

City & Guilds

Fundamental Inspection & Testing

30 Question Test Sheet (2392-10 Paper No1.)

NOTE: This paper relates to a 'closed book' exam – & therefore candidates should attempt this exam paper with no study-notes or text books.

Once the exam is completed, delegates should use the On Site Guide and GN3 to check their answers

- 1 The certificate issued for an initial verification must be accompanied by a schedule of
 - a. Test results only
 - b. Inspections only
 - c. Tests and schedules of inspections
 - d. Test results and schedule of inspections

- 2 On completion of an initial verification of an additional new circuit, the inspector should provide
 - a. A Minor Works Installation Certificate
 - b. A periodic Certificate
 - b. relevant comments on the condition of the existing electrical installation
 - c. details of any departures to the Distribution Network Operator

- 3 A Minor Electrical Works Certificate does not require a record of
 - a. System earthing arrangements
 - b. Departures from BS7671
 - c. Method of fault protection
 - d. Prospective fault current

- 4 Which one of the following documents does not include model forms for certifications purposes?
 - a. HSE Guidance notes GS38
 - b. The On Site Guide
 - c. IEE guidance Notes 3
 - d. BS7671

- 5 Apart from an Electrical Installation Certificate and associated schedules , additional documentation must be issued for initial verification where
 - a. Bedrooms have been converted into bathrooms
 - b. Stand by generators are present
 - c. The property is occupied by a tenant
 - d. An electrical installation incorporates an RCD

- 6 Before conducting an inspection and test of a new shower circuit, one of the most important items of information is the
- Date of installation of the circuit
 - Size, type, and rating of the cable and the protective device
 - Manufacture and power rating of the shower unit
 - Manufacture of the test equipment used
- 7 Which human sense is most likely to indicate that a BS3036 fuse has just operated the moment a circuit switch is closed
- Taste
 - Touch
 - Smell
 - Hearing
- 8 Any item that does not need inspection during initial verification should be marked
- X
 - N/A
 - LIM
 - ◇
- 9 A human sense appropriate during initial verification of an installation would be
- Touch
 - Taste
 - Intuition
 - None
- 10 A New installation is protected against faults by ADoS. When inspecting this method of protection, which of the following is not an essential check
- Earthing conductor
 - Circuit protective conductors
 - Fire barriers
 - Main Protective bonding conductors
- 11 Where mechanical protection is not provided, supplementary bonding conductors should be of a csa of not less than
- 2.5mm²
 - 4.00mm²
 - 6.0mm²
 - 10.0mm²

- 12 An additional CPC is connected in parallel with the SWA of a cable. This has the effect of?
- Increasing the overall resistance
 - Decreasing the overall resistance
 - Decreasing the voltage drop under load conditions
 - Increasing the voltage drop under load conditions
- 13 In a room containing a bath, Zone 0 is
- Within the bath
 - Immediately above the bath
 - 600mm around the bathtub
 - Beyond 600mm from the bathtub
- 14 When carrying out an Earth Fault Loop Impedance on a final circuit, the earthing conductor must
- Disconnected from all the protective conductors
 - Connected to all the protective conductors
 - Only connected to the main equipotential protective bonding conductors
 - Only disconnected from the circuit protective conductors
- 15 The non statutory document that is applicable to the construction and use of test equipment is
- HSE guidance Note GS38
 - The IEE On Site Guide
 - IEE Guidance Notes 3
 - BS7671
- 16 When a number of circuits are added to a distribution board the overall insulation resistance will
- Decrease
 - Remain unchanged
 - Be the average of the circuit values
 - Increase
- 17 Which one of the following identifies the conditions required before performing a test of insulation resistance?
- Consult the client follow safety procedures and erect warning signs
 - Inform HSE
 - Inform staff, the HSE, and erect warning signs
 - Consult the engineer, inform HSE and tell the client

- 18 Which one of the following results would confirm the separation of SELV circuits from circuits operating at 230 volt as required by BS 7671
- Test Voltage 250 V Minimum resistance 0.25M Ω
 - Test Voltage 250 V Minimum resistance 0.5M Ω
 - Test Voltage 500 V Minimum resistance 0.5M Ω
 - Test Voltage 500 V Minimum resistance 1.0M Ω
- 19 Where residual current devices are to be connected in series, to ensure correct operation in the event of a fault there must be suitable
- Discrimination
 - Distribution
 - Discernment
 - Displacement
- 20 A test of prospective fault current should be undertaken at the point in installation of an over-current protective device in order to ensure it is
- Capable of being replaced
 - Able to safely disconnect the fault likely to occur at that point
 - To ensure it is twice the protective devices value
 - Able to disconnect in the required time
- 21 Continuity of conductors should be verified by using
- A continuity tester
 - A high resistance ohm meter
 - An earth fault loop impedance tester
 - A low resistance ohm meter
- 22 In order to ensure that the risk of electric shock under fault conditions is significantly reduced, it is important that,
- Basic protection is provided
 - All protective conductor terminations have a warning label
 - All protective conductors are in place and disconnection times are met
 - The earthing conductor must not be less than 25.00mm²
- 23 When two copper cores each with a resistance of 0.1 Ω are connected together in parallel the combined resistance would be
- 0.5 Ω
 - 0.2 Ω
 - 0.1 Ω
 - 0.05 Ω

- 24 An additional result of conducting a test for ring final continuity is to achieve a value for
- Insulation resistance
 - Polarity
 - $R1 + R2$
 - RCD operating times
- 25 The unit of measurement for insulation resistance is
- $m\Omega$
 - Ω
 - $k\Omega$
 - $M\Omega$
- 26 The maximum tabulated value of earth fault loop impedance for a circuit is 1.85Ω . If the resistance of the line and cpc of a new circuit is 1.03Ω . the maximum accepted external earth loop impedance value is
- 0.82Ω
 - 0.45Ω
 - 0.35Ω
 - 0.20Ω
- 27 Before carrying out a test of insulation resistance
- The circuit must be isolated
 - A loop impedance test is undertaken
 - All loads must be connected
 - All switches must be open
- 28 The type of earthing system which includes an installation earth electrode is
- TT
 - TN-S
 - TN-C-S
 - IT
- 29 A 100 mA residual current device is installed to provide fault protection. The maximum applied test current to confirm compliance is.
- 50 mA
 - 100 mA
 - 150 mA
 - 200 mA
- 30 The current measured between line and neutral at the origin of an electrical installation forming part of a TT system would be recorded as the
- Design current
 - Nominal current
 - Rated current
 - Prospective fault current