

Unit 022/602: Understand the requirements of electrical installations BS 7671:2018+A2:2022

Practice questions (Learner)

1. The selection of protective equipment would not include consideration of the effects of:
 - a) overcurrent
 - b) equipment costs
 - c) earth fault current
 - d) undervoltage.
2. The magnitude of current to be carried by a circuit in normal service is:
 - a) overload current
 - b) short circuit current
 - c) protective conductor current
 - d) design current.
3. Which of the following is **not** recognised as a source for a safety service?
 - a) storage batteries
 - b) the normal DNO supply
 - c) primary cells
 - d) independent generator sets.
4. What is the maximum rating of an RCD providing additional protection to a BS 1363 socket-outlet used by ordinary persons?
 - a) 10mA
 - b) 30mA
 - c) 100mA
 - d) 300mA.
5. A 16A BS EN 60898 Type C circuit breaker used to protect a three-phase reduced low voltage circuit is subject to a maximum earth fault loop impedance value of:
 - a) 0.65Ω
 - b) 0.75Ω
 - c) 0.33Ω
 - d) 0.38Ω .

6. In order to protect against burns, a non-metallic electrical part intended to be touched (but not handheld) should not attain a surface temperature in excess of:
- 65°C
 - 70°C
 - 80°C
 - 90°C.
7. What is the maximum time a 16.0 mm² conductor having a 'k' factor of 115 can withstand a fault current of 13 kA?
- 0.01 s
 - 0.02 s
 - 0.14 s
 - 2.26 s.
8. The notice relating to an RCD requires the device to be operated via its test button:
- monthly
 - quarterly
 - half-yearly
 - annually.
9. The rating factor for a cable surrounded by thermal insulation for 200 mm is:
- 0.88
 - 0.78
 - 0.63
 - 0.51.
10. Where a Type 1 SPD is installed near the origin of an installation and is not protected by an OCPD, the minimum cross-sectional area of an SPD connecting conductor is:
- 4.0 mm²
 - 6.0 mm²
 - 10.0 mm²
 - 16.0 mm².
11. Control equipment incorporating protection against overload shall be provided for every motor with a rating exceeding:
- 100 W
 - 370 W
 - 37 kW
 - 10 kW.

12. The minimum value of insulation resistance and the applied test voltage for a 400V circuit is:
- a) 0.5 M Ω at 500 V AC
 - b) 1.0 M Ω at 500 V DC
 - c) 0.5M Ω at 250V DC
 - d) 1.0 M Ω at 1000 V AC.
13. A 13 A socket outlet may be installed in a bathroom if it is installed beyond the boundary of zone 1 by a horizontal distance of:
- a) 1.25 m
 - b) 2.00 m
 - c) 2.50 m
 - d) 3.00 m.
14. Cables buried in arable land on a farm should be at a minimum depth of:
- a) 0.5 m
 - b) 0.6 m
 - c) 1.0 m
 - d) 6.0 m.
15. Electrical equipment installed outside within a caravan park shall have a mechanical impact code of at least:
- a) IK01
 - b) IK03
 - c) IK06
 - d) IK08.
16. Socket-outlets used on Group 2 medical IT systems should be identified with the colour:
- a) red
 - b) yellow
 - c) blue
 - d) grey.
17. A periodic inspection for a frequently used caravan should be carried out:
- a) monthly
 - b) quarterly
 - c) annually
 - d) three-yearly.

- 18.** To which standard are flexible heating elements required to comply?
- a) BS EN 14505:2005
 - b) BS EN 50525-2-11
 - c) BS EN 60335-2-96
 - d) BS EN 60073:2002.
- 19.** A 16 A BS 88-3 fuse carrying a fault current of 76 A will disconnect within a maximum of:
- a) 1 s
 - b) 2 s
 - c) 3 s
 - d) 4 s.
- 20.** The maximum value of earth fault loop impedance for a 32 A BS EN 60898 type B circuit breaker, for comparison with measured test readings, is:
- a) 1.37 Ω
 - b) 1.10 Ω
 - c) 1.02 Ω
 - d) 0.72 Ω .