Level 2 Fibre optic cabling in an external environment (7540-226)

Systems and Principles
Assignment guide for candidates

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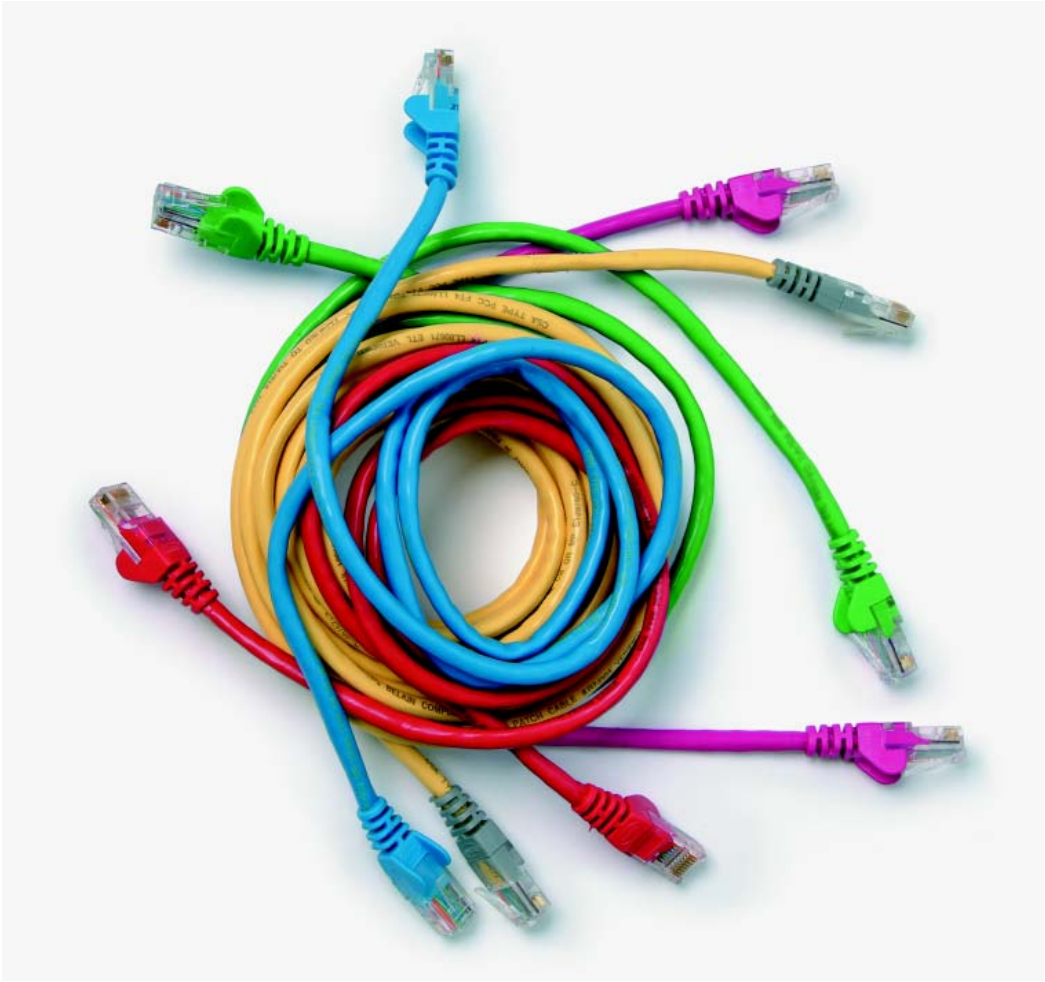

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Level 2 Fibre optic cabling in an external environment (7540-226)

Candidate Instructions

You are advised to read all instructions carefully before starting work. Check with your assessor, if necessary, to ensure that you have fully understood the process.

You must, at all times, observe all relevant health and safety precautions.

You should be aware of the manufacturer's calibration requirements. Please note that test equipment may need a user reference prior to use.

You may use any of the tools, materials and equipment provided.

There is a time limit of eight hours for this assignment.

Introduction

This assignment is broken down into three parts.

Task A requires you to interpret installation plans, and identify cables and equipment in accordance with the plans.

Task B requires you to prepare external fibre optic cable for termination and to assemble a fibre optic link.

Task C requires you to operate test equipment, test a fibre optic link, interpret and record test results, and rectify faults.

Task A

You are required to interpret the installation plan provided by your assessor and identify the correct cables and pigtails to be used. Pigtail end faces should be inspected with a x 400 microscope before splicing.

Task B

You are required to install a fibre optic link to meet the requirements specified in the installation plan. A joint enclosure must be used in the link. You must terminate a minimum of two fibres per tube and use a minimum of eight splices over the link. You must seal the enclosure using methods suited to that enclosure.

Task C

You are required to test and accurately record test results as follows:

- calculate a loss budget for the fibre optic link
- test fibre continuity using a visible light source
- identify fibre breaks using a visible fault locator
- measure the link loss using appropriate equipment
- check the return loss of the link using an OTDR
- compare the test results with the calculated loss budget to determine if the link performance is acceptable
- demonstrate link performance testing using OTDR techniques.

All test results should be recorded.

- **At the conclusion of this assignment, hand all paperwork to your assessor.**
- **Ensure that your name and enrolment number are on all documentation.**

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