

Sample Questions - C&G 2382 17th Edition full paper D

1 o/c 1 - A recommendation for the interval to the first periodic inspection shall be made by:

- a the installation electrician.
- b the main contractor.
- c the designer of the installation.
- d the test and inspection engineer.

2 o/c1 BS 7671 applies to

- a lift installations
- b highway equipment
- c equipment on board ships
- d electrical equipment of machines.

3 18 o/c1 BS 7671 identifies that the cross-sectional area of a conductor shall be determined by

- a the admissible maximum temperature
- b the nominal voltage
- c voltage tolerances
- d the earthing system.

4 To which one of the following electrical installations does BS 7671 apply?

- a Installations at mines and quarries.
- b Caravans and their sites.
- c Public transmission systems.
- D Off-shore installations.

5 Oc 2 A corridor containing supporting structures for cables and joints and/or other elements of wiring systems, the dimensions of which allow persons to pass freely throughout the entire length, is known as

- a an access pathway
- b a cable tunnel
- c an access throughway
- d cable ducting.

6 o/c2 - BS 7671 defines extra-low voltage a.c. as not exceeding:

- a 12V a.c. and 50V d.c.
- b 50V a.c. and 100V d.c.
- c 24V a.c. and 50V d.c.
- d 50V a.c. and 120V d.c.

7 o/c2 The algebraic sum of the currents in the live conductors of a circuit at a point in the electrical installation is known as the

- a residual current

- b harmonic current
- c line current
- d neutral current.

8 Which of the following supply characteristics is not listed amongst those determined in regulation 313.1:

- a. Nominal Voltage
- b. Type of system earthing
- c. Earth Fault loop impedance
- d. Prospective short circuit current

9 o/c 3 - Which of the following would not normally be recognised as being a supply source for safety services:

- a a generator supplying power, via the grid, to a hospital.
- b storage batteries.
- c primary cells.
- d a separate feeder of the supply network effectively independent of the normal feeder.

10 Which of the following supply characteristics would need to be ascertained for a new domestic installation?

- a Number of points of utilization
- b The supply transformer type
- c The supply cable size
- d The nature of the current and frequency

11 /c3 Which one of the following is not a characteristic of the supply?

- a The nature of the current and frequency
- b The earth fault loop impedance external to the installation
- c Main switch current rating
- d The nominal voltage

12 o/c3 BS 7671 requires designers to take into account the frequency and quality of maintenance an installation can reasonably be expected to receive when

- a assessing staff numbers
- b inspecting and testing
- c selecting staff
- d specifying or selecting equipment reliability.

13 o/c4 In the event of an earth fault on the HV side of a substation the LV installation may be affected by

- a V
- b U
- c I

d I^2t .

14 o/c4 414.3 - Which one of the following supplies is not suitable for an SELV system:

- a safety isolating transformer complying with BS EN 61558.2.6.
- b engine driven generator.
- c battery.
- d transformer with an earthed secondary winding.

15 o/c 4 - Correct co-ordination between circuit conductors and an overcurrent protection device is achieved when:

- a I_n exceeds the lowest current carrying capacity I_z .
- b I_n is not less than the design current I_b .
- c I_b is greater than or equal to I_z .
- d I_z is lower than or equal to I_b .

16 o/c4 - Class II equipment is used as a measure of:

- a overvoltages.
- b indirect protection.
- c basic protection.
- d fault protection.

17 o/c4 - When providing fault current protection for conductors in parallel a fault current protective device shall be provided at:

- a each end of each parallel conductor.
- b at the supply end of each parallel conductor.
- c at the load end of each parallel conductor.
- d at the midway position of each parallel conductor.

18 o/c 4 - A circuit is protected by a 32A Type circuit breaker. If the value of Z_e is 0.8 ohms what will be the maximum allowable value for $(R_1 + R_2)$:

- a 1.44 ohms.
- b 2.24 ohms.
- c 0.72 ohms.
- d 0.64 ohms.

19 o/c 4 table 42.1 - The maximum temperature for an accessible part of non-metallic equipment intended to be touched but not held is:

- a 55°C.
- b 65°C.
- c 70°C.
- d 80°C.

20 o/c4 - Correct co-ordination between conductors and the circuit overcurrent protective device is achieved when:

- a I_n is less than I_b .
- b I_n does not exceed I_z .
- c $I_b > 1.45 I_Z$.
- d I_b exceeds I_Z .

21 o/c 4 Protection by automatic disconnection of supply is

- a permitted only if the installation is under effective supervision
- b a method of reducing magnetic effects
- c a combination of basic and fault protection
- d a combination of thermal and overvoltage protection.

22 o/c4 Which one of the following is not part of the requirements for fault protection?

- a Protective earthing
- b Protective equipotential bonding
- c Automatic disconnection
- d Protection by insulation of live parts

23 o/c4 A SELV source can be derived from which one of the following?

- a Double-wound transformer
- b Autotransformer
- c Safety isolating transformer
- d Step-up transformer

24 o/c4 Except where otherwise recommended by the manufacturer, spotlights and projectors rated at over 100 W and up to 300 W shall be installed at a minimum distance from combustible materials of

- a 0.5m
- b 0.6m
- c 0.8m
- d 1.0m.

25 o/c4 Where particular risks of fire exist, the classification for high density occupation areas with easy conditions of evacuation is

- a BD1
- b BD2
- c BD3
- d BD4.

26 o/c4 What is the impulse category of equipment that is part of the fixed electrical installation and other equipment where a high degree of availability is expected?

- a I
- b II
- c III
- d IV

27 o/c 5 Which of the following may be used to provide emergency switching for a motor:

- a a plug and socket.
- b a luminaire connection device.
- c a device which latches in the OFF position.
- d a key switch.

28 /c 5 559.6.1.6 Lighting circuit with E14 lamp holders should be protected by over current protection on greater than.

- 1 - 6A
- 2 - 16A
- 3 - 5 A
- 4 - 20A

29 o/c 5 - A main switch must be capable of withstanding:

- a the prospective short circuit current at that point.
- b twice the earth loop fault current.
- c twice the prospective short circuit current.
- d twice the maximum demand.

30 o/c5 - Which of the following statements is incorrect:

- a The use of PEN conductors is permitted within an installation where authorisation has been obtained.
- b The use of PEN conductors is permitted within an installation where the supply is obtained from a private generating plant.
- c For a fixed installation flexible conductors of csa less than 10mm² may serve as a PEN conductor.
- d No means of switching shall be inserted in the outer conductor of a concentric cable.

31 o/c5 Lighting circuits incorporating E40 landholders shall be protected by an overcurrent device with a maximum rating of

- a 6A
- b 10A
- c 16A
- d 20A.

32 o/c 5 The supply circuit of insulation monitoring devices must be installed:

- a. at the furthest point of the installation

- b. as close as practical to the origin of the installation 538.1.2
- c. in series with the load
- d. to provide protection against shock

33 27o/c 5 521.5.2 - In order to withstand electromechanical stresses every conductor shall have:

- a adequate strength.
- b adequate flexibility.
- c an armoured sheath.
- d high current carrying capacity.

34 o/c5 514.4.2 - Single core protective conductors coloured green and yellow shall have one of the colours cover the surface at least and at most:

- a 30% and 70%.
- b 20% and 80%.
- c 50% and 50%.
- d 40% and 60%.

35 o/c5 Where underground power and telecommunication cables are in close proximity, they should be separated by a minimum distance of

- a 1000mm
- b 500mm
- c 300mm
- d 100mm.

36 o/c5 A functional switch has to be provided for each part of the circuit

- a that may require independent control
- b 1200 mm from the floor
- c for safe isolation
- d for emergency switching purposes.

37 o/c5 A multicore 70 °C thermoplastic cable with 2.5 mm² conductors supplies a single-phase load of 20 A at 230 V a.c. over a distance of 22 metres. The voltage drop in the cable will be

- a 6V
- b 6.6V
- c 7.92V
- d 9.2V.

38 oc5 When selecting wiring systems for safety services, the type of table that should be used in fire conditions should comply with

- a BS5467
- b BS6231
- C BS7211

d BS EN 50362.

39 oc 5 A single-phase load of 13 A is supplied via a 15 A BS 1361 fuse using single-core 70 °C thermoplastic copper cables installed to method 4 (Reference Method B). The rating factor for grouping is 0.7 and for ambient temperature 0.87, and overload protection is to be provided. The minimum acceptable size cable would be

- a 1 mm²
- b 1.5 mm²
- c 2.5 mm²
- d 4 mm².

40 oc 5 Under fault conditions, cables are subjected to stress and thermal effects. One item not normally encountered would be

- a electrochemical effects
- b electromechanical stresses
- c electromagnetic effects
- d thermal damage.

41 oc5 Where safety depends upon the direction of rotation of a motor, provision shall be made to

- a measure the maximum and minimum speed
- b monitor the slip frequency
- c prevent reverse operation
- d prevent operation of overload devices.

42 o/c 6 - With regard to determining the frequency of periodic inspection and testing of an installation, which of the following does not need to be considered:

- a results of previous reports.
- b the installation use.
- c the frequency of maintenance.
- d the quality of the test instruments.

43 o/c 6 - Which of the following statements is incorrect:

- a periodic inspection is carried out to check for heat arising from an installation defect.
- b a schedule of inspections and test results must accompany a periodic inspection report.
- c periodic inspection and testing must be carried out by a fully qualified electrician.
- d where possible, results from previous inspection and testing must be taken into.

44 /c6 - BS 7671 recommends that continuity testers shall be capable of having a no-load voltage between:

- a 4V and 24V d.c. or a.c.

- b 4V and 24V d.c.
- c 24V and 250V a.c.
- d 24V and 250V d.c. or a.c.

45 Which of the following is the designated symbol for a high pressure sodium lamp with an internal starting device?



46 oc6 When carrying out an inspection of a new installation, it is not necessary to verify the

- a total earth fault loop impedance for each circuit
- b connection of conductors
- c methods of protection against electric shock
- d presence of diagrams, instructions and similar information.

47 oc6 After completion of a periodic inspection, the completed documentation shall be given to the

- a person ordering the inspection
- b local authority
- c insurance company
- d main contractor.

48 o/c7 13A socket-outlets are to be installed in a location containing a bathtub. The minimum distance they may be located from zone 1 is

- a 1m
- b 2m
- c 3m
- d 4m.

50 o/c7 When the a.c. side of photovoltaic equipment is disconnected, the d.c. side is considered to be

- a de-energised
- b energised
- c a non-conducting location
- d anequipotential zone.

51 o/c 7 The space under a bath, unless accessible only with a tool, is considered to be in zone:

- a 0.
- b 1.
- c 2.

d 3.

52 o/c7 - Which of the following statements regarding exhibitions, shows and stands is incorrect:

- a all sockets not exceeding 32A shall be protected by an RCD.
- b the nominal supply voltage shall not exceed 230V/400V a.c.
- c all electric motors shall have means of isolation.
- d signs shall be constructed of materials having an adequate heat resistance.

53 o/c 7 753.512.2.5 - Heating units installed in a concrete floor shall have a degree of ingress protection not less than:

- a IP7X.
- b IP6X.
- c IPX6.
- d IPX7.

54 o/c7 - Which of the following types of equipment is allowed to be installed within Zone 1 of a swimming pool:

- a switchgear.
- b controlgear.
- c 13A socket-outlets.
- d electrical equipment for fountains protected to at least AG2.

55 o/c7 In zones 0 and 1 of a fountain, the protective measure of SELV may be used, provided that the source of SELV is

- a inside these zones
- b outside these zones
- c via an autotransformer
- d centre tapped to earth.

56 oc7 In a room containing a bath, electrical equipment installed in zone 0 shall have a degree of protection of at least

- a IPX5
- b IP5X
- c IP7X
- d IPX7.

57 oc7 Equipment on a pontoon in a marina that is subject to impact to level AG2 should have a mechanical protection code of

- a IPX4
- b IPX8
- c IP55
- d IK08.

58 o/c8 A flat twin and earth cable clipped direct to a ceiling joist where the thermal insulation does not exceed 100 mm thickness is installation method

- a 100
- b 101
- c 102
- d 103.

59 o/c 8 app7 - In the new colouring system the neutral in a three-phase a.c. system will be:

- a brown
- b red
- c black
- d blue

60 oc8 A 2.5 mm² thermoplastic insulated and sheathed flat cable with protective conductor is laid in a ceiling beneath thermal insulation 80 mm thick in contact with the ceiling board, as shown in the figure below. What is its installed rating?

- a 17 A
- b 20A
- c 21A
- d 27 A

answers below

Sample Questions - C&G 2382 17th Edition full paper D

1 o/c 1 - A recommendation for the interval to the first periodic inspection shall be made by:

- a the installation electrician.
- b the main contractor.
- c the designer of the installation.**
- d the test and inspection engineer.

2 o/c1 BS 7671 applies to

- a lift installations
- b highway equipment**
- c equipment on board ships
- d electrical equipment of machines.

Answer b

See Part 1: Scope, Regulation 110.1.

3 18 o/c1 BS 7671 identifies that the cross-sectional area of a conductor shall be determined by

- a the admissible maximum temperature**
- b the nominal voltage
- c voltage tolerances
- d the earthing system.

Section 132.6

4 To which one of the following electrical installations does BS 7671 apply?

- a Installations at mines and quarries.
- b Caravans and their sites.**
- c Public transmission systems.
- D Off-shore installations.

5 Oc 2 A corridor containing supporting structures for cables and joints and/or other elements of wiring systems, the dimensions of which allow persons to pass freely throughout the entire length, is known as

- a an access pathway
- b a cable tunnel**
- c an access throughway
- d cable ducting.

6 o/c2 - BS 7671 defines extra-low voltage a.c. as not exceeding:

- a 12V a.c. and 50V d.c.
- b 50V a.c. and 100V d.c.
- c 24V a.c. and 50V d.c.
- d 50V a.c. and 120V d.c.**

7 o/c2 The algebraic sum of the currents in the live conductors of a circuit at a point in the electrical installation is known as the

- a residual current**

- b harmonic current
- c line current
- d neutral current.

8 Which of the following supply characteristics is not listed amongst those determined in regulation 313.1:

- a. Nominal Voltage
- b. Type of system earthing**
- c. Earth Fault loop impedance
- d. Prospective short circuit current

9 o/c 3 - Which of the following would not normally be recognised as being a supply source for safety services:

- a a generator supplying power, via the grid, to a hospital.**
- b storage batteries.
- c primary cells.
- d a separate feeder of the supply network effectively independent of the normal feeder.

10 Which of the following supply characteristics would need to be ascertained for a new domestic installation?

- a Number of points of utilization
- b The supply transformer type
- c The supply cable size
- d The nature of the current and frequency**

Answer d

See Part 3: Assessment of general characteristics, Regulation 313,1.

11 /c3 Which one of the following is not a characteristic of the supply?

- a The nature of the current and frequency
- b The earth fault loop impedance external to the installation
- c Main switch current rating**
- d The nominal voltage

313.1

12 o/c3 BS 7671 requires designers to take into account the frequency and quality of maintenance an installation can reasonably be expected to receive when

- a assessing staff numbers
- b inspecting and testing
- c selecting staff
- d specifying or selecting equipment reliability.**

341.1

13 o/c4 In the event of an earth fault on the HV side of a substation the LV installation may be affected by

- a V
- b U**
- c I
- d I^2t .

Answer b See Part 4: Protection for safety, Regulation 442.2.

14 o/c4 414.3 - Which one of the following supplies is not suitable for an SELV system:

- a safety isolating transformer complying with BS EN 61558.2.6.
- b engine driven generator.
- c battery.
- d transformer with an earthed secondary winding.**

15 o/c 4 - Correct co-ordination between circuit conductors and an overcurrent protection device is achieved when:

- a I_n exceeds the lowest current carrying capacity I_z .
- b I_n is not less than the design current I_b .**
- c I_b is greater than or equal to I_z .
- d I_z is lower than or equal to I_b .

16 o/c4 - Class II equipment is used as a measure of:

- a overvoltages.
- b indirect protection.
- c basic protection.
- d fault protection.**

17 o/c4 - When providing fault current protection for conductors in parallel a fault current protective device shall be provided at:

- a each end of each parallel conductor.
- b at the supply end of each parallel conductor.**
- c at the load end of each parallel conductor.
- d at the midway position of each parallel conductor.

18 o/c 4 - A circuit is protected by a 32A Type circuit breaker. If the value of Z_e is 0.8 ohms what will be the maximum allowable value for $(R_1 + R_2)$:

- a 1.44 ohms.
- b 2.24 ohms.
- c 0.72 ohms.
- d 0.64 ohms.**

19 o/c 4 table 42.1 - The maximum temperature for an accessible part of non-metallic equipment intended to be touched but not held is:

- a 55°C.
- b 65°C.
- c 70°C.
- d 80°C.**

20 o/c4 - Correct co-ordination between conductors and the circuit overcurrent protective device is achieved when:

- a I_n is less than I_b .
- b I_n does not exceed I_z .**
- c $I_b > 1.45 I_z$.
- d I_b exceeds I_z .

21 o/c 4 Protection by automatic disconnection of supply is

- a permitted only if the installation is under effective supervision
- b a method of reducing magnetic effects
- c a combination of basic and fault protection**
- d a combination of thermal and overvoltage protection.

Answer c

See Part 4: Protection for safety, Regulation 411.1.

22 o/c4 Which one of the following is not part of the requirements for fault protection?

- a Protective earthing
- b Protective equipotential bonding
- c Automatic disconnection
- d Protection by insulation of live parts**

411.3

23 o/c4 A SELV source can be derived from which one of the following?

- a Double-wound transformer
- b Autotransformer
- c Safety isolating transformer**
- d Step-up transformer

414.3

24 o/c4 Except where otherwise recommended by the manufacturer, spotlights and projectors rated at over 100 W and up to 300 W shall be installed at a minimum distance from combustible materials of

- a 0.5m
- b 0.6m
- c 0.8m**
- d 1.0m.

422.3.1 422.4.2

25 o/c4 Where particular risks of fire exist, the classification for high density occupation areas with easy conditions of evacuation is

- a BD1
- b BD2
- c BD3**
- d BD4.

422.2

26 o/c4 What is the impulse category of equipment that is part of the fixed electrical installation and other equipment where a high degree of availability is expected?

- a I
- b II
- c III**
- d IV

table 44.4 section 443

27 o/c 5 Which of the following may be used to provide emergency switching for a motor:

- a a plug and socket.
- b a luminaire connection device.

c a device which latches in the OFF position.

d a key switch.

28 /c 5 559.6.1.6 Lighting circuit with E14 lamp holders should be protected by over current protection on greater than.

1 - 6A

2 - 16A

3 - 5 A

4 - 20A

29 o/c 5 - A main switch must be capable of withstanding:

a the prospective short circuit current at that point.

b twice the earth loop fault current.

c twice the prospective short circuit current.

d twice the maximum demand.

30 o/c5 - Which of the following statements is incorrect:

a The use of PEN conductors is permitted within an installation where authorisation has been obtained.

b The use of PEN conductors is permitted within an installation where the supply is obtained from a private generating plant.

c For a fixed installation flexible conductors of csa less than 10mm² may serve as a PEN conductor.

d No means of switching shall be inserted in the outer conductor of a concentric cable.

31 o/c5 Lighting circuits incorporating E40 landholders shall be protected by an overcurrent device with a maximum rating of

a 6A

b 10A

c 16A

d 20A.

Answer c

See Part5: Selection and erection of equipment, Regulation 559.6.1.6.

32 o/c 5 The supply circuit of insulation monitoring devices must be installed:

e. at the furthest point of the installation

f. as close as practical to the origin of the installation 538.1.2

g. in series with the load

h. to provide protection against shock

33 27o/c 5 521.5.2 - In order to withstand electromechanical stresses every conductor shall have:

a adequate strength.

b adequate flexibility.

c an armoured sheath.

d high current carrying capacity.

34 o/c5 514.4.2 - Single core protective conductors coloured green and yellow shall have one of the colours cover the surface at least and at most:

- a 30% and 70%.
- b 20% and 80%.
- c 50% and 50%.
- d 40% and 60%.

35 o/c5 Where underground power and telecommunication cables are in close proximity, they should be separated by a minimum distance of

- a 1000mm
- b 500mm
- c 300mm
- d 100mm.

Answer d

See Part 5: Selection and erection of equipment, Regulation 528.2.

36 o/c5 A functional switch has to be provided for each part of the circuit

- a that may require independent control
- b 1200 mm from the floor
- c for safe isolation
- d for emergency switching purposes.

537.5.1.1

37 o/c5 A multicore 70 °C thermoplastic cable with 2.5 mm² conductors supplies a single-phase load of 20 A at 230 V a.c. over a distance of 22 metres. The voltage drop in the cable will be

- a 6V
- b 6.6V
- c 7.92V
- d 9.2V.

table 4d2b appendix 4

38 oc5 When selecting wiring systems for safety services, the type of table that should be used in fire conditions should comply with

- a BS5467
- b BS6231
- c BS7211
- d BS EN 50362.

560.8.1

39 oc 5 A single-phase load of 13 A is supplied via a 15 A BS 1361 fuse using single-core 70 °C thermoplastic copper cables installed to method 4 (Reference Method B). The rating factor for grouping is 0.7 and for ambient temperature 0.87, and overload protection is to be provided. The minimum acceptable size cable would be

- a 1 mm²
- b 1.5 mm²
- c 2.5 mm²
- d 4 mm².

App 4, 5.1.2

40 oc 5 Under fault conditions, cables are subjected to stress and thermal effects. One item not normally encountered would be

- a **electrochemical effects**
- b electromechanical stresses
- c electromagnetic effects
- d thermal damage.

521.5.1 and 521.5.2

41 oc5 Where safety depends upon the direction of rotation of a motor, provision shall be made to

- a measure the maximum and minimum speed
- b monitor the slip frequency
- c **prevent reverse operation**
- d prevent operation of overload devices.

537.5.4.3

42 o/c 6 - With regard to determining the frequency of periodic inspection and testing of an installation, which of the following does not need to be considered:

- a results of previous reports.
- b the installation use.
- c the frequency of maintenance.
- d **the quality of the test instruments.**

43 o/c 6 - Which of the following statements is incorrect:

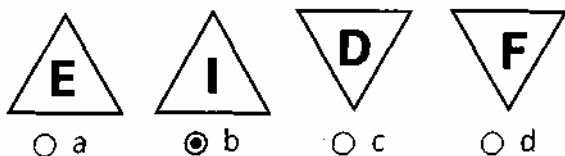
- a periodic inspection is carried out to check for heat arising from an installation defect.
- b a schedule of inspections and test results must accompany a periodic inspection report.
- c **periodic inspection and testing must be carried out by a fully qualified electrician.**
- d where possible, results from previous inspection and testing must be taken into.

44 /c6 - BS 7671 recommends that continuity testers shall be capable of having a no-load voltage between:

- a **4V and 24V d.c. or a.c.**
- b 4V and 24V d.c.
- c 24V and 250V a.c.
- d 24V and 250V d.c. or a.c.

Section 6

45 Which of the following is the designated symbol for a high pressure sodium lamp with an internal starting device?



46 oc6 When carrying out an inspection of a new installation, it is not necessary to verify the

- a **total earth fault loop impedance for each circuit**
- b connection of conductors

- c methods of protection against electric shock
- d presence of diagrams, instructions and similar information.

611.3

47 o/c6 After completion of a periodic inspection, the completed documentation shall be given to the

- a person ordering the inspection
- b local authority
- c insurance company
- d main contractor.

634.1

48 o/c7 13A socket-outlets are to be installed in a location containing a bathtub. The minimum distance they may be located from zone 1 is

- a 1m
- b 2m
- c 3m
- d 4m.

Answer c See Part 7: Special installations or locations, Regulation 701.512.3.

50 o/c7 When the a.c. side of photovoltaic equipment is disconnected, the d.c. side is considered to be

- a de-energised
- b energised
- c a non-conducting location
- d anequipotential zone.

Answer b See Part 7 Special installations or locations, Regulation 712.410.3.

51 o/c 7 The space under a bath, unless accessible only with a tool, is considered to be in zone:

- a 0.
- b 1
- c 2.
- d 3.

52 o/c7 - Which of the following statements regarding exhibitions, shows and stands is incorrect:

- a all sockets not exceeding 32A shall be protected by an RCD.
- b the nominal supply voltage shall not exceed 230V/400V a.c.
- c all electric motors shall have means of isolation.
- d signs shall be constructed of materials having an adequate heat resistance.

53 o/c 7 753.512.2.5 - Heating units installed in a concrete floor shall have a degree of ingress protection not less than:

- a IP7X.
- b IP6X.
- c IPX6.
- d IPX7.

54 o/c7 - Which of the following types of equipment is allowed to be installed within Zone 1 of a swimming pool:

- a switchgear.
- b controlgear.
- c 13A socket-outlets.
- d electrical equipment for fountains protected to at least AG2.**

55 o/c7 In zones 0 and 1 of a fountain, the protective measure of SELV may be used, provided that the source of SELV is

- a inside these zones
- b outside these zones**
- c via an autotransformer
- d centre tapped to earth.

Answer b

See Part 7: Special installations or locations, Regulation 702.410.3.4.2.

56 oc7 In a room containing a bath, electrical equipment installed in zone 0 shall have a degree of protection of at least

- a IPX5
- b IP5X
- c IP7X
- d IPX7.**

701.512.2

57 oc7 Equipment on a pontoon in a marina that is subject to impact to level AG2 should have a mechanical protection code of

- a IPX4
- b IPX8
- c IP55
- d IK08.**

709.512.2.1.4

58 o/c8 A flat twin and earth cable clipped direct to a ceiling joist where the thermal insulation does not exceed 100 mm thickness is installation method

- a 100**
- b 101
- c 102
- d 103.

Answer a See Appendices: Appendix 4, Table 4A2.

59 o/c 8 app7 - In the new colouring system the neutral in a three-phase a.c. system will be:

- a brown
- b red
- c black
- d blue**

60 oc8 A 2.5 mm² thermoplastic insulated and sheathed flat cable with protective conductor is laid in a ceiling beneath thermal insulation 80 mm thick in contact with the ceiling board, as shown in the figure below. What is its installed rating?

- a 17 A
- b 20A
- c 21A**
- d 27 A

app4 table 4A2 method 100 and table 4D5