

1. Before initial verification of an addition to an existing installation is carried out, the occupier of the next premises should
 - a. be issued with disclaimer in case of accident caused by testing
 - b. Evacuate the premises before testing takes place
 - c. Receive a detailed account of the inspection procedure
 - d. Be informed that the inspection and testing is to take place
2. The title given in law to a person who carries out inspection and testing is
 - a. Inspector
 - b. Tester
 - c. approved person
 - d. Duty holder
3. Which one of the following will ensure isolation remains effective while working on a circuit?
 - a. Lock off only
 - b. Lock off and display notices
 - c. Switch off and display notices
 - d. Display notices
4. Which one of the following is the most suitable location to test and confirm that a lighting circuit is fully isolated and that it is safe to work in the entire circuit?
 - a. At the supply intake point
 - b. On the supply of the circuit protective device
 - c. At the last luminaire on the circuit
 - d. On the load side of the circuit protective device
5. Which one of the following items is most likely to be isolated from a circuit while the circuit is tested for insulation resistance?
 - a. Current using equipment
 - b. contact switches
 - c. Circuit conductors

- d. **Circuit connections**
6. **The most important precaution to be taken before disconnecting main protective conductor for test purposes is**
- a. **warn the occupier of the premises**
 - b. **Isolate the supply and lock off**
 - c. **Check for parallel paths**
 - d. **Use a screwdriver insulated to 1000 V**
7. **A circuit cannot be securely isolated from the supply. Which of the following tests must not be undertaken under these circumstances**
- a. **Continuity of CPC**
 - b. **Earth fault loop impedance**
 - c. **Insulation resistance**
 - d. **Functional securely**
8. **Which one of the following documents is non-statutory?**
- a. **BS7671**
 - b. **EWR**
 - c. **PUWER**
 - d. **ESQCR**
9. **The non -statutory document that is applicable to the construction and use of test equipment is**
- a. **BS7671**
 - b. **IEE Guidance Note 3**
 - c. **HSE Guidance Note GS38**
 - d. **The IEE On-Site Guide**
10. **Which one of the following test could, in addition, indicate the supply polarity condition?**
- a. **External earth fault loop impedance**
 - b. **Continuity of protective conductors**

- c. Insulation resistance
- d. Continuity of Ring Final circuit's

11. Which one of the following tests is not, under any circumstances, required on a circuit which is protected against faults by SELV?

- a. Continuity of protective conductors
- b. Insulation resistance
- c. Separation of circuits
- d. Polarity

12. Which one of the following groups of tests is in the correct order s given I BS7671?

- a. Continuity of ring final circuits, continuity of protective conductors, insulation resistance, polarity
- b. Continuity of protective conductors, continuity of ring final circuit's, polarity insulation resistance
- c. Polarity, insulation resistance , continuity of ring final circuit's, continuity of protective conductors.
- d. Continuity of protective conductors, continuity of ring final circuit's, insulation resistance, polarity.

13. Which one of the following combinations of test instrument and units displayed are used to establish a value of PFC?

- a. PFC tester set to kilo ohms
- b. PFC tester set to kilo amperes
- c. Earth fault loop impedance tester set to Mega ohms
- d. Earth fault loop impedance tester set to milli amperes

14. The unit of measurement for insulation resistance is

- a. milli ohm
- b. Ohm
- c. Kilo ohm
- d. Mega-ohm

15. Which of the ranges on a loop impedance tester will give the most accurate reading if the value of the impedance to be measured is 0.6 ohms?
- a. 20 kilo ohm
 - b. 2000 ohm
 - c. 200 ohm
 - d. 20 ohm
16. In order to maintain instrument accuracy, test instruments should be regularly tested against known values. On which document should test instruments identification numbers be recorded, in order to trace tests that may have been performed using in-accurate instruments?
- a. Electrical Installation Condition Report
 - b. Schedule of Test Results
 - c. Schedule of Inspections
 - d. Electrical Installation Certificate
17. Which of the following is a method of testing the correct function of an insulation resistance ohmmeter prior to use?
- a. Null the test leads as their resistance could affect results
 - b. Carry out an open and closed circuit test with the leads
 - c. Test the instrument on a known, energized supply.
 - d. Test the circuit with loads in place, then remove the loads
18. Details of instrument manufacturer and serial numbers must be recorded on the
- a. Schedule of Test Results
 - b. Schedule of inspections
 - c. minor electrical Installation works certificate
 - d. Electrical Installation Certificate
19. In order to ensure that the risk of electric shock under fault conditions is significantly reduced, it is important that
- a. Basic protection is provided

- b. All protective conductors terminations have a warning notice
 - c. all protective conductors are in place and disconnection times have been met
 - d. The earthing conductor must not be less than 25mm
20. A test to prove the continuity of a main protective bonding conductor which is not disconnected at either end may result in a reading even if the conductor is broken. This is a result of
- a. Using an un-calibrated instrument
 - b. The instrument being set to the wrong scale
 - c. The test leads being too long
 - d. the presence of parallel paths
21. Increasing the length of a cable would not affect the
- a. Voltage drop
 - b. Loop impedance
 - c. Rating of the protective device
 - d. Insulation resistance
22. The measurement of the continuity of a protective conductor is higher than expected. One possible reason for this is the test
- a. Lead resistance has not been subtracted
 - b. Lead resistance has not been added
 - c. Leads are too short
 - d. Leads are not double insulated
23. When a number of circuits are connected in parallel the overall insulation resistance will be
- a. The sum of the individual insulation resistances
 - b. The average of the insulation resistances
 - c. Equal to the highest individual insulation resistance
 - d. Lower than the lowest individual insulation resistance
24. When a number of additional circuits are connected to a distribution board the overall insulation resistance will

- a. Decrease
- b. remains unchanged
- c. Be the average of the circuit value
- d. Increase

25. A test that is automatically conducted when carrying outage test of ring final circuit continuity is

- a. insulation resistance
- b. Polarity
- c. RCD operating times
- d. Loop impedance

26. The earth lead of the earth fault loop impedance tester used to carry out a test of earth electrode resistance must be attached to the

- a. Main earthing terminal
- b. Disconnected earthing conductor
- c. Main protective bonding conductors
- d. Circuit protective conductors

27. Z_e for an electrical installation is 0.8ohms. For one of the circuits the resistance of the line conductor is 1.21ohms and the resistance of the cpc is 1.81ohms. The expected earth fault loop impedance for the circuit is

- a. 3.82ohms
- b. 3.02ohms
- c. 2.61ohms
- d. 2.01ohms

28. The type of earthing system which includes a separate metallic earth return path throughout is

- a. TT
- b. TN-S
- c. TN-C-S
- d. IT

29. A test of insulation resistance is carried out between live and earth on a 230 v single phase circuit and the result recorded was 0.02 mega ohms. Which one of the following is the approximate value of current that would leak to earth during normal working condition?

- a. 1.5 mA
- b. 11.5 mA
- c. 1.5 A
- d. 11.5 A