Edexcel GCE

Applied Information and Communication Technology
Unit 9: Communications and Networks
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Scenario	Paper Reference **6959/01**

The scenario should be distributed to candidates at least three working weeks before the examination.
Note: There are **no** practice files for this examination.

This scenario should be used for the purposes of preparing candidates for the examination. This copy **must not** be taken into the examination. The information contained in the scenario will be included in the examination paper.

Further details are in the Instructions for the Conduct of Examinations (ICE), available from the Edexcel website for this qualification.

Edexcel will not accept any request for special consideration should candidates be given the incorrect scenario for the examination they are sitting.

Turn over ▶

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Scenario

Volunteer work

You decide to have a gap year. A charity offers you a placement in Tanzania, East Africa, that will make use of your A level networking skills.

The placement involves setting up a network for a junior school and a clinic, both located in a remote village. You will be helping an experienced volunteer, Dave Grant. He is a retired network engineer who is managing several projects in the area. After the installation he will leave you to train people to run and maintain the network.

After your flight to Dar es Salaam it takes a twelve-hour drive to get to the school. You are met by the headteacher and the doctor from the clinic. They tell you that Dave has been evacuated to a hospital in Dar es Salaam. He will not return for at least a month.

Dave had just started planning the network when he was taken ill. You are shown his workshop, which contains:

- a desk

- a toolbox containing an RJ45 crimper, network testing kits for cable and WiFi, a punchdown tool, a multimeter, and an assortment of cable clips and fasteners, screwdrivers, pliers and other small tools

- two 305m reels of CAT6 cable

- six packs of 50 RJ45 connectors

- a box of about 50 second-hand data sockets with assorted faceplates

- a box of new unmanaged switches, 10 x Netgear FS605 and 6 x Netgear FS608

- a box of new wireless access points, 10 x Netgear WN802T-200UKS Rangemax Next

- a Toshiba Tecra R10-11B laptop. This is second-hand and has a sticker saying 'tested OK March 2011, Linux Server'. It has a power pack and a spare battery

- two HP Deskjet D2660 inkjet printers. These are second-hand. One has a sticker saying 'tested OK March 2011'. The other one has a sticker saying 'tested March 2011, roller does not pick up paper from tray, must manual feed one sheet at a time'. They have USB and power leads.

The headteacher tells you that he has a set of fifty XO laptops from the *One Laptop Per Child* project. There are enough for the 10 and 11 year olds to have a laptop each. These are the oldest children in the school.

The doctor tells you that there are three WiFi enabled laptops in the clinic. A local mobile phone business, TanCel, provides a free broadband Internet connection to the clinic. The laptops all connect to a single WiFi access point which has a CAT 6 cable connection to TanCel.

TanCel has offered to let the school use the Internet connection but you will have to connect the school to the clinic.

On the desk is a sketch of the local area. Dave has made a few notes on it.

Village

River

School

Make a couple of extended range
WiFi antennae to cover the distance

About 500 metres

Village

Clinic

School compound

Offices and staffroom

6 classrooms

Workshop

75 metres