

Q1 Which one of these electrical installations does BS 7671:2008 not apply to:

- Temporary Construction sites
- Distributor's Equipment
- Caravans
- Public Premises

Q2 Which one of the following for electrical supplies may not be determined by calculation

- ELZ
- Type of overcurrent device at the origin of the installation
- Nature of current
- Suitability for installation including Maximum Demand

Q3 With regard to Electrical systems a LIVE PART is defined as one of the following

- a conductor connected to earth
- a conductive part liable to introduce a potential, generally at earth potential, and not forming part of the electrical installation
- A conductive part of equipment which can be touched which is not a live that may become live under fault conditions
- A conductor or conductive part which forms part of the installation, and intended to be energised in normal use

Q4 A Residual Current Device is designed to operate under the event of one of the following

- overload
- earth fault
- lightning strike on the supply
- short circuit

- Q5 The lowest level of electricity that can harm a human being is measured in (Answer D)
- microamps
 - kiloamps
 - amps
 - milliamps
- Q6 The reason that installations are divided into circuits is:
- To keep the cables smaller
 - to facilitate safe operation, inspection, testing and maintenance
 - To make it easier to do cable scheduals
 - To make cable calculations easier
- Q7 What is the colour of cable carrying conduit to distinguish it from other services is:
- Black
 - Green
 - Orange
 - Yellow
- Q8 It should be verified before adding to an existing installation that:
- The supply most be separate from the original installation
 - Be a similar wiring system to the original installation
 - Should not be a similar wiring system to the original wiring system
 - Should not impair the safety of other equipment or impair the supply

Q9 Which of the following could not be provided by enquiry:

- The nature of the current and frequency
- The PSC
- The suitability for the requirements of the installation
- Live working

Q10 Test instruments for working on electrical systems should

- Be Yellow in colour
- Be less than 10 years old
- Have non insulated test probes to GS36
- Have insulated test probes to GS38

Q11 The Electricity at Work Regulations apply to

- Only low voltage systems
- Only extra low voltage systems
- All voltage systems
- Only on high voltage systems

Q12 Omission for circuit protection against overload may not be given to which of the following:

- Fire Panel supplies
- Control circuit for fire extinguishing equipment
- Exciter circuits for rotating machines
- Supply circuits for lifting magnets

Q13 Miniture Circuit Breaker (MCB) must operate within 1.45 times the:

- Design Current
- Current Carrying Capacity of conductors
- Overcurrent device
- Short Circuit Current

Q14 Which must not be used for emergency switching

- Push button on a contactor
- Manual operated switch
- Miniture circuit breaker
- Plug and socket

Q15 Overcurrent protection is provided by

- Link switch
- Residual Current Device
- Disconnecter
- Circuit Breaker

Q16 Where mains voltage is to be supplied for portable equipment, what extra protection is recommended?

- A step down transformer
- A step down generator
- An electrical separation supply transformer
- An Residual Current Device

Q17 By which method is both Fault and Basic protection given

- SELV
- ELV
- Insulation
- Placing out of reach

Q18 On a construction site movable equipment, the protective device is a 20amp type 1361 fuse the Max Zs allowed is:

- 1.2
- 1.33
- 1.55
- 1.92

Q19 A supply that is not MIMS or busbar feeding a paper mill must be provided with an RCD not exceeding:

- 30mA
- 300mA
- 500mA
- 150mA

Q20 In zone A of a sauna the electrical equipment allowed is :

- A ceiling rose
- A shaving socket
- A thermostat and thermal cutout
- Any IP2X equipment

Q21 Which of the following complies with BS7671: (OSG:Table8A)

- A 20 amp radial in 4.00mm² with a maximum of 100m²
- A 30 amp radial in 2.5mm² with a maximum area of 75m²
- A 30 amp radial in 2.5mm² with a maximum area of 50m²
- A 30 amp radial in 4.00mm² with a maximum area of 75m²

Q22 What is the preferred wiring system to be used in a fire alarm system (OSG Table7.4)

- 70 degree multiple thermosetting rubber
- 90 degree single thermosetting rubber
- 70 degree single thermosetting rubber
- Mineral Insulated Cable

Q23 With regards to CONTROL, which of the following could be seen to effect a large motor

- Undervoltage
- Direct current feedback
- High frequency oscillators
- Overvoltage

Q24 In what chapter would you find the fundamental principles of the protection against overcurrent

- 40
- 13
- 53
- appendenix 3

Q25 If protection is provided by an RCD the following must be fulfilled

- $R_a I_a \leq 50V$
- $Z_s \leq \frac{0.866 U_s}{I_a}$
- $Z_s I_{\Delta n} \leq 50V$
- $R = 50 \times I_a$

Q26 Maximum disconnection times may be increased to afford protection for portable equipment when

- It supplies Class I equipment
- Where there is no supplementary bonding
- Where $Z_s \leq U_o / I_a$
- Where 3036 fuses are used

Q27 Find the minimum size of protective conductor for a fuse carrying a fault current of 250A which will disconnect at 0.2 sec if the value for k = 115.

- 150mm^2
- 1.00mm^2
- 0.5mm^2
- 185mm^2

Q28 Source of supply for safety services shall be provided by

- A storage battery
- MIMMS
- The supply authority
- A skilled person

- Q29 Which zone is the space under the bath tub if it can only be accessible with a tool
- Zone 1
 - Zone 0
 - Outside zones
 - Outside zones 1 + 2 inside Zones 0 + 4
- Q29 What is the maximum Z_s for a BS88-2.1 16 amp fuse for a single phase supply to a construction site for portable appliances at 220 v
- 3.00Ω
 - 4.36Ω
 - 0.83Ω
 - 2.53Ω
- Q30 A radiant heater mounted in an area where livestock may be present must be:
- Protected by a 30mA rcd
 - Allow clearance as by manufacturers instruction
 - Not allowed under any circumstances
 - Only if building fabric allows
- Q31 Equipment having a flexible protective conductor current exceeding 3.5 mA for plugs rated at 16 A must have a CSA of not less than
- 4.00mm^2
 - 1.5mm^2
 - 2.5mm^2
 - Disconnected from supply

- Q32 On caravan parks the minimum height of an overhead conductor shall be
- Not more than 1.8 meters above ground
 - 2 meters above ground
 - 6 meters above ground in vehicle movement areas
 - Buried and covered with steel protector
- Q33 Where protection against indirect contact is afforded to Class I equipment is by EEBAD fences and grids not forming part of the structure must be
- Connected to the main earthing terminal
 - Shall not be connected to the main earthing terminal
 - Be connected by a conductor of not less than 4.00mm²
 - Be connected by a conductor of not less than 2.5 mm²
- Q34 Before an edition to an installation it shall been verified
- That the voltage is 230 and the frequency is 50 Hz
 - Does not impair the safety of the existing installation
 - Complies to the On Site Guide
 - The meter board has enough spare ways
- Q35 Who determines the frequency of inspections after the initial inspection has taken place:
- The Client?
 - The Duty Holder?
 - The Designer?
 - The designer, installer, and other relevant parties?

- Q36 At what point of an inspection may items that may be harmed during certain test be found
- Before insulation resistance test?
 - Before ELZ tests?
 - During initial verification?
 - Polarity test?
- Q37 A 15 A. BS 3036 (se) with a fault current of 90 A will disconnect the power in how many seconds?
- 0.1s
 - 0.4 s
 - 5 s
 - 0.2s
- Q38 A straight piece of conduit from a distribution board has ten 1.5mm² and 4 2.5 mm² solid copper pvc insulated cables. Calculate the conduit size. (OSG Table 5B)
- 25mm
 - 20mm
 - 15mm
 - 32mm
- Q39 A length of trunking has to carry eight 10mm², sixteen 6mm², twelve 4mm², and ten 2.5mm² stranded single cables to BS7211. Calculate the size required(OSG Table 5E)
- 50 x 50
 - 50 x 75
 - 100 x 100
 - 75 x 75