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LEVEL 1/2 CAMBRIDGE NATIONAL IN ICT

R001/01 Understanding Computer Systems

PRE-RELEASE CASE STUDY

JANUARY 2016



INSTRUCTIONS TO TEACHERS

- This pre-release material may be given to candidates at any time after receipt by the Centre.

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- This document consists of **4** pages. Any blank pages are indicated.

Information for Learners

Doctors often work together in a practice. Doctors' practices employ office staff who do administrative tasks. (Scenario 1)

If an emergency arises when the practice is closed, patients are able to ask for an out-of-hours home visit. Practices employ an out-of-hours telephone operator who deals with these requests and passes on the details to the doctor who is on call. (Scenario 2)

Scenario 1

Appleside Doctors' Practice is run by a small team of doctors. It serves approximately 10 000 people and employs six administration staff, one of whom acts as Office Manager. The practice is open between the hours of 8 am and 6 pm from Monday to Friday and from 8 am to 2 pm on Saturdays.

People who want to register with the practice have to complete a questionnaire on paper. The completed questionnaires allow the practice to track down each patient's previous medical records, as well as identify any other potential health issues. A digital copy of each questionnaire is created and stored.

All patients' details are stored in a database. When a new patient joins the practice, one of the administration staff adds their data to the relevant fields on the database.

All data held by the practice is extremely important. The Office Manager has set up the computer system so that a complete back-up of all data held on the system is made every night. This is currently backed up to an external hard drive, but the practice is considering alternative storage media that may be used to store data that has been backed up. The Office Manager has also installed anti-virus software on all computers used in the practice. The Office Manager has set the options on the anti-virus software so that it updates automatically.

The practice uses its broadband internet connection to provide wifi access in the waiting room for patients to use with their own devices whilst they are waiting.

Scenario 2

A new doctor, Tamsin, has just joined the practice. Tamsin provides out-of-hours cover once a week. She is given a laptop computer by the practice, which she uses to access patients' records during her visits. Due to security risks, Tamsin has to use a strong password as well as a USB security key to log onto her laptop computer. Tamsin's laptop computer has the same anti-virus software settings as all other computers used in the practice.

Once a month, Tamsin has to return her laptop computer to the Office Manager for routine maintenance. The Office Manager uses some of the system tools on the laptop computer for this purpose.

As a new colleague, Tamsin has been asked for suggestions that would make Appleside Doctors' Practice more efficient. She has suggested that the practice replace the paper-based questionnaire used to collect patients' details with a digital form.

Preparation

To prepare for the examination, you should research the use of information systems in a doctors' practice including systems which support doctors who have to visit patients' homes.

This should include:

- methods by which details of out-of-hours emergency visits can be passed to the doctor on call
- methods by which data may be collected from patients and the benefits and drawbacks of these
- the use of a database including forms, queries and reports
- possible risks to data of providing doctors with laptop computers with access to patients' records and methods by which laptop computers can be protected from unauthorised access
- the hardware and software used by administration staff.

You should also research:

- possible impacts of providing access to wifi within an organisation that holds sensitive data
- the use of the defragmentation system tool, and other system tools, to perform routine maintenance tasks on computers
- the range of devices and media available for storing data and the benefits and drawbacks of each.

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