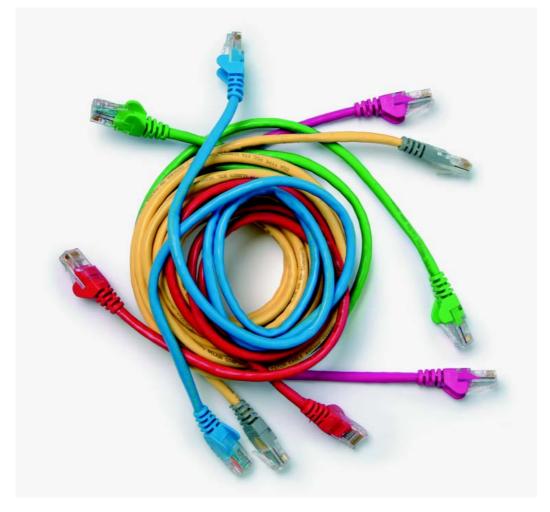
# Level 2 Fibre optic cabling in an internal environment (7540-225)

Systems and Principles Assignment guide for candidates

www.cityandguilds.com January 2009 Version 1.0





# **About City & Guilds**

City & Guilds is the UK's leading provider of vocational qualifications, offering over 500 awards across a wide range of industries, and progressing from entry level to the highest levels of professional achievement. With over 8500 centres in 100 countries, City & Guilds is recognised by employers worldwide for providing qualifications that offer proof of the skills they need to get the job done.

### **City & Guilds Group**

The City & Guilds Group includes City & Guilds, ILM (the Institute of Leadership & Management) which provides management qualifications, learning materials and membership services, NPTC which offers land-based qualifications and membership services, and HAB (the Hospitality Awarding Body). City & Guilds also manages the Engineering Council Examinations on behalf of the Engineering Council.

### **Equal opportunities**

City & Guilds fully supports the principle of equal opportunities and we are committed to satisfying this principle in all our activities and published material. A copy of our equal opportunities policy statement *Access to assessment and qualifications* is available on the City & Guilds website.

# Copyright

The content of this document is, unless otherwise indicated, © The City and Guilds of London Institute 2006 and may not be copied, reproduced or distributed without prior written consent.

However, approved City & Guilds centres and learners studying for City & Guilds qualifications may photocopy this document free of charge and/or include a locked PDF version of it on centre intranets on the following conditions:

- centre staff may copy the material only for the purpose of teaching learners working towards a City & Guilds qualification, or for internal administration purposes
- learners may copy the material only for their own use when working towards a City & Guilds qualification
- the Standard Copying Conditions on the City & Guilds website.

Please note: National Occupational Standards are not © The City and Guilds of London Institute. Please check the conditions upon which they may be copied with the relevant Sector Skills Council.

### **Publications**

City & Guilds publications are available on the City & Guilds website or from our Publications Sales department at the address below or by telephoning +44 (0)20 7294 2850 or faxing +44 (0)20 7294 3387.

Every effort has been made to ensure that the information contained in this publication is true and correct at the time of going to press. However, City & Guilds' products and services are subject to continuous development and improvement and the right is reserved to change products and services from time to time. City & Guilds cannot accept liability for loss or damage arising from the use of information in this publication.

City & Guilds 1 Giltspur Street London EC1A 9DD T +44 (0)20 7294 2800 F +44 (0)20 7294 2400

www.cityandguilds.com enquiry@cityandguilds.com

# Contents

Introduction - Information for Candidates	2
Level 2 Fibre optic cabling in an internal environment (7540-225)	3
Candidate Instructions	3

# Level 2 Fibre optic cabling in an internal environment (7540-225)

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 four 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 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 connectors to be used. You must ensure that at least two different termination methods are used, one of which must be pot and polish.

# Task B

You are required to install a fibre optic link to meet the requirements specified in the installation plan.

After terminating the fibre with connectors, and before starting Task C, check with your assessor. Your assessor will assess the quality of the end faces before allowing you to complete Task C.

### 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
- compare the test results with the calculated loss budget to determine if the link performance is acceptable
- demonstrate link performance testing using OTDR techniques.

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.

Published by City & Guilds 1 Giltspur Street London EC1A 9DD T +44 (0)20 7294 2468 F +44 (0)20 7294 2400 www.cityandguilds.com

City & Guilds is a registered charity established to promote education and training