

C&G 2382. 17th Edition (BS7671:2008) Examination

(You should allow 1 hour 10 minutes for this 40 question Mock-exam)

1. The Regulations (BS7671:2008) do NOT apply to

- a. Residential Premises
- b. Industrial Premises
- c. Lightning Protection
- d. Street Furniture

2. The Regulations do apply to

- a. Offshore Installations
- b. Mines & Quarries
- c. Lift Installations
- d. Low Voltage Generating sets

3. Which of the Following documents are deemed Non- Statutory

- a. BS7671:2008
- b. EAWR 1989
- c. HASAW 1974
- d. ESQCR 2002

4. Parts 3 – 7 of BS7671:2008 are explained in rudimentary terms within

- a. Chapter 13
- b. Chapter 12
- c. Part 3
- d. Appendix 5

5. Basic protection is defined as

- a. Protection against shock under fault conditions
- b. Protection against shock under fault free conditions
- c. Protection against contact with live parts under fault free conditions
- d. Protection against faults under sound electrical conditions

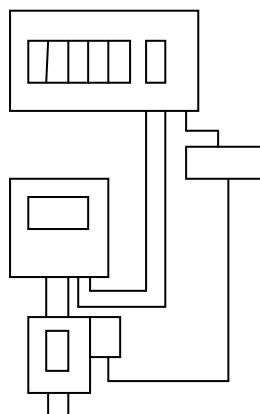
6. Equipment in which protection against electric shock does not rely on basic insulation only is described as

- a. Double Insulated Equipment
- b. Class I Equipment
- c. Class II Equipment
- d. Class III Equipment

7. The Earthing System illustrated in Figure 1 below would be identified as a

- a. TN-S
- b. TT
- c. TN-C-S
- d. IT

Figure 1



8. A Voltage of 250Volts AC (rms) would be defined as

- a. Band I
- b. Extra Low Voltage
- c. High Voltage
- d. Low Voltage

9. In determining Maximum Demand, 'Diversity' may be applied, which is

- a. Taking the sum of all the protective devices from any CCU
- b. Taking into account that not all loads will be switched on at the same time
- c. Taking into account that all loads doubtless will be engaged at the same time
- d. Ensuring that an economical and reliable design preference is utilised.

10. Every Installation is divided into circuits in order to

- a. Ensure simplicity of isolation
- b. Comply with European Standards
- c. Avoid hazards and prevent inconvenience in the event of a fault
- d. Allow individual energising of circuits which are not isolated

11. A building made entirely out of wood would be categorised for External Influences as

- a. CA2
- b. CA1
- c. CB3
- d. CB4

12. The Maximum Disconnection time for an a.c. TN circuit rated at 230V is

- a. 0.04 seconds
- b. 0.1 seconds
- c. 0.4 seconds
- d. 0.2 seconds

13. The Maximum Zs for a BSEN60898 Type C circuit breaker rated at 16Amps with a 0.4second disconnection time is

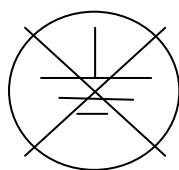
- a. 2.87Ω
- b. 1.44Ω
- c. 0.72Ω
- d. 1.15Ω

14. For a TT System the Maximum earth fault loop impedance for a 100mA BSEN61008-1 RCD in a 230Volt circuit is

- a. 500Ω
- b. 460Ω
- c. 167Ω
- d. 100Ω

15. Where, on electrical equipment, must the symbol in figure 2 be present

Figure 2



- a. Where basic and supplementary earthing is present on an appliance
- b. Where supplementary earth-bonding to an appliance is not present
- c. Where the protective measure of double or reinforced insulation is used.
- d. Where Class I equipment is served from a sub-main CCU

16. Where Basic Protection is employed in the form of a barrier or enclosure, any horizontal top surface must meet a protection level of at least

- a. IPDXX
- b. IP2X
- c. IPXX3
- d. IP4X

17. Except if made from adequate material, a luminaire rated at 200Watts should be located away from combustible material by a distance of at least

- a. 0.3m
- b. 0.5m
- c. 0.8m
- d. 1.0m

18. To avoid burning, a non-metallic part intended to be touched but not hand held cannot exceed

- a. 80°C
- b. 85°C
- c. 90°C
- d. 95°C

19. In relation to Voltage Disturbances, the resistance of the earthing arrangement of the Transformersub-station is referred to, within the area of symbols, as

- a. RA
- b. RB
- c. RD
- d. RE

20. Every core of a cable shall be identifiable at its terminations and preferably throughout its length by

- a. colour code only
- b. letter code only
- c. number code only
- d. one or more of the above

21. An appropriate colour for a PEN conductor should be:

- a. blue through its length with green markings at the terminations
- b. green & yellow through its length with blue markings at the terminals
- c. green & yellow through its length with brown markings at its terminals.
- d. Green through its length with yellow markings at the terminals

22. A permanent label with the words 'Safety Electrical Connection – Do Not Remove', complies with:

- a. BS728
- b. BS1363
- c. BS951
- d. BS423

23. A cable buried underground but not in conduit or ducting for mechanical protection must incorporate

- a. An earthed armour or metal sheath or both
- b. A surface covering of 50mm thickness paving stones
- c. A clear surface warning notice informing of its location
- d. A PVC outer sheath

24. The de-rating factor for a cable surrounded by 50mm of thermal insulation is

- a. 0.88
- b. 0.78
- c. 0.63
- d. 0.51

25. In an L.V installation supplied directly from a public L.V distribution system the maximum volt drop on a lighting circuit between the origin and any load point should be no greater than

- a. 6% U_0
- b. 5% U_0
- c. 4% U_0
- d. 3% U_0

26. Every electrical connection shall be accessible for inspection, testing and maintenance purposes except for which of the following

- a. A connection made in a junction box beneath floorboards
- b. A connection made within a motor control unit
- c. A connection designed to withstand fault current
- d. A compound filled or encapsulated joint

27. The rated RCD operating current of such a device installed as a protection against risk of fire in a TT system shall have a value of

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

28. The maximum prospective short circuit or earth fault current in a circuit should not exceed

- a. The operating current of circuit switching devices
- b. The rated breaking capacity of any associated protective device
- c. The design current of the circuit
- d. The rated operating current of any RCD in circuit

29. Which of the following switching devices may be satisfactorily utilised for the purposes of isolation?

- a. BSEN60669-2-4
- b. BSEN60669-2-3
- c. BSEN60669-2-1
- d. BSEN60669-1

30. When using bare conductors in extra low voltage lighting installations supplied from a safety isolating transformer the minimum permissible cross sectional area of conductors must be

- a. 1.5mm²
- b. 2.5mm²
- c. 4mm²
- d. 6mm²

31. Suspension devices for ELV luminaries must in any case be capable of supporting at least

- a. 5 Kg
- b. 7.5 Kg
- c. 10 Kg
- d. 20 Kg

32. An automatic electrical safety service supply classed as medium break must, in the event of losing the main supply, instate the safety service supply in a time period of

- a. within 0.5 seconds
- b. within 5 seconds
- c. within 15 seconds
- d. greater than 15 seconds

33. The minimum value of Insulation Resistance for a 230Volt system must be

- a. >0.25 MΩ
- b. >0.5 MΩ
- c. >1.0 MΩ
- d. >2.0 MΩ

34. Correct Polarity must ensure that every ES lamp-holder have their outer or screwed contacts connected to the neutral conductor, except for

- a. E14 & E27 Lampholders
- b. E14 & BSEN60895 Lampholders
- c. E27 & BSEN61009 Lampholders
- d. E11 & E24 Lampholders

35. To comply with PART 6 of BS7671, Periodic Inspection & Testing shall be specifically undertaken by

- a. A formally qualified Test Engineer
- b. A person deemed as the 'Duty Holder' of the company carrying out the work
- c. A expressly skilled person
- d. A competent person

36. Zone 2 of a bathroom is restricted to the highest water outlet or the horizontal plane lying above finished floor level by

- a. 3.00m
- b. 2.50m
- c. 2.25m
- d. 2.00m

37. In Zone 3 of a Sauna equipment must be able to withstand a minimum temperature of

- a. 100°C
- b. 120°C
- c. 125°C
- d. 170°C

38. In marinas, equipment installed above a jetty or wharf, which is likely to encounter water jets, shall be selected to comply with external influence levels of

- a. (AD4): IPX4
- b. (AD5): IPX5
- c. (AD6): IPX6
- d. (AE6): IPX5

39. For a BS88-3 (fuse system c) Fuse rated at 20A to obtain a 0.4sec disconnection time, it would require a minimum fault current of

- a. 95A
- b. 113A
- c. 240A
- d. 135A

40. A 30Amp Semi Enclosed BS3036 Fuse receiving a fault current of 300A would disconnect in

- a. 5.0sec
- b. 1.0sec
- c. 0.4sec
- d. 0.2sec

Answers:

1. C Part 1 -110.2 Page 15
2. D Part 1 -110.1.1 Page 14
3. A Part 1 -114.1 Page 15
4. A Part 1 -120.3 Page 16
5. B Part 2 – DEFINITIONS p.23
6. B Part 2 – DEFINITIONS p.25
7. C Part 3 – 312.2.1.1 p.44.
8. D Part 2 – DEFINITIONS p.36
9. B Part 3 - 311.1 Page 41
10. C Part 3 - 314.1 Page 46
11. A Appendix 5 Page 377
12. C Part 4 - Table 41.1 Page 53
13. B Part 4 - Max Zs Tables - Part 4 p.56
14. A Part 4 - Table 41.5 Page 57
15. C Part 4 - 412.2.1 Page 62
16. D Part 4 - 416.2.2 Page 67
17. C Part 4 - 422.3.1 Page 74
18. A Part 4 - Table 42.1 Page 77
19. D Part 4 - 442.1.2 Page 89
20. D Part 5 514.3.1 p.115
21. B Part 5 514.4.3 p.115
22. C Part 5 514.13.1 p.118
23. A Part 5 522.8.10 p.126
24. A Part 5 – Table 52.2 Page 129
25. D Appx 4 p.314 (see 525.101 p.130)
26. D Part 5 526.3 p.131
27. C Part 5 532.1 p.139
28. B Part 5 536.1 p.147
29. A Part 5 Table 53.4 p.149
30. C Part 5 559.11.5.3 p.181
31. A Part 5 559.11.6 p.181
32. C Part 5 560.4.1 p.184
33. C Part 6 - Table 61 Page 191
34. A Part 6 - 612.6 Page 192
35. D Part 6 - 621.5 Page 195
36. C Part 7 - Page 198
37. C Part 7 - 703.512.2. Page 213
38. B Part 7 - 709.512.2.1.1 Page 226
39. B Appendix 3 - Time/Current Graph - Page 296
40. D Appendix 3 - Time/Current Graph -Page 297

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