



EXAMINATION: AUTHORISATION A

September 2021

Practical Test

Time Allowed – 1½ Hr

Name & Surname _____
(In Block letters)

Index No. _____

Figure 1 shows the line diagram of typical domestic installation. As can be seen the installation comprises of a:-

- i. Ring Circuit supplying 4 single 13Amp socket outlets.
 - ii. Power circuit supply a 20A double pole switch which will be supplying a water heater
 - iii. One lighting circuit consisting of a lighting point controlled from two separate positions.
- a. For each circuit shown in Figure 1, draw separate wiring diagrams showing the connections, polarity, colour, size of cables and protective devices ratings required for the following circuits.
 - b. List the sequence of tests that need to be carried before energising the installation shown in Figure 1.
 - c. Write a small report to explain how a Ring final circuit continuity test and an insulation resistance test will be carried out on the Ring circuit shown in Figure 1. In the report include drawings showing how the instruments will be connected to perform each test.
 - d. Draw a suitable Consumer Unit Layout for the above installation showing the MCB`s, Main Switch, RCD and any other protection that may be required for the installation shown in Figure 1.
 - e. State with reasons what is the maximum acceptable earth electrode resistance value for a domestic installation?

This practical test and the oral examination will comprise a total of 100 marks.

PLEASE WRITE YOUR ANSWERS AND DRAWINGS HERE

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