

2382-15 TEST QUESTIONS – PAPER 1

1. BS7671 applies to:
 - a) aircraft
 - b) photovoltaic supplies
 - c) distributors equipment
 - d) electrical equipment of machines

2. BS 7671 does not apply to:
 - a) railway traction equipment
 - b) photovoltaic systems
 - c) marinas
 - d) fairgrounds

3. Protection against electric shock under single fault conditions is:
 - a) basic protection
 - b) fault protection
 - c) additional protection
 - d) supplementary protection

4. Which of the following would not be defined as a live part?
 - a) neutral conductor
 - b) line conductor
 - c) neutral bar
 - d) PEN conductor

5. Every installation should be divided into circuits as necessary to avoid:
 - a) fuse discrimination problems
 - b) hazards to minimise inconvenience in the event of a fault
 - c) unauthorised interference with safety supplies
 - d) wiring impracticability

6. The protective measure 'automatic disconnection of supply':
 - a) is only permitted if the installation is under effective supervision
 - b) is a method of reducing thermal effects
 - c) is a combination of basic and fault protection
 - d) is a combination of under and over voltage protection

7. The maximum disconnection time for a 16A final circuit having U_0 230V ac on a TN system is:
 - a) 5 s
 - b) 0.2 s
 - c) 0.4 s
 - d) 0.1 s

8. Where there is a danger of fire due to the nature of stored materials a motor with star – delta starting must be protected against excessive temperature:
 - a) in star
 - b) in delta

- c) in both star and delta
- d) only if 10 kw or more

9. In the event of failure of the provision for basic protection, additional protection may be provided by:

- a) supplementary bonding
- b) use of a time delay 100mA RCD
- c) use of a RCD with $I_{\Delta n}$ not exceeding 30mA
- d) electrical separation

10. Which of the following is not a method of fault protection:

- a) placing out of reach
- b) use of class II equipment
- c) earthing and bonding
- d) electrical separation

11. For a TT system where disconnection in the case of earth fault is achieved by RCD, the maximum disconnection time for a general socket in a domestic kitchen is:

- a) 0.1 s
- b) 0.2 s
- c) 0.4 s
- d) 5 s

12. In the event of an earth fault on the HV side of a substation, the LV installation may be affected by:

- a) power frequency fault currents
- b) power frequency stress voltages
- c) power current stresses
- d) power plus current stresses

13. Connection of extraneous conductive parts to the MET of an installation forms part of the requirements for:

- a) SELV
- b) enclosures
- c) basic protection
- d) fault protection

14. Thermoplastic PVC T&E buried less than 50mm must be protected by:

- a) MCB
- b) cpc the same size as the P & N
- c) 30mA RCD
- d) disconnection time of 0.4 s

15. RCD installed for protection against fire must have a rating not exceeding:

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

16. Which of the following may not be used as an earth electrode:

- a) underground structural steel work
- b) welded metal reinforcement
- c) water utility supply pipes
- d) earth plates

17. Socket outlets with a rating not exceeding 20A for general use by ordinary persons should be:

- a) connected as a ring circuit
- b) connected as a radial circuit
- c) protected by a 30mA RCD
- d) protected by a 20A CB

18. Lighting installations in bus shelters must be protected by:

- a) CCTV
- b) double pole circuit breakers
- c) graffiti proof covers
- d) 30mA RCD

19. Busbar trunking systems must comply with:

- a) BSEN 60439-2
- b) BSEN 61534-1
- c) BSEN 60898-7
- d) BSEN 60309-2

20. The minimum acceptable value for insulation resistance in 230v supply is:

- a) 0.25 MF
- b) 0.5 MF
- c) 1.0 MF
- d) 5.0 MF

21. Insulation resistance measured between line and neutral of a 230v domestic installation should not be less than:

- a) 0.25 MF
- b) 0.5 MF
- c) 0.75 MF
- d) 1.0 MF

22. A PV generator and array junction box must have a warning label indicating that:

- a) high voltage is present
- b) parts inside may still be live following isolation
- c) PV array must be cleaned regularly
- d) PV arrays are fragile

23. All circuits in a bathroom must have:

- a) protection by a 30mA RCD
- b) disconnection time of 5 s
- c) supplementary bonding

d) protected by a CB

24. Electrical cables in Zone 1 of a fountain shall be protected against mechanical impact to:

- a) AG1
- b) AG2
- c) AH2
- d) AH3

25. On agricultural premises an RCD may be used for protection against fire providing that the rating of the RCD does not exceed:

- a) 30 mA
- b) 150 mA
- c) 300 mA
- d) 500 mA

26. Any luminaries of lighting chains used at a circus must be firmly fixed when at a height less than:

- a) 1 m
- b) 1.5 m
- c) 2 m
- d) 2.5 m

27. In a bathroom the protective measure of obstacles is:

- a) allowed in all zones
- b) allowed in zones 1 & 2
- c) allowed in zone 2 only
- d) not allowed

28. Where a TN system of earthing is used in a marina the final circuits for the supply of a pleasure craft must not include:

- a) any earth conductors
- b) a PEN conductor
- c) any RCD's
- d) protective devices

29. For a 100 mA non-delay RCD to BSEN 61008 the residual test currents and maximum permitted disconnection times are:

- a) 100 mA 300ms 500 mA 40ms
- b) 100 mA 130ms 1500 mA 150ms
- c) 100 mA 0ms 100 mA 40ms
- d) 100 mA 400ms 500 mA 50ms

30. Flat T & E cable clipped direct to a ceiling joist where thermal insulation exceeds 100mm thickness is installation method:

- a) 101
- b) 100
- c) 3
- d) 20

Answers:

- 1 B 110.1 (xii)
- 2 A 110.2 (ii)
- 3 B Definitions
- 4 D Definitions
- 5 B 314.1 (i)
- 6 C 411.1 (i) (ii)
- 7 C Table 41
- 8 C 422.3.7
- 9 C 415.1.1
- 10 A 417.1
- 11 B Table 41.1
- 12 B 422.2 (ii)
- 13 D 411.3.1.2
- 14 C 522.6.7
- 15 C 532.1 (i)
- 16 C 542.2.1
- 17 C 411.3.3 (i) & 415.1
- 18 D 559.10.3.2 & 415.1
- 19 A 521.4
- 20 C Table 61
- 21 D Table 61
- 22 B 712.537.2.2.5.1
- 23 A 701.411.3.3
- 24 B 702.55.3
- 25 C 705.411.1 (iii)
- 26 D 740.55.1.1
- 27 D 701.410.3.5
- 28 B 709.411.4
- 29 A Table 3A Page 243
- 30 A Table 4A2 Page 265