

# C&G 2382 17<sup>th</sup> Edition IEE Regulations

## 25 Questions & Answers

Some answers are included as bold – with reference to where they can be found in BS7671:2008. Those that are not are left to be achieved mathematically.

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1.

BS7671 states that installation design must take into account

- a. current copper prices
- b. the effects of climate change
- c. a comparison of renewable energy sources
- d. anticipated electromagnetic emissions**

**Reg. 332.2**

2.

Adequate protection against the spread of liquid from a static transformer must be taken if the flammable liquid is

- a. Is in access of 25 litres
- b. Will not produce material of combustion
- c. Is less than 25 litres**
- d. Is less than or in excess of 25 litres

**Reg 421.5**

3.

Thermoplastic PVC insulated and sheathed cables with protective cover when installed in a wall in a dwelling of less than 50mm and enclosed in an earthed metallic conduit may run

- a. vertically
- b. horizontally
- c. in any direction
- d. in prescribed zones only**

**Reg 522.6.6**

4.

The maximum time(t) in seconds in which a given fault current can raise the conductors to the limiting temperature can be found from the formula given that:

- A.  $k=115$
- B.  $S=95$
- C.  $I=16\ 000$
- D.  $t=\text{time in seconds}$

5.

The single phase voltage drop for a 25 mtr. length of 10mm<sup>2</sup> two- core mineral insulated copper cable (refer to TABLE 4G1B) with an overall covering of PVC carrying a current of 40 amp is

- a. 4.0 V
- b. 4.1V
- c. 4.2V
- d. 6.0 V

6.

A cooker control unit fitted with a socket outlet is fed from a distribution board by a 32 amp BS88-2-2. What is the maximum Zs permitted to give the correct disconnection time:

- a. **1.04**
- b. 1.84
- c. 1.12
- d. 1.44

**TABLE 41.3**

7.

According to BS7671:2008 a high-rise building such as an hotel or hospital is categorised as code:

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

**REG 422.2**

8.

Except for equipment for which an appropriate product standard specifies requirements, a luminaire must be kept at an adequate distance from combustible material. What is the minimum distance for a 300w lamp:

- a. 500mm
- b. **800mm**
- c. 1.0m
- d. 1.5m

**REG 422.3.1**

9.

Under normal conditions what temperature is recommended not to exceed for electrical equipment such as resistors and heaters;

- a. 115°C
- b. 55°C
- c. **90°C**

**REG 422.3.2**

d. 65°C

10.

Luminaires marked with



in accordance with BSEN 60598-1 are suitable for mounting on a

what?

a. not a flammable surface

**b. a normally flammable surface**

**REG422.4.2**

c. in a cage

d. on a wall

11.

The temperature limit under normal load conditions for an accessible part of a fixed hand held part of electrical equipment within arms reach shall not exceed:

**a. 55°C**

**Table 42.1**

b. 65°C

c. 70°C

d. 80°C

12.

Which reason below is not under omission of devices for protection against overload for safety:

a. a circuit supplying a fire extinguisher device

b. the exciter circuit of a rotating machine

c. the secondary side of a current transformer

**e. IT system lightning conductor**

**REG 433.3.3**

13.

What is the minimum required impulse voltage for 230V portable household appliances or tools

a. 12

b. 8

**c. 2.5**

**Table 44.3**

d. 4

14.

Where an unexpected disconnection of a circuit could cause danger the omission of protective devices against overload is

a. permitted

b. not permitted

**c. compulsory**

**Reg 433.3.3**

d. not authorised

15.

Omission of Identification by colour or marking is not required for which of the following?

a. Two Wire unearthed DC power circuit

b. Control Circuit, ELV and other applications

c. Bare conductors where permanent identification is not practicable REG514.6.1

d. Protective conductors

16.

The requirement that the metalwork of gas, water, or other services, is not to be used as a protective earth electrode does not preclude

- a. **it's temporary use as an earth electrode** **Reg 542.2.4**
- b. the permanent isolation of such pipe work
- c. it's use as an auxiliary earth electrode
- d. the bonding of such metal work as required

17.

Providing necessary precautions are taken, a metallic pipe may be used as an earthed electrode if it

- a. carries a flammable gas
- b. it is owned by a water utility company
- c. **is a private water supply pipe** **Reg. 542.2.4**
- d. is insulated

18.

Heating cables laid directly into soil, roads or building structures should be installed so that it

- a. Completely enclosed in an insulated material
- b. Fed only from extra low voltage sockets
- c. Completely embedded in the substance it was intended to heat
- d. **Completely withdraw able from the substance to allow repairs to be carried out** **Reg 554.4.3**

19.

According to BS7671:2008 a protective conductor may consist of one of the following:

- a. Constructional parts subject to stress
- b. Flexible pipe
- c. **A metal covering such as screen, armour or sheath of a cable** **REG543.2.2**
- d. A gas pipe

20.

Where an earthing arrangement has a PEN conductor is in use in a caravan park, on earth electrode must be provided for the protective conductor for each

- a. underground cable
- b. **socket outlet circuit** **Reg 708.553.1.14**
- c. lighting circuit
- d. water provider

21.

The need for information such as diagrams, charts, or tables to be available prior to the inspection and testing of an installation does not need to include details relating to

- a. the type and composition of each circuit
- b. the identification of every protective device

**c. the form of contract details**

**Part 612**

- d. any circuit vulnerable to a typical test

22.

The propose of the integral button on a RCD is to check

- a. Continuity of the earthing conductor
- b. Earth fault loop impedence
- c. Earth electrode resistance
- d. Mechanical parts of the device

23.

Every installation during erection and completion and before put into service shall be:

**a. Inspected, tested and verified to the IEE Regulations**

**REG610**

- b. Tested for insulation resistance
- c. Tested for continuity of protective conductors
- d. Tested for continuity of ring final conductors

24.

According to BS7671:2008 the minimum values of insulation resistance for a 230V system is:

- a.  $\geq 0.5 \text{ M}\Omega$
- b.  $\geq 0.25 \text{ M}\Omega$
- c.  $\geq 1.00 \text{ M}\Omega$**
- d.  $< 1.00 \text{ M}\Omega$

**TABLE 61**

25.

if any test indicates a failure to comply, the procedure to adopt, after the fault has been rectified is:

- a. That test and those that follow to be repeated
- b. The whole sequence of tests shall be tested
- c. Only the test that indicated the fault should be tested
- d. The test that indicated the fault and those tests preceding it which may have been influenced by the fault indicated, shall be repeated.**

**REG 612.1**