

Electrotechnical Guide to Assessments and Permitted Materials

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This guide sets out all Electrotechnical assessments indicating component numbers, assessment times and permitted materials.

Non-programmable scientific calculators are permitted for all assessments but may not be necessary in some of the assessments.

Where permitted materials state 'any suitable resource material', permitted material are at the discretion of the assessor. Resources could include reference books, manufacturer's information or information from the internet.

Calculators and stationery

Non-programmable scientific calculators are permitted for **all** assessments but may not be necessary in some of the assessments. For written and externally marked assessments, it is strongly recommended that candidates use black or blue ball point pens for writing to avoid spoiling the paper. Other forms of pen can cause ink to spill through the paper spoiling scans of other pages. Candidates are allowed rulers, protractors and squares, as well as pencils and coloured pencils where questions may involve diagrams or graphics.

‘Any Suitable Resource Materials’

Where permitted materials state ‘any suitable resource material’, permitted materials are at the discretion of the assessor. Resources could include reference books, manufacturer’s information or information from the Internet.

Electronic copies

City & Guilds will permit candidates to use electronic copies of the materials within practical assessments. However, electronic copies of materials **cannot** be used in externally marked assessments (evolve tests/written exams). If a candidate only has an electronic copy of the materials, centres must provide the candidate with a paper-based copy that meets the below criteria.

Examinations allowing publications

Where BS 7671, IET On-Site Guide and other IET Guidance Notes are permitted, books **must not** contain additional notes or pages within the publications, further clarification of this guidance is given in the lists below. The lists below details what is and is not deemed to be acceptable.

What is permitted in these publications;

- corrigenda published by IET or BSI
- amendments which have been published by IET or BSI as additional pages instead of a publication re-print
- stick-on paper used as page referencing
- highlighting text within the publication
- very shorthand-written descriptors of BS or regulation numbers which cross-reference a feature elsewhere in the publication (see example 1 below).

Example 1 – What is acceptable

30mA max

'...shall be provided with additional protection by means of an RCD having the characteristics specified in Regulation 415. 1.'

What is **not** permitted in these publications;

- additional personal note pages
- additional formula (printed or handwritten)
- additional printed pages (with exception of those listed above)
- handwritten procedures
- handwritten descriptors of regulations/text which do not feature elsewhere in the publication.

Currency of permitted publications

Unless specifically specified, due to regular changes in regulations, current versions of BS 7671 should always be used, where permitted. This includes the most up to date versions of other permitted related materials, such as the IET On-Site Guide, where permitted.

Permitted publications with published errors

Where publications have known errors and before any corrigendum is published, corrections to errors may be made.

Apprenticeship / Full time Qualifications

Table 1A: 5357-03 and 5357-23 Electrotech apprenticeship qualification

| Subject | Assessment number | Assessment type | Assessment time | Permitted materials |
|------------------------------|-------------------|--------------------------------------|--------------------|--|
| Health & Safety | 101 | Practical | 7 hours | Closed book |
| | 001 | E-volve on-line MCQ test | 40 minutes | Closed book |
| Scientific Principles | 103 | Short answer, written question paper | 120 minutes | Closed book |
| | | Practical | 45 minutes | |
| | 003 | E-volve on-line MCQ test | 90 minutes | Closed book |
| Design | 104 | Project | 20 hours guided | Any relevant resource |
| | 004 | E-volve on-line MCQ test | 70 minutes | IET On-Site Guide; BS 7671 (see note 1) |
| Plan and Oversee | 105 | Project | No time constraint | Any relevant resource |
| | 505 | E-volve on-line MCQ test | 40 minutes | Closed book |
| Terminations and connections | 107 | Practical | 10 hours | Any relevant resource |
| Inspection & Testing | 112/312 | Practical | 3 hours | Any relevant resource |
| | | Short answer, written question paper | 2 hours | Closed book |
| | 012/212 | E-volve on-line MCQ test | 80 minutes | Closed book |
| Fault diagnosis | 114 | Practical | 3 hours | Any relevant resource |
| | 014 | E-volve on-line MCQ test | 60 minutes | Closed book |
| Requirements of BS 7671 | 022 | E-volve on-line MCQ test | 120 minutes | BS 7671 |

Notes;

1. For 5357-004, candidates will not be disadvantaged if they do not have a copy of BS 7671 for this assessment, but all candidates must have a copy of the IET On-Site Guide.

Table 1B: 2357 Electro Technical Technology

| Subject | Assessment number | Assessment type | Assessment time | Permitted materials |
|-------------------------------------|-------------------------------------|---|-------------------------|-------------------------------|
| Health & Safety | 601 | Assignment | No time constraint | Any relevant resource |
| | 301 | E-volve on-line MCQ test | 40 minutes | Closed book |
| Environmental technologies | 602 | Assignment | No time constraint | Any relevant resource |
| | 102 | E-volve on-line MCQ test | 70 minutes | Closed book |
| Organise & Oversee | 603 | Project | No time constraint | Any relevant resource |
| | | Short answer, written question paper | 60 minutes | Closed book |
| Electrical Design | 604 | Project | No time constraint | Any relevant resource |
| | | Short answer, written question paper | 150 minutes (2.5 hours) | BS 7671; IET On-Site Guide |
| Electrical Installations to BS 7671 | 705/725 | Assignment | No time constraints | Any relevant resource |
| | | Short answer, written question paper (705 only) | 60 minutes | Closed book |
| | 305 | E-volve on-line MCQ test | 45 minutes | BS 7671 |
| | 022 (18 th Edition Test) | E-volve on-line MCQ test | 120 minutes | BS 7671 |
| Terminations | 606 | Practical | 5 hours | Any relevant resource |
| Inspection & Testing | 107 | E-volve on-line MCQ test | 80 minutes | Closed book |
| | 607 | Short answer, written question paper | 2 hours | Closed book |
| | | Practical | 5 hours | Any relevant resource |
| Fault diagnosis | 608 | Short answer, written question paper | No time constraint | Any relevant resource |
| | | Practical | 3 hours | Any relevant resources |
| Scientific Principles | 309 | E-volve on-line MCQ test | 60 minutes | Closed book |
| | 609 | 2 Short answer, written question papers | 60 minutes per paper | Closed book |

Table 1C: Level 2 2365 Electrotechnical Craft

| Subject | Assessment number | Assessment type | Assessment time | Permitted materials |
|-----------------------|--------------------------|--------------------------|------------------------|----------------------------|
| Health & Safety | 211 | Practical | 7 hours total | Closed book |
| | 601 | E-volve on-line MCQ test | 40 minutes | Closed book |
| Fundamental Science | 602 | E-volve on-line MCQ test | 90 minutes | Closed book |
| Electrical Technology | 203 | E-volve on-line MCQ test | 75 minutes | IET On-Site Guide |
| Installation | 204 | Practical assignment | 8 hours | Any relevant resource |
| Communications | 210 | E-volve on-line MCQ test | 40 minutes | Closed book |

Table 1D: Level 3 2365 Electrotechnical Craft

| Subject | Assessment number | Assessment type | Assessment time | Permitted materials |
|--------------------------|--------------------------|--------------------------------------|------------------------|----------------------------|
| Environmental Technology | 301 | E-volve on-line MCQ test | 75 minutes | Closed book |
| Advanced science | 612 | Short answer, written question paper | 120 minutes | Closed book |
| | | Practical | 45 minutes | |
| Fault diagnosis | 623 | E-volve on-line MCQ test | 60 minutes | Closed book |
| | 613 | Practical | 3 hours | Any relevant resource |
| Inspection & Testing | 614 | Practical | 3 hours | Any relevant resource |
| | | Short answer, written question paper | 2 hours | Closed book |
| | 624 | 40 item E-volve on-line MCQ test | 80 minutes | Closed book |
| Electrical Design | 625 | 30 item E-volve on-line MCQ test | 70 minutes | IET On-Site Guide; BS 7671 |
| | 615 | Project | No time constraint | Any relevant resource |
| Career awareness | 308 | Short answer, written question paper | No time constraint | Closed book |
| | | Project | No time constraint | Any relevant resource |

Table 1D: 8202 Technicals in Building Services Engineering

| Subject | Assessment number | Assessment type | Assessment time | Permitted materials |
|-----------------------------|--------------------------|--|-------------------------------|-------------------------------|
| Level 2 Theory Test | 020/520 | MC test either on E-volve (on-line) or paper | 120 minutes | BS 7671; IET On-Site Guide |
| Level 2 Synoptic Assignment | 021 | Synoptic assignment | Subject to assignment version | Any relevant resource |
| Level 3 Theory Test | 531 | Externally marked, written paper | 150 minutes (2.5 hours) | BS 7671; IET On-Site Guide |
| Level 3 Synoptic Assignment | 032 | Synoptic assignment | Subject to assignment version | Any relevant resource |

Table 1E: 5393 Electrotechnical in Dwellings (apprenticeship)

| Subject | Assessment number | Assessment type | Assessment time | Permitted materials |
|-----------------------------------|--------------------------|--------------------------------------|---------------------------------|--|
| Health & Safety | 101 | Practical | See pack for individual timings | Closed book |
| | 001 | E-volve on-line MCQ test | 40 minutes | Closed book |
| Scientific Principles | 103 | Short answer, written question paper | 120 minutes | Closed book |
| | 003 | E-volve on-line MCQ test | 90 minutes | Closed book |
| Design | 104 | Project | 20 hours guided | Any relevant resource |
| | 004 | E-volve on-line MCQ test | 90 minutes | IET On-Site Guide; IET Electrician's Guide to the Building Regulations. |
| | 204 | Practical | See pack for timings | Any relevant resource |
| Plan and Oversee | 105 | Project | No time constraint | Any relevant resource |
| Inspection & Testing | 012 | E-volve on-line MCQ test | 90 minutes | Closed book |
| | 112 | Practical | See pack for timings | Any relevant resource |
| Fault diagnosis and rectification | 014 | E-volve on-line MCQ test | 60 minutes | Closed book |
| | 114 | Practical | 3 hours | Any relevant resource |
| Requirements of BS 7671 | 022 | E-volve on-line MCQ test | 120 minutes | BS 7671 |

CPD qualifications

Table 2A: 2391 Electrical Inspection and Testing

| Subject | Assessment number | Assessment type | Assessment time | Permitted materials |
|----------------------------|-------------------|----------------------------|-------------------------|--|
| Initial Verification | 050 | E-volve on-line MCQ test | 90 minutes | BS 7671, IET On-Site Guide; IET GN3 |
| | 500 | Practical | 150 minutes (2.5 hours) | |
| | | Short answer written paper | 60 minutes | |
| Periodic Inspection & Test | 051 | E-volve on-line MCQ test | 90 minutes | BS 7671, IET On-Site Guide; IET GN3 |
| | 501 | Practical | 150 minutes (2.5 hours) | BS 7671, IET On-Site Guide; IET GN3 (except Task A) |
| | | Short answer written paper | 60 minutes | |
| Combined Inspection & Test | 052 | E-volve on-line MCQ test | 120 minutes | BS 7671, IET On-Site Guide; IET GN3 |
| | 502 | Practical | 150 minutes (2.5 hours) | BS 7671, IET On-Site Guide; IET GN3 (except Task A) |
| | | Short answer written paper | 80 minutes | |

Table 2B: 2382 Requirements for Electrical Installations

| Subject | Assessment number | Assessment type | Assessment time | Permitted materials |
|-------------------------|--------------------------|----------------------------------|------------------------|----------------------------|
| Requirements of BS 7671 | 622 | 60 item E-volve on-line MCQ test | 120 minutes | BS 7671 |

Table 2B: 2396 Design, Erection and Verification

| Subject | Assessment number | Assessment type | Assessment time | Permitted materials |
|---|--------------------------|------------------------|------------------------|-------------------------------------|
| Design & Management of Electrical Installations | 401 | Project | 40 hours | Any relevant resource |
| | 402 | 10 item written paper | 3 hours | BS 7671, IET On-Site Guide; IET GN3 |

Table 2C: Other CPD Qualifications

| Qualification | Subject | Assessment number | Assessment type | Assessment time | Permitted materials |
|---------------|--|-------------------|---|---------------------------------|--|
| 2392 | Fundamental Inspection & Testing | 101 | 50 item E-volve on-line MCQ test | 100 minutes | Closed book |
| | | 102 | Practical assessment | 2 hours | BS 7671; IET On-Site Guide; IET GN3 |
| 2393 | Building Regulations | 101 | 20 item E-volve on-line MCQ test | 40 minutes | IET Guide to the building Regulations |
| 2377 | In-service inspection and testing of electrical equipment | 701 | 50 item E-volve on-line MCQ test | 1 hour 45 mins | IET code of practice In-service inspection and testing of electrical equipment (PAT) |
| 2921-31 | Design and Installation of Domestic and Small Commercial Electric Vehicle Charging Installations | 301 | Short-answer and scenario based questions | See assessment pack for details | BS 7671 Requirements for Electrical Installations (IET Wiring Regulations), IET Code of Practice: Electric Vehicle Charging Equipment Installation, IET On-Site Guide. |
| | | 601 | 28 item E-volve on-line MCQ test | 45 minutes | IET Code of Practice for Electric Vehicle Charging Equipment Installation |
| 2921-32 | Design and Quality Assurance of Largescale Electric Vehicle | 302 | Short-answer and scenario based questions | See assessment pack for details | BS 7671 Requirements for Electrical Installations (IET Wiring Regulations), IET Code of Practice: Electric Vehicle Charging Equipment Installation, |

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|---------|--|-----|-----------------------|---------------------------------|--|
| | Charging Installations | | | | IET Electric Vehicle Charging Installations at Filling Stations. |
| | | 304 | Project | See assessment pack for details | BS 7671 Requirements for Electrical Installations (IET Wiring Regulations), IET Code of Practice for Electric Vehicle Charging Equipment Installation (and IET/APEA supplement). |
| 2921-33 | Installation and maintenance of largescale electric vehicle charging installations | 303 | 24 item written paper | See assessment pack for details | BS 7671 Requirements for Electrical Installations (IET Wiring Regulations), IET Code of Practice for Electric Vehicle Charging Equipment Installation, IET Electric Vehicle Charging Installations at Filling Stations |