

---

## The exam

---

The exam	10
Sitting a City & Guilds online examination	11
Frequently asked questions	18
Exam content	20
Tips from the examiner	25

---

---

# The exam

## The exam

The examination has a multiple-choice format, with 60 questions, which you will have two hours to answer. The test is offered on **e-volve**, a simple online service that does not require strong IT skills. **e-volve** uses a bank of questions set and approved by City & Guilds. Each candidate receives randomised questions, so no two candidates will sit exactly the same test.

The exam always follows a set structure, based on the seven parts of the *IET Wiring Regulations* plus the appendices. The table below outlines the sections of the exam and the number of questions in each section. It also shows the weighting – so you can see how important each section is in determining your final score.

Section	Topic	% weighting	No of questions
1	Part 1 Scope, object and fundamental principles	7	4
2	Part 2 Definitions	3	2
3	Part 3 Assessment of general characteristics	10	6
4	Part 4 Protection for safety	25	15
5	Part 5 Selection and erection of equipment	23	14
6	Part 6 Inspection and testing	7	4
7	Part 7 Special installations or locations	17	10
8	Use of appendices	8	5
	Total	100	60

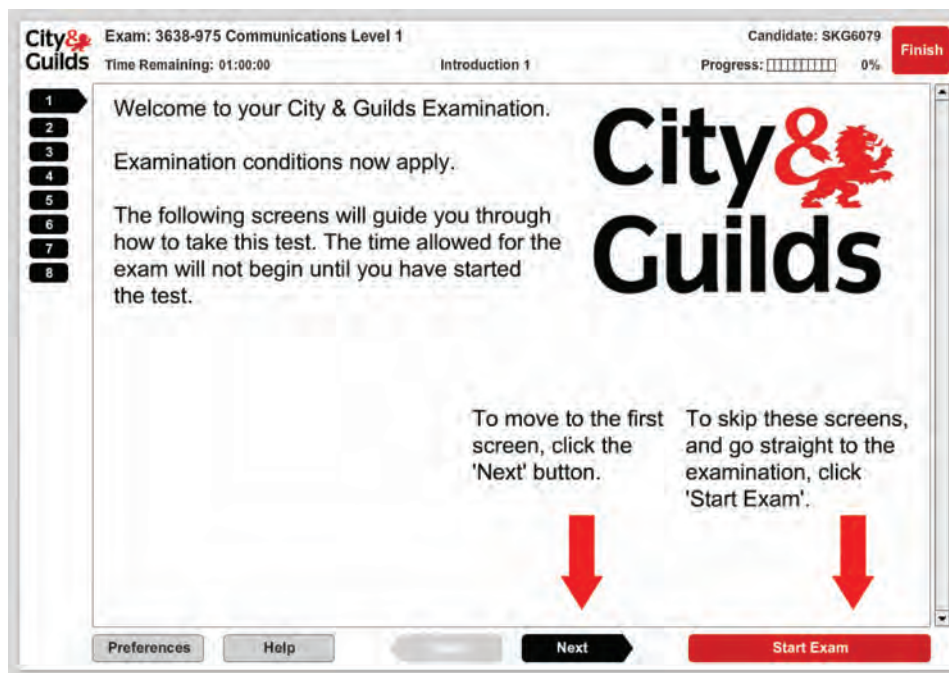
## Sitting a City & Guilds online examination

Notes

The test will be taken under usual exam conditions. If you leave the exam room unaccompanied before the end of the test period, you may not be allowed to come back into the room.

### Introduction

When you take a City & Guilds exam online, you can go through an introduction to familiarise yourself with the system. Once you are logged on to take the exam, the first screen will give you the chance to look through a set of introductory screens that show how the exam will be presented, how to get help, how to move between different screens and how to mark questions that you might want to return to later.



**Notes**

The sample questions in the introduction will be unrelated to the exam you are taking. The time it takes to look through the introduction is not included in the exam time, so you can go through it in your own time. The exam will only start once you have completed or skipped the introduction.

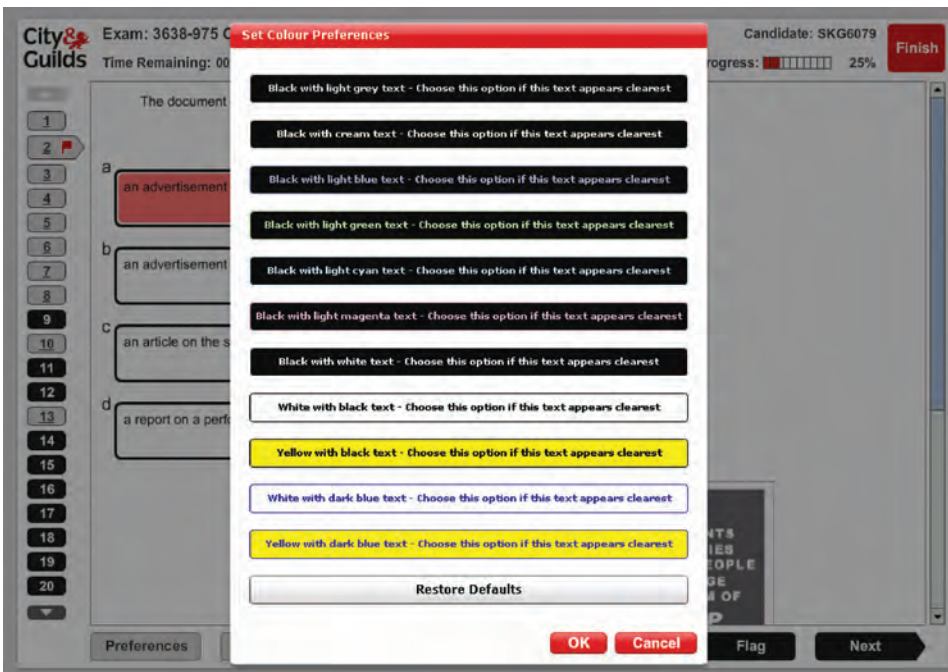
The screenshot displays the City & Guilds exam interface. At the top, it shows 'Exam: 3638-975 Communications Level 1' with a candidate ID of 'SKG6079' and a 'Finish' button. Below this, the 'Introduction 2' screen is active, showing 'Exam: Level 1 Key Skills in Application of Number' with a candidate ID of 'Stanley Davis' and a progress of 37%. The question text asks, 'On a cloudless day at noon, the sky typically appears' and is accompanied by a photograph of a blue sky with white clouds. Four multiple-choice options are provided: 'a black', 'b blue', 'c green', and 'd orange'. The 'b blue' option is highlighted in red. A text box at the bottom of the question area states: 'During the test, use the 'Next' and 'Back' buttons to move forward and backward'. Navigation buttons include 'Preferences', 'Help', 'Introduction', 'Back', 'Flag', 'Next', and a large red 'Start Exam' button at the bottom right.

Use the 'Next' and 'Back' buttons to navigate through the introduction.

You can quit the introduction and start the test at any time by clicking on the 'Start Exam' button. The introduction will still be available for you to go back to at any time during the exam, although once you have started the exam the clock timer will continue to move forwards and cannot be paused.

The 'Preferences' button allows you to change the colour scheme of the exam. The different options are designed to improve accessibility for candidates with a visual impairment. Simply select from the list the option you find easiest to read and click 'OK'. The 'Restore defaults' button will set the display back to the default style.

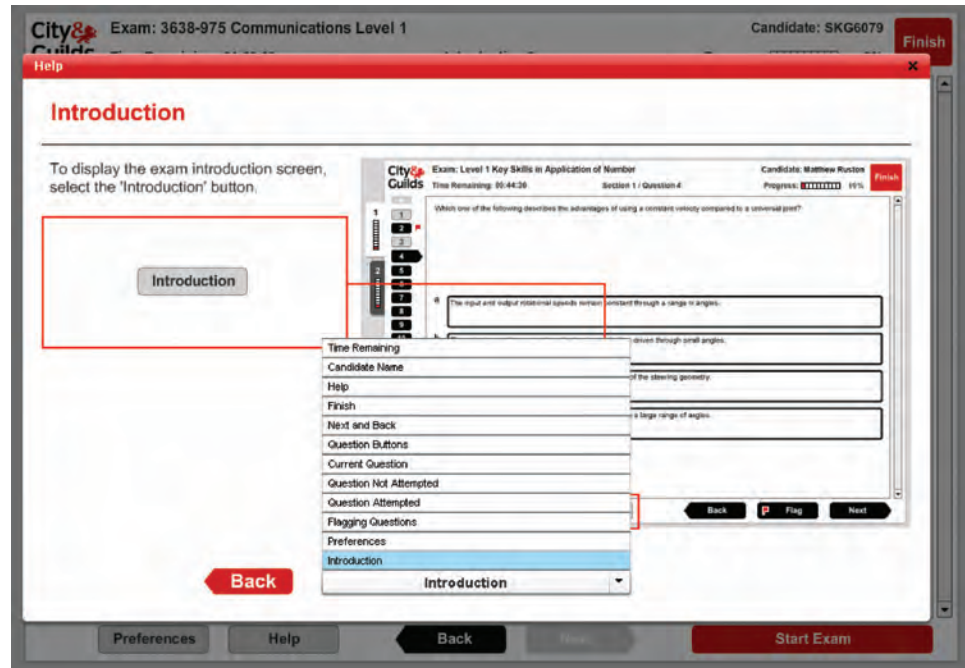
Notes



The 'Preferences' button can be used before the exam begins (ie during the introduction) or at any point during the exam. However, the timer will continue to move on if you look at the preferences and change them during the exam. To maximise your available exam time, we advise that you review your preferences before you start the exam.

**Notes**

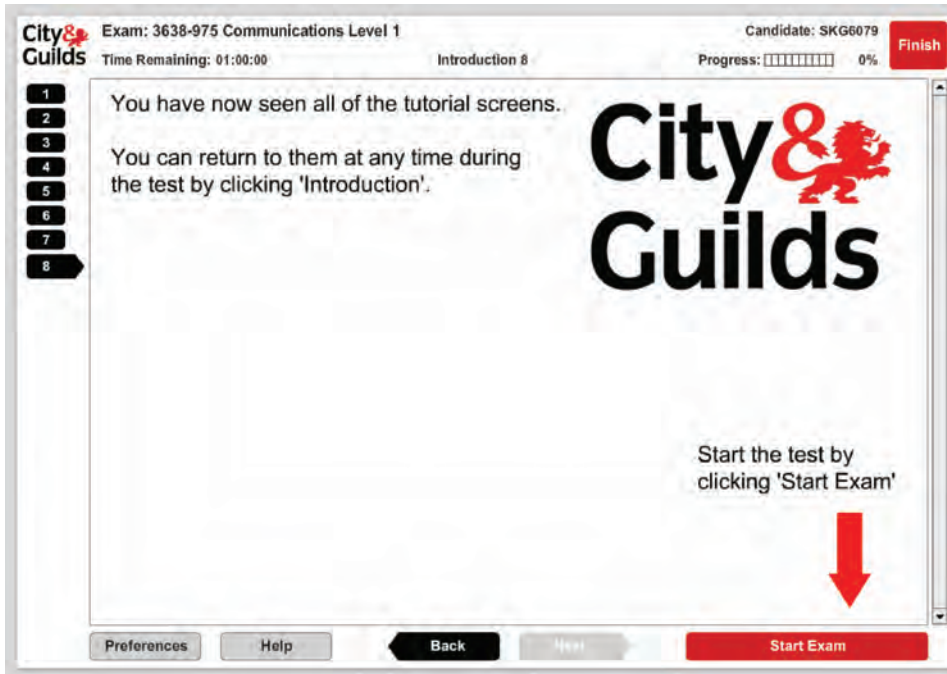
The 'Help' button will launch a tutorial that explains how to use the system. Select the help option you need from the dropdown menu at the bottom, or move backwards and forwards with the 'Back' and 'Next' buttons.



The 'Help' button can be used before the exam begins (ie during the introduction) or at any point during the exam. However, the timer will continue to move on if you look at the help options during the exam. To maximise your available exam time, we advise that you review the Help screens before you start the exam.

Once you have finished with the introduction you can click the 'Start Exam' button.

Notes

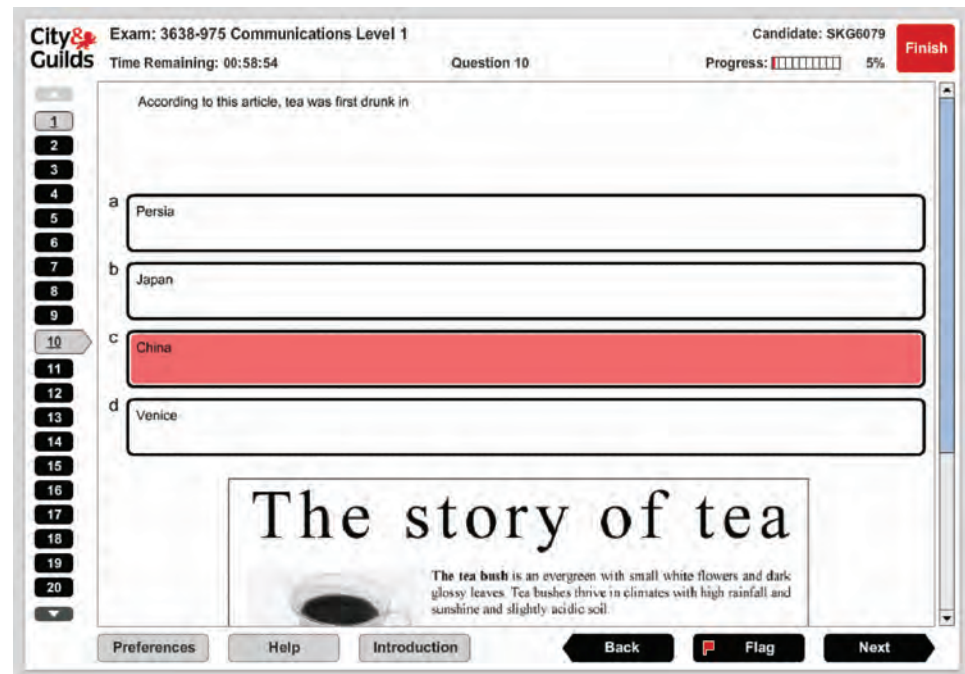


You will then see the first question displayed and the timer will start.

## Notes

## The exam

This is a typical screen that you will see in the exam.



At the top of the screen you can see your progress (on the right-hand side) and the exam time remaining (on the left-hand side). A notification will be displayed when you have 30, 15 and 5 minutes left.

The bar on the left-hand side shows the question numbers. You can progress through the test using the 'Next' and 'Back' buttons at the bottom of the page, or you can go straight to a specific question by clicking on that question number on the bar on the left.

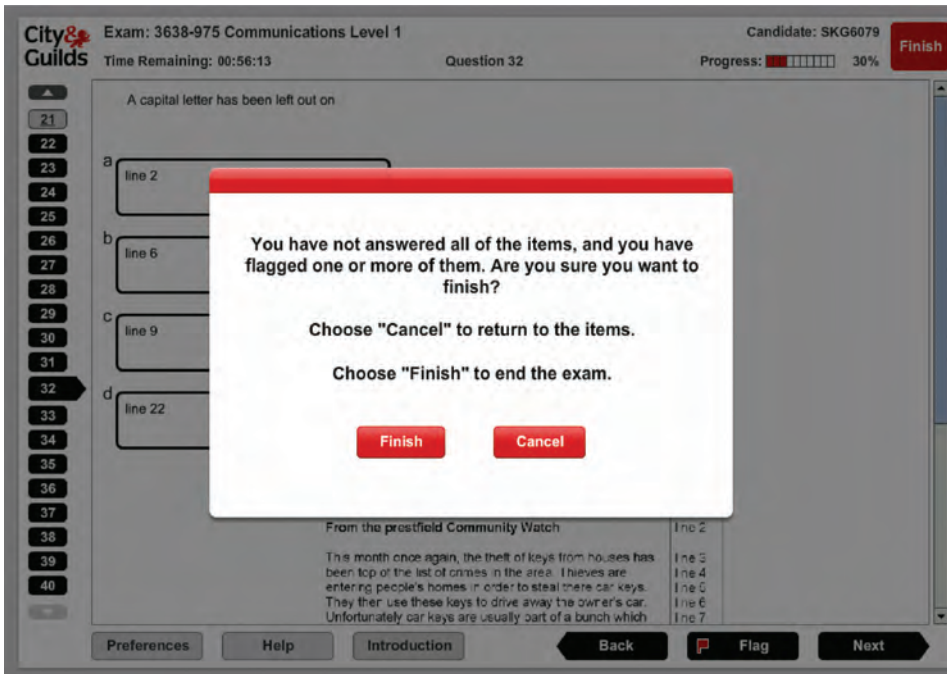
You may flag a question to come back to it later by clicking on the 'Flag' button.

Some of the questions in the test may be accompanied by an exhibit. This may be an article or table for you to scroll through, or a photograph or other illustration. The question will tell you whether you will need to click on the 'Document' or 'Scenario' button to view these items.



When you reach the final question and click 'Next', or if you click 'Finish' at any time, you will have the option to finish the test. If you have unanswered or flagged questions, the system will warn you. Click 'Cancel' to go back to the test and review your answers. Click 'Finish' to proceed.

**Notes**



A final warning will then be displayed. If you click the 'Exit' button the test will finish and you will not be able to go back.

You will then be prompted to close the application.

Your Invigilator will be able to give you feedback on your result as soon as the test is finished (provided you are sitting a multiple choice exam that does not need to be marked by an examiner).

---

## Frequently asked questions

---

**When can I sit the paper?**

*You can sit the exam at any time, as there are no set exam dates. You may need to check with your centre when it is able to hold exam sessions.*

---

**Can I use any reference books in the test?**

*Yes, you can use a copy of the IET Wiring Regulations, 17th Edition, BS 7671:2008 Amendment No 1.*

---

**How many different parts of the test are there?**

*There are 60 questions, which cover eight different sections of the syllabus.*

---

**Do I have a time limit for taking the test?**

*You have two hours to complete the test.*

---

**Do I need to be good at IT to do the test online?**

*No, the system is really easy to use, and you can practise before doing the test.*

---

**What happens if the computer crashes in the middle of my test?**

*This is unlikely, because of the way the system has been designed. If there is some kind of power or system failure, then your answers will be saved and you can continue on another machine if necessary.*

---

**Can people hack into the system and cheat?**

*There are lots of levels of security built into the system to ensure its safety. Also, each person gets a different set of questions, which makes it very difficult to cheat.*

---

**Can I change my answer?**

*Yes, you can change your answers quickly, easily and clearly at any time in the test up to the point where you end the exam. With any answers you feel less confident about, you can click the 'Flag' button, which means you can review these questions before you end the test.*

---

**How do I know how long I've got left to complete the test?**

*You can check the time remaining at any point during the exam by clicking on the 'Clock' icon in the tool bar. The time remaining will come up on the bottom right corner of the screen.*

---

---

**Is there only one correct A, B, C or D answer to multiple-choice questions?**

Yes.

Notes

---

**What happens if I don't answer all of the questions?**

*You should attempt to answer all of the questions. If you find a question difficult, mark it using the 'Flag' button and return to it later.*

---

**What grades of pass are there?**

*A Pass or a Fail.*

---

**When can I resit the test if I fail?**

*You can resit the exam at any time, and as soon as you and your tutor decide it is right for you, subject to the availability of the online examination.*

---

---

## Exam content

---

To help you to fully understand the exam content, this chapter is divided into the eight sections of the exam, which are in turn mapped to the seven parts and the appendices of BS 7671 (the *IET Wiring Regulations*). The requirements of the examination are listed and references made to the relevant parts of BS 7671. One of the most useful parts of BS 7671 is its very comprehensive index. If you don't know where to look, use the index.

---

### Section 1

---

#### **Part 1 – Understand the scope, object and fundamental principles of BS 7671**

There are four questions on Part 1, which represent 7 per cent of the mark. Part 1 of BS 7671 contains Chapters 11, 12 and 13 and is the essence of the standard. It includes the scope, an important section as any installation for which requirements are being sought must be confirmed as being within the scope of BS 7671. It also includes the fundamental principles (Chapter 13). The rest of BS 7671, that is Parts 2 to 7, supports Part 1; Part 2 provides definitions of the terminology used throughout the standard and Parts 3 to 7 provide technical requirements intended to ensure that the electrical installation conforms with the fundamental principles of Chapter 13 of Part 1.

It is to be noted that departures from Parts 3 to 7 are allowed (Regulation 120.3), providing there is still compliance with Part 1. Regulation 133.5 allows the use of new materials and inventions not anticipated when the Regulations were published. However, departures from Parts 3 to 7, including the use of new materials and inventions, must not result in a degree of safety any less than that required by Part 1. Departures from Parts 3 to 7 must be recorded on the installation certificate.

To show that you are conversant with BS 7671, you are required to be able to:

- 1.1** Identify the scope of BS 7671
  - 1.2** Identify the object of BS 7671
  - 1.3** Identify the fundamental principles of BS 7671.
-

---

## Section 2

---

Notes

### Part 2 – Understand the definitions used within BS 7671

There are two questions on Part 2, which represent 3 per cent of the mark. There are approximately 14 pages dedicated to the definitions used by the Regulations. Definitions that are particularly important, as their meanings in BS 7671 are often not the same as those in common English usage, include:

**Exposed-conductive-part.** A conductive part of equipment which can be touched and which is not normally live, but which can become live under fault conditions.

**Extraneous-conductive-part.** A conductive part liable to introduce a potential, generally Earth potential, and not forming part of the electrical installation.

**Electrical equipment** (abbr: *Equipment*). Any item for such purposes as generation, conversion, transmission, distribution or utilisation of electrical energy, such as machines, transformers, apparatus, measuring instruments, protective devices, wiring systems, accessories, appliances and luminaires. (Be sure to note that 'equipment' is the abbreviation for 'electrical equipment'.)

To show that you are conversant with BS 7671, you are required to be able to:

- 2.1 Interpret the definitions used within BS 7671
  - 2.2 Relate the definitions to the regulations and appendices of BS 7671.
- 

## Section 3

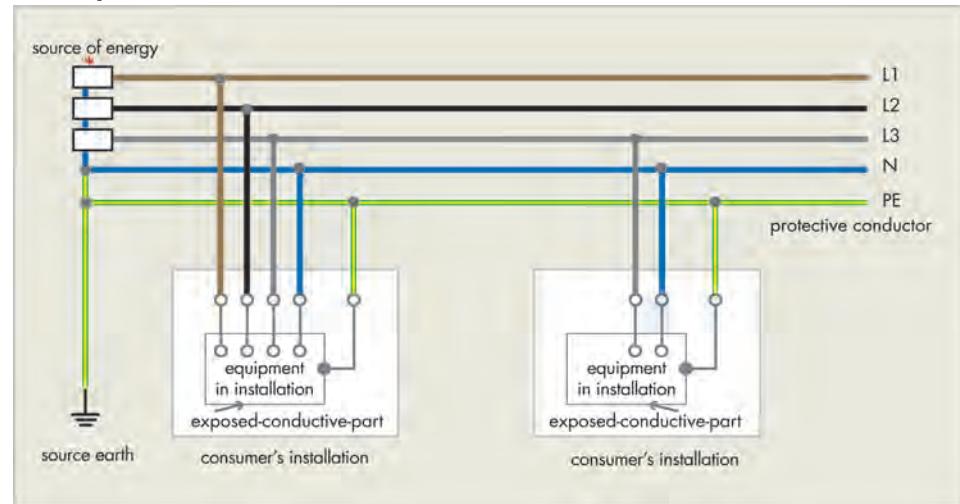
---

### Part 3 – Understand how to assess the general characteristics of electrical installations

There are six questions on Part 3, which represent 10 per cent of the mark. Part 3 requires a general assessment of the characteristics of the proposed installation. It also requires that the nature or characteristics of the supply be determined, as this plays an important part in the design of the installation. Consideration needs to be given to safety services and standby supplies. This part also includes requirements for the installation circuit arrangements.

Part 3 also includes useful technical information, such as the definitions of types of system earthing, eg '**TN-S system**. A system having separate neutral and protective conductors throughout the system.' A black and white drawing is provided as Fig 3.8 in Part 3 of the Regulations; for a colour drawing see page 22.

## Notes

**TN-S system**


Separate neutral and protective conductors throughout the system.

The protective conductor (PE) is the metallic covering of the cable supplying the installations or a separate conductor.

All exposed-conductive-parts of an installation are connected to this protective conductor via the main earthing terminal of the installation.

To show that you are conversant with BS 7671, you are required to be able to:

- 3.1** Interpret the requirements of assessing the general characteristics of electrical installations within the scope of BS 7671.

## Section 4

### Part 4 – Understand the requirements of protection for safety for electrical installations

There are 15 questions on Part 4, which represent 25 per cent of the mark. Part 4 contains some of the key chapters of BS 7671: Chapter 41, Chapter 42, Chapter 43 and Chapter 44.

To show that you are conversant with BS 7671, you are required to be able to:

- 4.1** Identify the requirements of protection for safety within the scope of BS 7671
- 4.2** Interpret how this applies to electrical installations within the scope of BS 7671 to include:
- protection against electric shock
  - protection against thermal effects
  - protection against overcurrent
  - protection against voltage disturbances and electromagnetic disturbances.

---

## Section 5

---

Notes

### **Part 5 – Understand the requirements for selection and erection of equipment for electrical installations**

There are 14 questions on Part 5, which represent 23 per cent of the mark.

Part 5 includes requirements for voltage drop, warning notices and identification of conductors, as well as requirements for isolation and switching, earthing and bonding arrangements, protective conductors, lighting installations and generating sets.

To show that you are conversant with BS 7671, you are required to be able to:

- 5.1** Identify the requirements for selecting and erecting equipment, within the scope of BS 7671
- 5.2** Interpret how this applies to electrical installations within the scope of BS 7671 to include:
  - common rules
  - selection and erection of wiring systems
  - protection, isolation, switching, control and monitoring
  - earthing arrangements and protective conductors
  - other equipment
  - safety services.

---

## Section 6

---

### **Part 6 – Understand the requirements of inspection and testing of electrical installations**

There are four questions on Part 6, which represent 7 per cent of the mark.

To show that you are conversant with BS 7671, you are required to be able to:

- 6.1** Identify the requirements for inspection and testing
- 6.2** Interpret how this applies to electrical installations.

---

## Section 7

---

### **Part 7 – Understand the requirements of special installations or locations as identified in BS 7671**

There are ten questions on Part 7, which represent 17 per cent of the mark. Part 7 includes additional requirements or altered requirements to those in Parts 3 to 6. The requirements of the rest of BS 7671 apply to the special locations, unless they are amended or altered by the particular requirements in Part 7.

**Notes**

---

To show that you are conversant with BS 7671, you are required to be able to:

**7.1** Identify the requirements for special installations and locations

**7.2** Interpret how these affect the general requirements of the regulations.

---

## Section 8

---

There are five questions on the Appendices of BS 7671, which represent 8 per cent of the mark.

To show that you are conversant with BS 7671, you are required to be able to:

**8.1** Identify the information in the appendices of BS 7671

**8.2** Specify how the information contained in the appendices is used to support electrical installation activities.

---



---

## Tips from the examiner

---

### Notes

The following tips are intended to aid confident test performance. Some are more general and would apply to most exams. Others are more specific, either because of the format of this test (multiple choice) or the nature of the subject.

- ✓ If you rarely use a computer, try to get some practice beforehand. You need to be able to use a mouse to move a cursor arrow around a computer screen, as you will use the cursor to click on the correct answer in the exam.
- ✓ Take a copy of *BS 7671:2008(2011) Requirements for Electrical Installations (IET Wiring Regulations, 17th Edition, incorporating Amendment No 1)* into the exam. Take the time to familiarise yourself with the structure and content of this publication.
- ✓ Make the most of the course you will attend before taking the exam. Try to attend all sessions and be prepared to devote time outside the class to revise for the exam.
- ✓ On the day of the exam, allow plenty of time for travel to the centre and arrive at the place of the exam at least ten minutes before it's due to start so that you have time to relax and get into the right frame of mind.
- ✓ Listen carefully to the instructions given by the invigilator.
- ✓ Read the question and every answer before making your selection. Do not rush – there should be plenty of time to answer all the questions.
- ✓ Look at the exhibits where instructed. Remember, an exhibit supplies you with information that is required to answer the question.
- ✓ Attempt to answer all the questions. If a question is not answered, it is marked as wrong. Making an educated guess improves your chances of choosing the correct answer. Remember, if you don't select an answer, you will definitely get no marks for that question.
- ✓ The order of the exam questions follows the order of the *IET Wiring Regulations* publication. Therefore, look for the answers to early questions at the front of the book and progress through it as you work through the exam questions.

**Notes**

- ✓ Don't worry about answering the questions in the order in which they appear in the exam. Choose the 'Flag' option on the tool bar to annotate the questions you want to come back to. If you spend too much time on questions early on, you may not have time to answer the later questions, even though you know the answers.
- ✓ You should bring a basic, non-programmable calculator to the exam. You might find it helpful to bring one with square-root ( $\sqrt{\quad}$ ) and square ( $x^2$ ) functions.
- ✓ If you are having trouble finding the regulation for a particular question, look for the subject in the index of the *IET Wiring Regulations*. Using the index should minimise the time it takes you to find the relevant topic.
- ✓ It is not recommended that you memorise any of the material presented here in the hope it will come up in the exam. The exam questions featured in this book will help you to gauge the kinds of questions that might be asked. It is highly unlikely you will be asked any identical questions in the exam, but you may see variations on certain themes.