Pearson Edexcel GCE

Applied Information and Communication Technology
Unit 9: Communications and Networks

May 2016 **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 Instuctions for the Conduct of Examinations (ICE), available from the Pearson Edexcel website for this qualification.

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Scenario

The Jolly Roger Marina

The Jolly Roger Marina (JRM) is situated in the town of Chora on the island of Agios Giorgios, in the Ionian Sea. JRM is owned and run by the Walker family; Roger, Katerina and their children Maria and Gregor.

The JRM business consists of:

• a marina, with workshops and chandlery

• a fleet of 12 hire boats

• 20 holiday apartments

• a taverna and mini-market.

The layout is shown in the sketch map.

The marina has moorings for the hire boats and about 30 visitors. The chandlery and workshops are sufficient to maintain the hire boats and carry out repairs for visitors. Most visitors are cruising around the Ionian Islands and only stay for one or two nights.

The hire boats are all eight-berth sailing yachts. They are mainly used for flotilla sailing, where several boats sail together on the same route, overseen by a qualified skipper. The Walker family are all qualified skippers and JRM hires extra skippers for the busier parts of the year. JRM occasionally runs sail training courses and charters boats to experienced sailors for unaccompanied trips.

The apartments receive good reviews, but do not get many repeat customers as Agios Giorgios is quite small and easily explored in one week. The apartments are normally only in use from April to October. The taverna and mini-market are used by both visitors and locals and have customers all year round. The taverna occupies the waterside half of the building. Roger and Katerina live in an apartment above the mini-market, while Maria and Gregor have their own properties in Chora.

In recent years, Roger has been getting less and less jolly. The economic problems in Europe and the wider world have squeezed profit margins. JRM has been unable to raise prices in line with inflation and last year was forced to offer large, last minute discounts to keep the hire boats and apartments busy.

The problem, as Roger sees it, is that JRM is competing with too many similar companies. He thinks that the problem will self-correct as some of the companies go bankrupt. He is concerned that JRM might be one of those companies unless some changes are made.
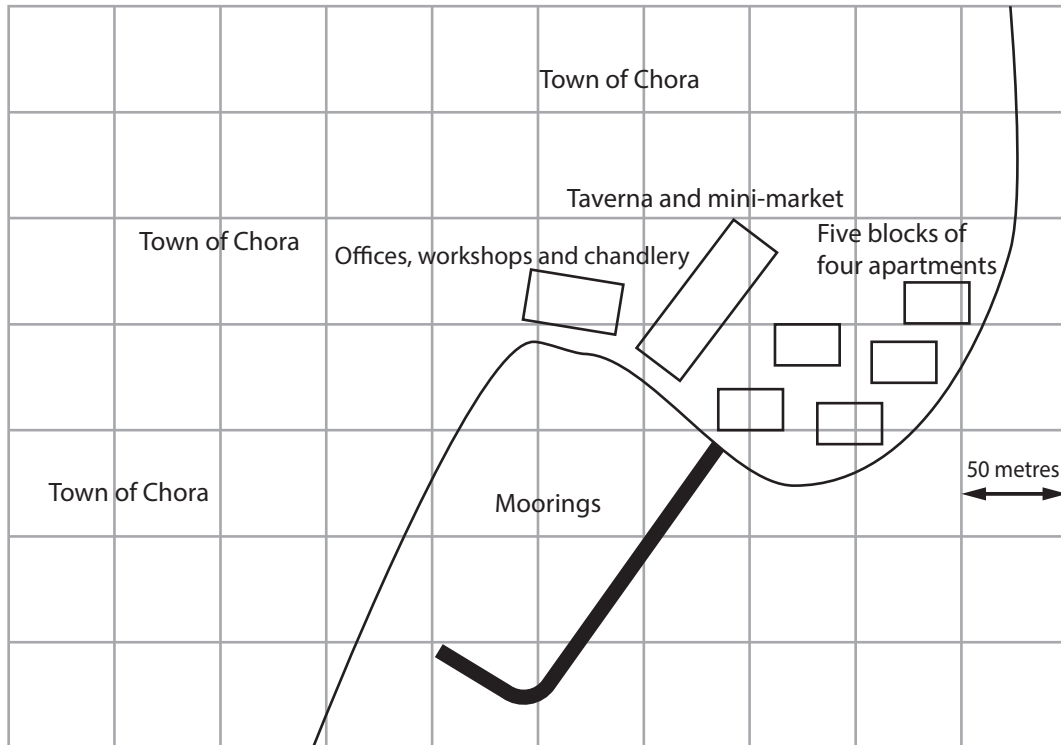
The Walker family have concluded that:

• sail training is potentially the most profitable activity

• flotilla sailing uses a lot of staff and takes one or more of the family away for extended periods

• customers like the 'guided tour' nature of a flotilla but don't like being tied to the speed of the slowest boat and prefer a bit more flexibility in the itinerary

• JRM needs to attract more visitors over a longer season.

The family have identified three ideas for taking the business forward.

1. Convert some of the apartments into a sailing school.

2. Improve the marina facilities to attract out-of-season sailors looking for long-term stays.

3. Use technology to reduce staff numbers and offer greater flexibility to hire boat customers.

Although the family are experts in boat-based systems such as navigation and radio equipment, their ability to use computers and networks is only average. You have been employed to advise on IT matters for the improved Jolly Roger Marina.

The current IT situation

- JRM has an ADSL-based internet connection, situated in the offices. This has a capacity of 10–15 Mbps, depending on local conditions. The ISP provides a WiFi (802.11n) enabled router with a built-in five port switch. The router provides a DHCP service for the JRM network.

- The chandlery has a PC, a monochrome inkjet printer and a credit card reader, all connected via WiFi.

- The offices have two PCs, a monochrome laser printer and a credit card reader, all connected by WiFi. There is also a network attached storage device (NAS), connected by cable.

- The taverna and mini-market both have commercial point-of-sale systems, connected by Cat5e cable. The taverna also has an open wireless access point (WAP) to provide free WiFi for customers.

- Roger and Katerina have a four port switch in their apartment, connected to the ISP router by Cat5e. They have a PC, WAP and colour laser printer.

- All the PCs run the latest version of Windows 8. JRM uses the built-in Windows 8 backup system, which uses the NAS as an external drive.

- There is no network provision for the holiday apartments or the moorings.

- The ground is hard and rocky. All exterior cable installations on land, both network and mains electricity, follow the local practice of being strung along walls and stretched over gaps, at or above first floor level.

- The marina offers electric hook-up for boats. There are cable ducts and electricity take-off points along the length of the harbour wall.