

Sample Questions - C&G 2382 17th Edition 2382-10 full

1 o/c 1 - BS 7671 relates to permanent and temporary installations for equipment on:

- a marinas.
- b ships.
- c equipment on aircraft.
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2 Which of the following is listed with the exclusions from the scope at the Regulations:

- a. Swimming pools
- b. Saunas
- c. Highway power supplies and street furniture
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3 o/c1 **Which one of the following is not a statutory regulation?**

- a Electricity at Work Regulations 1989 as amended
- b The Supply of Machinery (Safety) Regulations 1992 as amended
- c Requirements for Electrical Installations (BS 7671)
- d Agricultural (Stationary Machinery) Regulations

4 oc1 **The selection of the type of wiring and method of installation is not influenced by**

- a the nature of the location
- b the load current
- c the value of the prospective short-circuit current
- d the nature of the structure supporting the wiring.

5 o/c 2 An area or temporary structure used for display, marketing or sales is defined as

- a a booth
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6 o/c 2 - gM is a category of BS 88 fuses used in:

- a motor circuit applications.
- b general circuit applications.
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- d mixed circuit applications.

7 o/c2 **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.

8 o/c 3 With reference to the nature of the supply, which one of the following can be determined by calculation, enquiry or measurement?

- a The maximum demand of the installation
- b The rating of the circuit protective device
- c The prospective short-circuit current at the origin of the installation
- d The csa of the tails

9 o/c3 - The requirements for overload current protection are met when:

- a $I_b = 15A, I_n = 20A, I_z = 18A.$
- b $I_b = 20A, I_n = 15A, I_z = 20A.$
- c $I_b = 8A, I_n = 15A, I_z = 16A.$
- d $I_b = 2.5A, I_n = 10A, I_z = 9A.$

10 o/c3 Diversity may be taken into account when considering

- a maximum demand of the installation
- b a TN-C-S system
- c the prospective short-circuit fault current
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11 oc3 Every installation must be divided into circuits as necessary in order to

- a reduce the cost of installation
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- a power factor is monitored
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13 o/c4 Which of the following need not be tested under fire conditions to ensure compliance with non-flame propagating requirements?

- a Cables
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- d Trunking systems

14 o/c4 - Protection against overvoltages of atmospheric origin is set out in Section:

- a 422.
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15 o/c 4 - table 41.1 What will be the operating time for a 60A BS 3036 protective device when the value of fault current is 205A:

- a 0.2 seconds.
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16 o/c 4 - The current rating of a BS 3036 fuse should not exceed that of the lowest rated conductor in the circuit multiplied by:

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17 o/c4 - Prevention of a shock by touching a metallic part not normally live but made live under fault conditions is called:

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- a I_n exceeds the lowest current carrying capacity I_z .
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20 o/c4 table 41.1 - All final circuits supplied at 230V and not exceeding 32A shall have a maximum disconnection time not exceeding:

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21 o/c 4 Which is a method of fault protection

- 1 out of reach
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- 3 Obstacles
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22 o/c4 The maximum disconnection time for a circuit supplied by a reduced low voltage system using a 110 V midpoint earthed transformer is

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- a automatic when under the supervision of a competent person
- b manually operated
- c possible only with the use of a key or tool
- d automatic with time delay.

24 o/c4 A 32 A type B circuit-breaker is used to give a disconnection time of 5 seconds in a reduced low voltage system with a nominal voltage to Earth (U_0) of 55 V. What is the maximum value of earth fault loop impedance (Z_s)?

- a 0.44Ω
- b 0.34Ω
- c 0.17Ω
- d 0.09Ω

25 o/c4 Where arcs, sparks or particles at high temperature may be emitted by fixed equipment in normal service, the equipment shall be

- a totally enclosed in arc-resistant material
- b protected by a 30 mA RCD
- c enclosed to at least IP55
- d accessible only by use of a key or tool.

27 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.

28 o/c 5 A factory requires repairs to a machine. The type of switching to allow this work to go ahead would be switching for:

- a mechanical cleaning.
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29 o/c 5 Barriers and enclosures shall, during erection, be protected against ingress to a minimum of:

- a IP1X.
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30 o/c 5 - As a means of isolation in a circuit it is NOT permissible to use a:

- a luminaire connection device.
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- d plug and socket outlet.

31 o/c 5 - Where electrical conduit is required to be distinguished from a pipeline or another service the colour used to identify it would be:

- a red.
- b orange.
- c blue.
- d black.

32 o/c5 **The equipment, design, installation and testing of an electric surface heating system shall be in accordance with**

- a BS EN 60898
- b BS6217
- c BS6351
- d BS EN 60417.

33 o/c 5 - In the expression $s = \sqrt{I^2 t} / k$ the symbol 'k' represents:

- a the fault current.
- b a factor applied to conductor materials.
- c the minimum size of the cpc.
- d the time the fault current exists.

34 o/c5 - Every firepersons switch should be:

- a coloured RED with the OFF position at the top.
- b coloured BLUE with the OFF position at the top.
- c coloured RED with the ON position at the top.
- d coloured BLUE with the OFF position at the top.

35 o/c 5 - The maximum height a firepersons switch may be situated above the ground is:

- a 2.5 m.
- b 2.75 m.
- c 3.25 m.
- d 3.5 m.

36 o/c 5 531.2.2 - The magnetic circuit of the transformer of an RCD shall enclose:

- a all line conductors of the protected circuit.
- b all live and earth conductors of the protected circuit.
- c neutral and earth conductors of the protected circuit.
- d all live conductors of the protected circuit.

37 o/c5 **A permanent label to BS 951 bearing the words 'Safety Electrical Connection-Do Not Remove' is not required at**

- a the connection of every earthing conductor to an earth electrode
- b the point of connection of every bonding conductor to an extraneous-conductive-part
- c the main earth terminal, where separate from the main switchgear
- d a main earthing bar contained within switchgear.

38 o/c5 **If an area within an installation undergoes a 10 °C rise in ambient temperature, the effect on the current-carrying capacity of cables will be to**

- a decrease the value of I_z
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- c leave I_z unchanged
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- a Residual current device to BS 4293
- b Cartridge fuse to BS 1362
- c Cartridge fuse to BS 88-6
- d Rewirable fuse to BS 3036

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- a It is completely embedded in the soil
- b It does not suffer damage in the event of normal movement
- c It complies with the manufacturer's instructions
- d It is protected by a 500 mARCD

43 o/c6 The test voltage and minimum insulation resistance value for a PELV circuit is

- a 250 V, 1 M Ω
- b 500V, 0.5 M Ω
- c 230V, 1 M Ω
- d 250V, 0.5 M Ω .

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- a 1.
- b 2.
- c 3.
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- a 0.25 M Ω .
- b 0.5 M Ω .
- c 1.0 M Ω .
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- a inspection
- b measurement
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- a the name of the client
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- a 0.2 seconds.
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- a IPX3
- b IPX4
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- a covered by an earthed metal grid.
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- a 30 mA.
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- a 500mA
- b 300mA
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- d 30mA.

57 oc7 **Access to the space under a bath is gained by unscrewing the bath panel retaining clips. This space is classified as**

- a zone 0
- b zone 1
- c outside the zones

d zone 2.

58 o/c 8 app7 - The positive and negative conductors in two-wire unearthed d.c. power circuits are identified by the colours:

- a red and black.
- b red and blue.
- c brown and grey.
- d brown and black.

59 oc8 The ambient air temperature rating factor for 90 °C thermosetting cables operating in an ambient air temperature of 60 °C is

- a 0.50
- b 0.56
- c 0.63
- d 0.71.

Table 4B1 app4

60 o/c 8 Multicore cables on a perforated tray are covered by reference method:

- a A.
- b C.
- c E.
- d G.

answers below

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Table 4B1

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- c Cartridge fuse to BS 88-6
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part 2 def

42 oc5 Which of the following is not a BS 7671 requirement when installing a heating cable laid directly in soil?

- a It is completely embedded in the soil
- b It does not suffer damage in the event of normal movement
- c It complies with the manufacturer's instructions
- d It is protected by a 500 mARCD

554.4.3

43 o/c6 The test voltage and minimum insulation resistance value for a PELV circuit is

- a 250 V, 1 Q
- b 500V, 0.5 MQ
- c 230V, 1 MQ
- d 250V, 0.5 MQ.

Answer d > See Part 6: Inspection and testing, Regulation 612.3.2, Table 61.

44 o/c 6 - Methods of inspection and testing are described in Guidance Note:

- a 1.
- b 2.

c 3.

d 4.

45 o/c 6 - The minimum allowed test value of insulation resistance for a circuit supplied at 230 V is:

a 0.25 M Ω .

b 0.5 M Ω .

c 1.0 M Ω .

d 2.0 M Ω .

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a inspection

b measurement

c calculation

d enquiry.

Answer b

See Part 6: Inspection and testing, Regulations 612.4.1 and 612.4.2.

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c the length of cable runs in the installation

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a changes in ownership

b records of repair over the last five years

c defects in the existing installation

d voltage drop in the longest circuit.

633.2

48 o/c 7 - On a construction site a final circuit exceeding 32A and supplied by a TT system shall have a disconnection time not exceeding:

a 0.2 seconds.

b 0.3 seconds.

c 0.8 seconds.

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- b IPX4**
- c IPX5
- d IPX6.

Answer b See Part 7: Special installations or locations, Regulation 709.512.2.1.1.

50 o/c 7 Where an electric heating element is embedded in the floor of a bathroom it should be:

- a covered by an earthed metal grid.**
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- b close to the entry of extraneous-conductive-parts to the room**
- c to non-metallic water service pipes
- d to ceramic bath or shower basins.

Answer b *"

See Part 7: Special installations or locations, Regulation 701.415.2.

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- a Mobile generating sets
- b Mobile medical services unit**
- c Motor caravan
- d Mobile machinery

Answer b

See Part7: Special installations or locations, Regulation 717.1.

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- a 500mA
- b 300mA**
- c 100mA
- d 30mA.

705.411.1

57 oc7 Access to the space under a bath is gained by unscrewing the bath panel retaining clips. This space is classified as

- a zone 0
- b zone 1
- c outside the zones**
- d zone 2.

701.32.3

58 o/c 8 app7 - The positive and negative conductors in two-wire unearthed d.c. power circuits are identified by the colours:

- a red and black.
- b red and blue.
- c brown and grey.**
- d brown and black.

59 oc8 The ambient air temperature rating factor for 90 °C thermosetting cables operating in an ambient air temperature of 60 °C is

- a 0.50
- b 0.56
- c 0.63
- d 0.71.**

Table 4B1 app4

60 o/c 8 Multicore cables on a perforated tray are covered by reference method:

- a A.
- b C.
- c E.**
- d G.

