OCR
Oxford Cambridge and RSA

Thursday 25 May 2017 – Afternoon

GCSE INFORMATION AND COMMUNICATION TECHNOLOGY

B063/02/PRE   ICT in Context

Duration: 1 hour

INSTRUCTIONS TO CANDIDATES

- This is a clean copy of the pre-release material which you have already seen.
- You may **not** take your previous copy of the pre-release material into the examination.
- You may **not** take notes into the examination.

INFORMATION FOR CANDIDATES

- This document consists of **2** pages. Any blank pages are indicated.

INSTRUCTION TO EXAMS OFFICER/INVIGILATOR

- Do not send this insert for marking; it should be retained in the centre or recycled. Please contact OCR Copyright should you wish to re-use this document.

OCR is an exempt Charity

Turn over

Progress Delivery Company (PDC) collects and delivers parcels throughout the country. Its customers range from individuals to large companies.

When a customer wants to send a parcel, they make the booking through PDC's website. After logging in, the parcel's dimensions, weight and contents are entered into the website, along with the delivery address for the parcel. The information entered is used to calculate a price for shipping. To send the parcel, the customer enters their payment details and a shipping label is generated that is printed by the customer and attached to the parcel.

During the booking process, the customer can choose to have the parcel collected, or they can take it to a local drop off point. When the parcel is handed over, the label is scanned using a handheld device and a receipt is printed containing the parcel's details and tracking number. This is given to the customer.

Each time the parcel is handled, it is scanned with a handheld device and details of its current location are recorded, along with the current date and time, as well as the name of the person who scanned it. This could be in a shop, van, or one of PDC's warehouses. Information is sent wirelessly from the handheld devices, either using 3G/4G services or Wi-Fi to PDC's computer system.

The tracking number can be used on the PDC website to view the status of the parcel. If the customer will not be available to take delivery of the package, they can use the website to have it delivered to an alternative address.

When the parcel is delivered, its tracking number is scanned again, and the customer is asked to sign the screen of a handheld device as proof of delivery. This proof of delivery can also be viewed on the PDC website by the person who sent the parcel so they can confirm that it has arrived safely.

PDC uses an Electronic Data Interchange (EDI) system so large companies can send bulk parcel orders without having to enter individual parcel details into the website. Tracking information can also be sent back to the companies using the EDI system.

PDC would like to have a smartphone app to allow customers to send parcels and to view tracking information. It would also like to be able to display a live map, showing the current location of the parcel as well as an estimated time that the parcel will be delivered. The app will be developed using the systems lifecycle.

PDC would also like to investigate the use of NFC technologies in its warehouse to improve its parcel tracking and delivery services.

You need to research the following in relation to a parcel delivery company:

- Hardware and software including wireless communications
- The stages of the systems lifecycle and its advantages and disadvantages
- Measures to protect data
- NFC technologies for parcel tracking and delivery
- Strategies for keeping data secure
- User interface design
- EDI and its advantages and disadvantages
- Legislation.