

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

Chief Examiner's report – **October 2016**



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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 2016** 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 2016 question paper was found to be in accordance with the scheme requirements.

The number of scripts received for this series was **approximately 330**.

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 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. These are common errors which appear on almost every examination series.

Not reading the whole question carefully

It is important that candidates read each question carefully before constructing their answer. Failure to do so may cost the candidate marks, and in some cases, they will score no marks at all as their answer does not relate to the question being asked.

One question asked the candidate to identify five checks to be carried out on **cables and conductors within a distribution board**. Whilst most candidates gave good relevant answers some gave answers that related to labelling the distribution board, the cable runs and zones and conduits thus losing a significant number of marks.

Terminology

The use of "live" and "line" are often used incorrectly. Candidates interchange the two terms when describing test procedures which often results in a loss of marks due to the testing procedure being unclear. 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.

One question asked candidates to state the results that must be recorded after successful completion of a ring final circuit continuity test. Many candidates listed the first five tests that would be carried out on a final circuit rather than the results of the single test, others lost marks because of using upper case letters rather than lower case letters for recorded values at stage one of the ring final test. Most were able to gain marks for R_1+R_2 .

Knowledge of BS 7671 and Guidance Note 3

One question required the candidates to state, in the correct sequence, the first three tests to be carried out on a new radial circuit. A surprisingly high number of candidates were unable to do so. Common errors were wrong titles of tests and an incorrect test order. Less common errors included reference to ring final circuit continuity test, even though the question clearly stated a radial. Some answers listed the same test twice, using a different title - "continuity of cpc, $R_1 + R_2$ test". It should be noted that " $R_1 + R_2$ test" is not the correct title of a test.

Another question required the candidate to state the operational characteristics of a RCD installed to provide Additional Protection. Many candidates described how a RCD worked rather than stating the characteristics as given in 415.1.1 of BS 7671.

Inspection

Most candidates scored high marks when answering the inspection question. Those candidates who did not read the question carefully, lost marks because they gave unrelated information.

Testing

The October paper contained questions relating to carrying out the continuity testing of a bonding conductor, insulation resistance testing and RCD testing. These questions were well answered by the majority of candidates.

With the question on insulation resistance testing, candidates did however repeat information from part a) of the question, even though instructed not to, but then omitted key points such as the need to operate two way switches during the test.

Another question required a test to be carried out on a 30 mA RCD. A large number of answers did not identify the test currents, even though the requirement for this was highlighted in bold on the question paper, or the maximum permitted disconnection times. Other incorrect answers related to the disconnection times with some candidates mixing up the $5I_{\Delta n}$ and $I_{\Delta n}$.

Part b) of this question required candidates to state the results that would be recorded on the Schedule of Test Results for the RCD test. Some candidates lost marks because they gave all of the test results from part a) including $\frac{1}{2} I_{\Delta n}$ rather than stating the highest reading at $5I_{\Delta n}$ and $I_{\Delta n}$. Some also forgot about recording that the test button check had been carried out.

3 National pass rate

Information needs to be added here

The national pass rate for the 2394-302 **October 2016** examination is as follows:

Exam series	Pass rate (%)	Fail rate (%)
October 2016	71	29

Past examination series

Exam series	Pass rate (%)	Fail rate (%)
August 2016	65	35
June 2016	59	41
April 2016	47	53

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