Number						Candidate Number				

Date of Birth	D	D	M	M	Y	Y	Y	Y

INSTRUCTIONS
- Use black ink. You may use an HB pencil for graphs and diagrams.
- Complete the boxes above with your name, centre number, candidate number and date of birth.
- Answer **all** the questions.
- Write your answer to each question in the space provided.
- Additional paper may be used if necessary but you must clearly show your candidate number, centre number and question number(s).

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 consists of **16** pages.

FOR EXAMINER USE ONLY	
Question No	Mark
Section A: 1-15	/15
Section B: 16	/4
17	/26
18	/7
19	/7
20	/21
Total	**/80**

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Turn over

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 types of server would be used to run a virtual machine?

(a) Mail

(b) Web

(c) File/print

(d) Hypervisor

[1]

2 Which of the following is an example of storage virtualisation?

(a) Storing audio files on a mobile device.

(b) Storing server back-ups on a removable drive.

(c) Storing a word processed document on a laptop desktop.

(d) Storing a movie on a drive from multiple network storage devices.

[1]

3 Which of the following is a characteristic of a peer to peer network?

(a) Centralised data accounts.

(b) All data traffic flows through a central server.

(c) Resources can be shared without a dedicated server.

(d) Data flow through the network is controlled by a token allocated by the server.

[1]

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4 **Fig. 1** shows a diagram of a computer network.
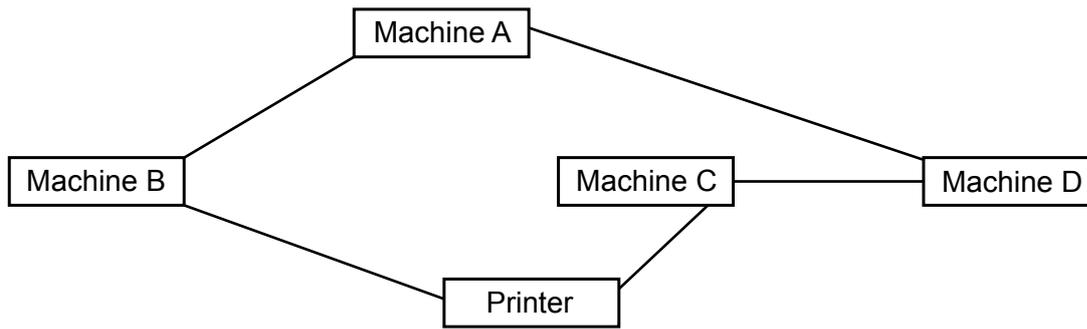
Fig. 1

Which network topology is represented in **Fig. 1**?

(a) Bus

(b) Star

(c) Ring

(d) Mesh

[1]

5 What is meant by the term 'Metropolitan Area Network' (MAN)?

(a) A network based in a school.

(b) A city-wide network of computers.

(c) A network spanning two countries.

(d) A network of hypervisor enabled machines.

[1]

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6 Which of the following is an example of a WAN connectivity method?

    (a) Data

    (b) ISDN

    (c) HTTP

    (d) SATA

[1]

7 Which of the following is **not** a suitable use of a blog by a business?

    (a) To launch a new product.

    (b) To request feedback on a product.

    (c) To share new developments with staff.

    (d) To inform staff that they have been made redundant.

[1]

8 Which of the following is considered to be a personal attribute for a successful network manager?

    (a) Being self-taught.

    (b) Requiring supervision.

    (c) Ability to work independently.

    (d) Being a member of a professional body.

[1]

9 Why could two staff members of an organisation have different expected standards of dress code at work?

    (a) The staff members job-share. ☐

    (b) The staff members are different ages. ☐

    (c) The staff members perform different job roles. ☐

    (d) Staff members are at different stages of their career. ☐

[1]

10 Which of the following is **not** a purpose of a professional body?

    (a) To share best practice. ☐

    (b) To organise industrial action. ☐

    (c) To act as a means of entry into the profession. ☐

    (d) To support the learning that underpins the professional body. ☐

[1]

11 Which of the following is an example of staying safe online?

    (a) Switching off the firewall. ☐

    (b) Regularly changing passwords. ☐

    (c) Providing personal details for public access. ☐

    (d) Updating anti-virus software on an annual basis. ☐

[1]

Turn over

12 Which of the following is **not** an example of disaster planning?

(a) Backing up the main server to the Cloud.

(b) Having two mirrored folders on separate servers.

(c) Keeping a back-up copy of an organisation's website.

(d) Using an external hard drive as the sole storage area.

[1]

13 Which of the following is an attempt to gain information by listening to communication traffic?

(a) Phishing

(b) Data theft

(c) Eavesdropping

(d) Social engineering

[1]

14 Which of the following is an example of digital security?

(a) Biometrics

(b) Electromagnetic wipe

(c) Permissions

(d) Tokens

[1]

15 Which of the following describes why usernames **must** be used with a password for improved security?

    (a) Usernames should combine numbers, letters and symbols.

    (b) Usernames and passwords are changed every time you log on.

    (c) Username and password combinations being guessed is a low risk.

    (d) Usernames are not unique, so offer high security levels on their own.

[1]

Section A Total:
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Turn over

SECTION B

Answer **all** the questions.

AMEC Leisure runs leisure centres throughout the country providing a variety of facilities. It has a website where customers can register to use a fitness gym's facilities and create a personal profile to store training programs and track their progress. Customers can also link their social media accounts to their profile to share their training information with friends.

The leisure centres feature the latest fitness technology including 'connected' fitness equipment that automatically uploads workout information to the customer's personal profile.

AMEC Leisure's IT staff are responsible for the maintenance of the 'connected' fitness equipment as well as the company's computer systems.

16 Staff at AMEC Leisure must read and sign the company's Code of Conduct.

Explain **two** reasons why staff must agree to the AMEC Leisure Code of Conduct.

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[4]

17 When maintaining the 'connected' fitness equipment, IT staff use a set of Standard Operating Procedures (SOP).

(a)* Explain why IT staff use SOP to maintain the 'connected' fitness equipment.

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The 'connected' fitness equipment features a hexadecimal error display. The code on the display identifies the error with the 'connected' gym equipment.

When updating the equipment's user manual, the engineer mistakenly used a decimal value instead of hexadecimal.

(b) Convert the decimal number 244 to hexadecimal. You **must** show your workings.

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(c) Each piece of 'connected' fitness equipment has 128 mebibytes of storage.

Describe the difference between a mebibyte and a megabyte and explain why mebibytes are used.

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(d)* Discuss the use of wireless technologies for uploading data to and from the 'connected' fitness equipment.

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Turn over

18 Staff at AMEC Leisure have received a customer complaint via one of its social media channels.

(a) Identify **one** social media channel that could be used by AMEC Leisure.

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(b) Explain **two** barriers to communication that could be encountered when receiving a complaint via social media.

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[6]

19 Before disposing of computer equipment, AMEC Leisure must ensure it has removed all data.

    (a) (i) Identify **one** method that could be used to remove data from equipment before disposal.

        ....**[1]**

      (ii) Explain **two** advantages and **one** disadvantage of the method you have chosen.

        Advantage 1 ....

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        Advantage 2 ....

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        Disadvantage..

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                                   [6]

Turn over

20 Each staff member at AMEC Leisure has a tablet computer with a bespoke operating system.

(a) Explain **one** benefit to AMEC Leisure of using a bespoke operating system.

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(b) Describe **three** functions that a tablet computer's operating system will perform.

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(c) Describe **two** troubleshooting tools that could be used to investigate faults with the tablet computers.

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15

(d) The tablet computers are connected to a network using the TCP/IP protocol. The addressing information must be configured manually.

Identify **three** pieces of information that must be configured to allow the tablet computer to access a web site on the internet.

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(e) Explain **one** benefit of **not** using automated methods to configure the addressing information.

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(f) Data on the tablet computers must be protected from accidental deletion.

Identify and describe **one** type of utility software that can be used for this purpose.

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(g) Identify and describe **one other** type of utility software that can be used to improve the performance of the tablet computer.

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END OF QUESTION PAPER

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