

**Wednesday 9 January 2019 – Morning**

**Level 3 Cambridge Technical in IT**

**05838/05839/05840/05841/05842/05877**

**Unit 1: Fundamentals of IT**

**Time allowed: 1 hour 30 minutes**

**Plus your additional time allowance.**

**You must have:  
no materials required**

**Modified Enlarged 18 pt**

**First Name**

**Last Name**

**Centre  
Number**

**Candidate  
Number**

**Date of  
Birth**

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**INSTRUCTIONS**

Use black ink. You may use an HB pencil for graphs and diagrams, if required.

Complete the boxes on the front page 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.

If additional answer space is required, you should use the lined page(s) at the end of this booklet. The question number(s) must be clearly shown.

**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 (\*).

**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 an input device? [1]**

**(a) Barcode reader**

☐

**(b) Headphones**

☐

**(c) Printer**

☐

**(d) Speaker**

☐

**2 Which of the following is safe to remove whilst a laptop is running? [1]**

**(a) External hard drive**

☐

**(b) Hard drive**

☐

**(c) RAM**

☐

**(d) ROM**

☐

**3 Which of the following is an example of a port? [1]**

**(a) SAS**

☐

**(b) SATA**

☐

**(c) SCSI**

☐

**(d) SMS**

☐

**4 Which of the following connection technologies requires line of sight? [1]**

**(a) Bluetooth**

☐

**(b) GSM**

☐

**(c) Laser**

☐

**(d) WiFi**

☐

**5 Which of the following is NOT part of the Internet of Things? [1]**

**(a) Smart bulb**

☐

**(b) Smart iron**

☐

**(c) Smart refrigerator**

☐

**(d) Smart thermostat**

☐

**6 Which of the following is an example of an engine management system in a car? [1]**

**(a) Embedded**

☐

**(b) Freeware**

☐

**(c) Off the shelf**

☐

**(d) Open source**

☐

**7 Which of the following is part of an Integrated Design Environment (IDE) that converts instructions into machine code? [1]**

**(a) Compiler**

☐

**(b) Debugger**

☐

**(c) Interpreter**

☐

**(d) Text editor**

☐

**8 Which of the following BEST describes a personal computer (PC) used at home? [1]**

**(a) Multiuser multitasking**

☐

**(b) Multiuser single application**

☐

**(c) Single user multitasking**

☐

**(d) Single user single application**

☐

**9 Which communication method would be MOST appropriate for discussing a new plane design? [1]**

**(a) Email**

☐

**(b) Instant messaging**

☐

**(c) Teleconference**

☐

**(d) Video conference**

☐

**10 Which of the following is NOT a feature of an Internet Protocol (IP)? [1]**

**(a) Forwarding packets to individual computers.**

☐

**(b) Putting packets back together in order.**

☐

**(c) Sending packets to the Domain.**

☐

**(d) Sending packets to the Gateway.**

☐

**11 Complete the following sentence:**

**\_\_\_\_\_ virtualisation typically uses a mixture of private and public cloud services. [1]**

**(a) Client**

☐

**(b) Hybrid**

☐

**(c) Server**

☐

**(d) Storage**

☐

**12 Which of the following is an element of a Class C network that will default to 255.255.255.0? [1]**

**(a) Default gateway**

☐

**(b) Host IP address**

☐

**(c) Local IP address**

☐

**(d) Subnet mask**

☐

**13 Complete the following sentence:**

**A token ring network is an example of a  
\_\_\_\_\_ . [1]**

**(a) LAN**

☐

**(b) MAN**

☐

**(c) PSTN**

☐

**(d) WAN**

☐

**14 Which of the following is NOT a characteristic of an ADSL connection? [1]**

- (a) Faster upload than download rate** ☐
- (b) Fibre optic connection** ☐
- (c) Microfilter installed on the line** ☐
- (d) Simultaneous voice and data connection** ☐

**15 Which of the following is NOT a common characteristic of helpdesk software? [1]**

- (a) Sales ordering process** ☐
- (b) Service level agreement** ☐
- (c) Technician assignment** ☐
- (d) Ticketing** ☐



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**SECTION B**

**Answer ALL the questions.**

**Monty Bella Retail operates five retail parks throughout the UK. After years of underinvestment, the information technology (IT) of the company is aging and is no longer fit for purpose. Monty Bella Retail has decided to move its IT infrastructure from its own data centre to the Cloud using public cloud providers. Monty Bella Retail also wants to upgrade all IT in its retail parks.**

**Monty Bella Retail would like to use technology to improve the customer experience whilst shopping. Each retail park will feature similar equipment to allow data about customers, their purchases and shopping habits to be shared amongst the business. Shoppers will also be tracked as they move through the retail parks. This information will be used for marketing purposes, to create promotions and to ensure the items that shoppers are looking for can be easily located.**

**16 Monty Bella Retail would like to track shoppers as they move through the retail parks using wireless technologies.**

**(a) Identify and describe TWO wireless technologies that could be used to track shoppers as they move through the retail parks. [4]**

**1** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2

**Data about the habits and location of shoppers must be kept secure.**

**(b) Identify and describe TWO digital security methods that could be used to keep the data secure.**

1

2

**Monty Bella Retail has decided to use virtualisation technologies to replace hardware in its data centre.**

**17\* Discuss, using examples, the benefits and limitations to Monty Bella Retail of using virtualisation technologies. [10]**

[illegible]

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**18 Shops in each retail park are all connected to a wired Local Area Network (LAN).**

**(a) Identify ONE piece of communications hardware needed to create a wired LAN.**

\_\_\_\_\_ **[1]**

**(b) Describe TWO ways Monty Bella Retail could use a wired LAN in its retail parks.**

**1** \_\_\_\_\_

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**2** \_\_\_\_\_

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**[4]**

**(c) Describe ONE protocol that could be used on the wired LAN.**

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**[2]**

**19 Monty Bella Retail uses productivity software to manage its business.**

**Explain, using examples, THREE types of productivity software Monty Bella Retail could use to manage its business.**

**1** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**2** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**3** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**20 IT staff at Monty Bella Retail must give a presentation to justify the use of new IT to the senior management team.**

**(a) Explain why the appropriate use of language is important when justifying the use of new IT to the senior management team.**

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**[2]**

**(b) Identify and describe TWO communication skills, OTHER THAN appropriate use of language, IT staff should consider when justifying the use of new IT to the senior management team.**

**1** 

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**2** 

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**[4]**



**(c) Identify and describe TWO ways IT staff can demonstrate that they are ready for work.**

**1**

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**2**

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**[6]**

**21\* Discuss the operational issues Monty Bella Retail should consider when moving its IT infrastructure to public cloud providers. [10]**

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**22 Monty Bella Retail uses a Management Information System (MIS) and a Customer Relationship Management (CRM) system.**

**(a) Explain the purpose of MIS and CRM systems.**

**MIS** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**CRM** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**[6]**

**(b) Monty Bella Retail uses a web server to host its web site.**

**Identify ONE OTHER type of server Monty Bella Retail could use.**

**[1]**

**END OF QUESTION PAPER**

[illegible]



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