

2394-302 Level 3 Principles, Practices and Legislation for the Initial Verification of Electrical Installations.

Chief Examiner's report – **October 2015**



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City & Guilds

1 Giltspur Street

London EC1A 9DD

T +44 (0)844 543 0000

F +44 (0)20 7294 2413

www.cityandguilds.com

centresupport@cityandguilds.com

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1 Introduction

The purpose of this document is to provide centres with feedback on the performance of candidates in the **October 2015** examination for 2394-302 Principles, Practices and Legislation for the Initial Verification of Electrical Installations.

The Chief Examiner's Report has been reintroduced as a result of feedback from centres, to give them guidance in preparing candidates for the written examination.

2 Feedback on candidate performance

General feedback

The following comments are intended to help students prepare for the examination by having a better understanding of what is expected of them. The feedback within this report would also be valuable to tutors in understanding candidates' difficulties in answering questions and the areas where more guidance is required.

The October 2015 question paper was found to be in accordance with the scheme requirements.

The number of scripts received for this series was 841

Candidates appeared to have no issues with the format of the paper. They need to be aware that the space left for their answer is intended to be generous and, in almost all cases, is more than enough to record their answer.

Candidates and centres should be mindful that this qualification relates to the initial verification of electrical installations. It was evident from answers provided by some candidates that they confused this process with that required during periodic inspection and testing.

Candidates should keep their responses within the allotted area and any additional sheets should be **stapled to the back** of the answer book. The number of additional attached sheets needs to be recorded in the box on the front cover of the examination paper/candidate response book. These additional sheets should be plain lined paper and not a second answer book. The blank pages at the back of the answer book should **not** be used for candidate responses. These pages are not allocated areas for recording answers. Where it becomes necessary for centres to copy/print additional answer books these should be produced double sided to facilitate correct scanning into the marking software.

The answers produced by candidates for this examination series were of a good standard but some candidates did not read the questions carefully. On a number of occasions it appeared that some candidates only read part of the question. It also appeared that some answers related to similar questions asked on previous papers rather than the question being asked on this paper.

Not reading the whole question carefully

One question asked which 'Live' tests required an installation to be connected to its means of earthing. A number candidates listed dead tests as answers. Another question clearly indicated that a socket outlet circuit was not intended to be protected by an rcd but asked what actions were required candidates stated 'fit an rcd / rcbo or rcd socket'.

Safe working practice

One question gave the scenario of the inspector identifying a dangerous situation with an existing installation whilst verifying a new final circuit and asked what action would be taken and what recommendation would be made by the inspector. Most candidates indicated that they would isolate and rectify without giving thought to the consequences of their actions.

Most did not mention immediately notifying the person ordering the work and recommending isolation, some gave answers that were more appropriate to periodic inspection.

The question asking for the describing of a safe isolation procedure was generally well answered but candidates dropped marks for such things as failure to ask permission, not mentioning the need for GS 38 compliant voltage indicators or the need to secure the keys.

Terminology

Not all candidates use the correct titles for tests and test instruments. The terminology used in BS 7671 and Guidance Note 3 must be used when answering questions.

Knowledge of BS 7671 and Guidance Note 3

Whilst most candidates were able to state the minimum IP codes for barriers or enclosures, a sizable number were unable to state the minimum IP codes for zones within bathrooms or to correctly state the meanings of the first and second numeral.

Most candidates struggled with the questions relating to additional protection and the questions relating to protection of socket outlet circuits. When asked for two methods of providing additional protection most candidates recognised the use of residual current devices, some stated RCDs and RCBOs as two different answers, but most failed to recognise the use of supplementary bonding. With the question asking for the actions to take if a socket-circuit was to be protected by a circuit breaker only a large number of candidates gave answers relevant to Amendment 1 of BS 7671 which with the introduction of Amendment 3 are no longer relevant. Very few mentioned carrying out a risk assessment, documenting it and attaching it to the Certificate.

The question about areas of competence that an inspector must possess as identified in GN3 caused problems for a large number of candidates. Very few mentioned the need for experience and knowledge of testing procedures or the type of installation being inspected. Some felt that being 'qualified' was enough.

Inspection

Most candidates provided good answers when asked to identify five checks to be made during an inspection of a pvc conduit system prior to the installation of cables.

One question asked for five items specifically related to consumer units and distribution boards that would be recorded following an inspection. Some candidates listed the characteristics of the supply rather than items listed on the Schedule of Inspections.

Another question asked candidates to state five extraneous conductive parts which need to be checked for the presence of a main protective bonding conductor connection. Most candidates were able to gain marks with answers such as structural steel work and lighting conductors but dropped marks either because answers were too vague, such as 'water pipe', or because the answers given were examples of exposed conductive parts. With question such as this the terminology used should be as used in BS 7671.

Testing

The question asking which tests require GS 38 leads was answered correctly by most but some candidates included continuity of protective conductors, continuity of ring final circuit conductors and polarity in their answers.

With the question asking for the procedure when testing the continuity of the circuit protective conductor of a new radial circuit and obtaining a value for $R_1 + R_2$ some only stated how to obtain the value of $R_1 + R_2$ and thus only tested at the furthest point rather than testing at every point as required by BS 7671 and GN3.

The final question on testing asked for the procedure to be followed when measuring the Z_s of a newly installed circuit. Most candidates failed to mention the need to ensure that the covers needed to be in place at other points in the circuit and that earthing and bonding needed to be connected.

3 National pass rate

The national pass rate for the 2394-302 **October 2015** examination is as follows:

Exam series	Pass rate (%)	Fail rate (%)
October 2015	56	44

Past examination series

Exam series	Pass rate (%)	Fail rate (%)
August 15	57	43
June 15	58	42
April 15	63	37

Forthcoming Exam Dates are:

Tues 09 February 2016 18:30 – 20:30
Tues 19 April 2016 18:30 – 20:30

Published by City & Guilds
1 Giltspur Street
London
EC1A 9DD
T +44 (0)844 543 0000
F +44 (0)20 7294 2413
www.cityandguilds.com

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