



Oxford Cambridge and RSA

Wednesday 8 January 2020 – Morning

Level 3 Cambridge Technical in IT

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

Time allowed: 1 hour 30 minutes

C380/2001



You must have:

- a calculator

Please write clearly in black ink.

Centre number

Candidate number

First name(s) _____

Last name _____

Date of birth

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 page(s) 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 **16** 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	/12
17	/11
18	/20
19	/10
20	/12
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 wireless technology requires 'pairing'?

(a) Bluetooth

(b) Laser

(c) Microwave

(d) Wifi

[1]

2 When using troubleshooting tools, a log can help to:

(a) record hardware faults

(b) fix hardware faults

(c) quarantine hardware faults

(d) remove hardware faults

[1]

3 Which productivity software is the **most** appropriate for creating a mail merge letter template?

(a) Database

(b) Email

(c) Spreadsheet

(d) Word processor

[1]

4 Which business software is **most** suitable for creating a safety poster?

(a) CAD

(b) CAM

(c) MIS

(d) DTP

[1]

5 Which communication software enables several users to participate in a meeting over the phone?

(a) Messaging

(b) Personal assistants

(c) Teleconference

(d) Video conference

[1]

6 Which software troubleshooting tool tests computer performance against an established norm?

(a) Baseline

(b) Error logs

(c) Event logs

(d) Installable tools

[1]

7 Which of the following is an error reporting protocol?

(a) ICMP

(b) FTP

(c) HTTP

(d) SMTP

[1]

8 A business stores its data off-site on computers run by another company.
This is an example of:

(a) Client virtualisation

(b) Cloud virtualisation

(c) Server virtualisation

(d) Storage virtualisation

[1]

9 Which business system allows managers to organise and manage departments?

(a) Customer relationship management

(b) Helpdesk

(c) Management information system

(d) Sales ordering process

[1]

10 Which of the following methods allows participants to use body language to aid communication?

(a) Emails

(b) Group discussions

(c) Telephone

(d) Teleconferencing

[1]

11 Which of the following does **not** demonstrate readiness to work through appearance?

(a) Appropriate clothing

(b) Can-do-attitude

(c) Combed hair

(d) Use of deodorant

[1]

12 Which of the following is an ethical issue that businesses **must** consider?

(a) Disaster planning

(b) Health and Safety

(c) Social engineering

(d) Use of Information

[1]

13 Which of the following is attempting to gain unauthorised access to a computer system?

(a) Eavesdropping

(b) Hacking

(c) Interception

(d) Phishing

[1]

14 Which physical security method requires the user to have a key or a code?

(a) Fingerprint scan

(b) Iris scan

(c) Lock

(d) RFID

[1]

15 Which digital security method enables the system administrator to allow users access to different data or software on a system?

(a) Anti-virus

(b) Encryption

(c) Permissions

(d) Usernames & Passwords

[1]

Section A Total:
(for examiner use only)

SECTION B

Answer **all** the questions.

GalenTyrol Engine Solutions (GES) is an engineering company that creates prototype engines for its clients. GES uses Computer Aided Design (CAD) and Computer Aided Manufacturing (CAM) in the creation process.

The company is based on one site with three main buildings. The main office has 8 personal computers which are used for office administration. The design building has 6 personal computers which are used by the designers for CAD. The manufacturing building contains the CAM computers and machinery used by the company engineers.

16 (a) The CAD designers use a range of input devices to create their designs.

Identify and describe **two** input devices that could be used.

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[4]

(b) GES takes video footage of the prototype engines being manufactured to send to their clients. The USB connections have been disabled on all company PCs.

Identify and describe **one** type of port that could be used to download the video footage from the camera.

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[2]

- (c) The personal computers in the design building have had graphics expansion cards installed.

Identify and describe **one** benefit to the designers of using the graphics expansion cards.

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.....[2]

- (d) Designers order 3D printer filaments by communicating with the staff in the main office.

Identify and describe **one** item of communications hardware required to communicate with main office using a tablet PC.

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.....[2]

- (e) The designers need to convert decimal numbers into hexadecimal.

Convert the following decimal numbers into hexadecimal. You should show all your working.

134

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244

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.....[2]

- 17 (a) GES stores client, project and finance details for every prototype engine project.

Identify which productivity software would be best suited to doing this.

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.....[1]

- (b) The CAM PCs used by the engineers need regular maintenance. The GES IT technician uses utility software during the maintenance.

Identify **two** different types of utility software that could be used during the maintenance of the CAM PCs. Justify your choices.

Utility Software 1

Justification

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Utility Software 2

Justification

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[6]

- (c) One of the CAM PCs keeps unexpectedly rebooting.

Identify and describe **two** troubleshooting tools that could be used to locate the issue.

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[4]

18 (a) The GES main office currently has one server. This server is used for:

- storing client and prototype engine design project data,
- sending, receiving and archiving emails,
- hosting the GES website,
- connecting to shared printers.

It has been recommended that three servers are installed to maintain the functionality.

Identify and explain **three** types of server that could be installed.

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[9]

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(c) The main office, design building and manufacturing building are connected in a network using ethernet cable and hubs.

Identify the type of network.

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.....[1]

19 (a) A weekly meeting is held with the managers, designers and engineers. The meeting is held in the design building as there are barriers to communication in the manufacturing building.

Identify and describe **two** possible barriers to communication in the manufacturing building.

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[4]

(b) GES uses bespoke software during the design process. The bespoke software needs updating.

Identify the job role which would carry out this task.

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.....[1]

(c) GES have decided to employ a new member of staff to update and maintain the software used in all departments. The new staff member should be a member of a professional body.

Identify and explain **one** benefit of being a member of a professional body.

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[3]

(d) The new staff member should have industry certification.

Identify and describe **one** benefit to GES of the new staff member having industry certification.

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[2]

20 (a)* GES need to maintain the confidentiality of their prototype engine designs. The current designs are stored on a physical server with the archived designs stored on the cloud.

Discuss the security measures that could be used to protect the engine designs stored on both the physical server and the cloud.

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(b) Identify **two** direct threats to the security of GES client personal data held on a server in the main office.

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- 2
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[2]

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 vertical line on the left side of the page is followed by 25 horizontal dotted lines, providing a ruled area for writing answers.

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



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