****

**Electrical Installation SVQ Level 3**

**FICA Self-Assessment Checklist**

**Overview**

This is a document to help you decide whether you are ready to sit the electrical competence-based trade test.

The checklist below is designed to help assess if you are adequately prepared and trained in all aspects of the SCQF Level 7 qualification which will be tested during the FICA. The FICA Assessment is designed to assess a Candidates competence in key occupational areas including:

* Identification of hazards and risk assessment
* Safe isolation of the electrical supply and final circuits
* Planning & installation, terminating and connecting specified wiring systems
* The interpretation of specifications, drawings, and diagrams
* Verification of new electrical installations (inspection, testing and certification)
* Fault diagnosis and correction of electrical faults
* Understanding and application of industry recognised procedures, working practices and the requirements of statutory and non-statutory regulations

**How to Use This Document**

Candidates, along with their employer, should go through each checklist point and decide whether they have current knowledge of recognised industry procedures/practices and, where relevant, regulations for each individual topic. They should also reflect on the level of practical, work-based experience for each topic.

Once this is completed, the Candidate should summarise this on the enclosed Summary Sheet. Candidates, with their employer’s assistance, should then create an Action Plan to ensure that they may gain the required knowledge and practical experience before undertaking the FICA.

|  |  |  |
| --- | --- | --- |
| **SECTION A: ASSESSMENT OF SAFE WORKING PRACTICES** | *Please tick the appropriate boxes* | |
|  | I have knowledge of: | I have little to no work-based experience of: |
| Identification of hazards and risk assessment |  |  |
| Safe isolation of the electrical supply |  |  |

|  |  |  |
| --- | --- | --- |
| **SECTION B: COMPOSITE INSTALLATION** | *Please tick the appropriate boxes* | |
|  | I have knowledge of: | I have little to no work-based experience of: |
| Interpretation of a specification and associated technical data including manufacturer’s instructions. |  |  |
| Selection of correctly rated circuit protective devices |  |  |
| Installing main protective bonding conductors |  |  |
| Installing ring final circuits with a spur |  |  |
| Installing lighting circuits with two-way and intermediate switching |  |  |
| Installing an extractor fan in locations containing a bath or shower incorporated into lighting circuit |  |  |
| Selection & installation of mains powered smoke and heat alarms |  |  |
| Ensuring equipment installed complies with building standards technical guidance |  |  |
| Installing PVC single core cables in containment systems using correct methods of connection /termination of the conductors to equipment |  |  |
| Installing motor circuits with remote stop/start control |  |  |
| Installing PVC twin & earth cables using correct methods of connection /termination of conductors to equipment |  |  |
| Ensuring adequate separation for EMC purposes is achieved between ELV and LV cables |  |  |
| Installing PVC multicore cables for door entry systems |  |  |
| Correctly identify cables throughout the installation |  |  |

|  |  |  |
| --- | --- | --- |
| **SECTION C: INSPECTION & TESTING** | *Please tick the appropriate boxes* | |
|  | I have knowledge of: | I have little to no work-based experience of: |
| Carrying out a visual inspection of the installation |  |  |
| *Completing the following tests:* |  |  |
| Continuity of circuit protective conductors including main protective bonding conductors |  |  |
| Continuity of ring final circuit conductors |  |  |
| Insulation resistance |  |  |
| Polarity |  |  |
| Earth fault loop impedance |  |  |
| Prospective fault current |  |  |
| Verifying the effectiveness of RCDs |  |  |
| Check of phase sequence |  |  |
| Functional testing |  |  |

*Continued over the page…*

|  |  |  |
| --- | --- | --- |
|  | *Please tick the appropriate boxes* | |
|  | I have knowledge of: | I have little to no work-based experience of: |
| Ensuring that defects or omissions revealed during the inspection and testing process are corrected before certification is completed |  |  |
| Completing a schedule of inspections and schedule of test results verifying that results recorded comply with  BS 7671 |  |  |

|  |  |  |
| --- | --- | --- |
| **SECTION D: SAFE ISOLATION OF SUPPLIES** | *Please tick the appropriate boxes* | |
|  | I have knowledge of: | I have little to no work-based experience of: |
| Understanding safe isolation procedures |  |  |
| *Can you apply the correct safe isolation procedure for the following?* |  |  |
| The electrical supply |  |  |
| Final circuits - single phase |  |  |
| Final circuits - three phase |  |  |
| Local isolation of equipment |  |  |

|  |  |  |
| --- | --- | --- |
| **SECTION E : FAULT DIAGNOSIS & RECTIFICATION** | *Please tick the appropriate boxes* | |
|  | I have knowledge of: | I have little to no work-based experience of: |
| Practical fault finding using a low resistance ohmmeter or a continuity tester |  |  |
| Understanding different types of electrical faults |  |  |
| Understanding the rectification of these faults |  |  |

|  |  |  |
| --- | --- | --- |
| **SECTION F: UNDERPINNING KNOWLEDGE ASSESSMENT** |  | |
| *Do you have working knowledge of the following resources?* |  | |
|  | *Please tick the appropriate boxes* | |
|  | I have working knowledge of: | I do not have working knowledge of: |
| BS 7671:2018 Requirements for Electrical Installations  (IET Wiring Regulations 18th Edition) |  |  |
| IET On-Site Guide (BS 7671:2018) |  |  |
| Memorandum of guidance on the Electricity at Work Regulations 1989 (HSR25) |  |  |
| Electricity at Work – Safe Working Practices (HSG85) |  |  |
| SELECT Certification of Construction Technical Guide 2014 – Guide to Certification and the Scottish Building Standards |  |  |
| *Have you attempted the mock papers below?* |  |  |
|  | I have: | I have not: |
| Attempted the Mock Underpinning Knowledge Papers |  |  |

**SUMMARY SHEET**

Having completed this Self-Assessment Checklist, use the checklist below to summarise the areas where you believe you require any additional training before undertaking the FICA.

Once completed, arrange a meeting with your employer and/or training officer to review the Self-Assessment Checklist. If there are any areas of concern, produce an Action Plan to help you achieve the required standard.

Check off your training once experience has been gained.

***Areas where I require additional training:***

|  |  |
| --- | --- |
|  | I have completed additional training: |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

***Signatures***

|  |  |
| --- | --- |
| Candidate Name |  |
| Candidate Signature |  |
| Employer Name |  |
| Employer Signature |  |

**SITE AND COLLEGE EXPERIENCE FLOW CHART**

Electrician Grading SVQ Level III

Apprenticeship Starts

1st Stage SVQ

2nd Stage SVQ

3rd Stage SVQ

**Induction Portfolio**

Safe Working Practices

**Workshop Portfolio**

PVC Sheathed Wiring Project

PVC Conduit & Trunking Project

Steel Conduit & Trunking Project

Cable Tray Project

(All work done in common circuits)

**Science Portfolio**

**Bed & Breakfast Portfolio**

**Site Organisation Portfolio**

**2nd Stage**

**Warehouse Portfolio**

**Science Portfolio**

**Site Organisation Portfolio**

**3rd Stage**

**Inspection and Testing Week**

Safe Working Practices

Dead & Live Testing

Associated Paperwork

**Basic Level – Assisting**

General Understanding of Safe Working Practices

Awareness of Safe Isolation

Basic Hand Skills

Knowledge of Basic Electrical Circuits

Knowledge of Electrical Material & Equipment

Basic Knowledge of Site Drawings and Specifications

Basic Understanding of Building Standards/Regulations

**Site Activity Portfolio**

**Intermediate Level – Gaining Experience with tradesperson**

Safe Working Practices

Safe Isolation

Hand skills

Knowledge of Electrical Circuits

Knowledge Electrical Material & Equipment

Use Site Drawings and Specifications

Critical Thinking/Problem Solving

Material Planning/Time Management

Working with Others

Building Standards/Regulations

Assist Tradesperson in Inspection and Testing

Assist Tradesperson in completing Documentation

Assist Tradesperson in Fault Finding

**Site Activity Portfolio**

**Advanced Level to Performing on his/her own (Supervised)**

Safe Working Practices

Safe Isolation

Hand Skills

Knowledge of Electrical Circuits

Knowledge Electrical Material & Equipment

Use Site Drawings and Specifications

Critical Thinking/Problem Solving

Material Planning/Time Management

Working with Others

Select ion of equipment to Building Standards/Regulations

Inspection and Testing

* + Continuity of CPC
  + Continuity of Ring Final Circuit
  + Insulation Resistance
  + Polarity
  + Earth Fault Ze and Zs
  + Phase rotation
  + PFC
  + RCD

Completion of Documentation

Fault Finding

**Site Activity Portfolio**

Employer Declaration

FICA

Completion

College Experience

Site Experience