

Electrical Switchgear Worker's Licence (ESWL) Theory Assessment Marking Guide Sample Paper 2025

AS/NZS 3439.1 Low-voltage switchgear and controlgear, Part 1: Type-tested and partially type-tested assemblies

Question 1

One of the following: 'Mechanical' or 'Electrical' or 'Thermal' (2 marks)

Clause 7.4.2.1 (2 marks)

Question 2

8 kV (2 marks) Deduct 1 mark for no or incorrect units given.

Table 15 (2 marks)

AS/NZS 61439.2 Low-voltage switchgear and controlgear assemblies. Power switchgear and controlgear assemblies

Question 3

X8 circuits assumed loading factor 0.7 Add all currents = 378×0.7
= 264.6A (2 marks)

Table 101 (2 marks)

AS/NZS 61439.1 Low-voltage switchgear and controlgear assemblies. General rules

Question 4

200mm² (2 marks)

Table 5 (2 marks)

Question 5

temporary overvoltage (2 marks)

Clause 3.6.4 (2 marks)

Question 6

45Hz AND 65Hz (2 marks)

Clause 10.9.2.2 (2 marks)

Question 7

protective coatings (2 marks)

Clause 8.1.2 (2 marks)

Question 8

0.1Ω (2 marks)

Clause 10.5.2 (2 marks)

Question 9

2830V (2 marks)

Table 8 (2 marks)

Question 10

500 V (2 marks)

Clause K.2.3.1 (2 marks)

Question 11

the prospective short circuit current of the supply system OR prospective short circuit current (2 marks)

Clause 5.3.3 (2 marks)

Question 12

30° (2 marks)

Table 6 (2 marks)

Question 13

box-type assembly OR box-type (2 marks)

Clause 3.3.7 (2 marks)

Question 14

No (2 marks)

Clause 8.1.3.2.3 (2 marks)

AS/NZS 3000:2018 Electrical installations – Wiring Rules

Question 15

125% (2 marks)

Clause 7.2.5.6.2 (b) (2 marks)

Question 16

leave the vicinity of a switchboard under emergency conditions (2 marks)

Clause 2.10.2.2.1 (c) (2 marks)

Question 17

No (2 marks)

Clause 2.10.3.4.2 (b) (2 marks)

Question 18

the position of the main switch controlling the alternative supply (2 marks)

Clause 2.3.3.5 (c) (2 marks)

Question 19

Yes (2 marks)

Clause 2.6.3.2.5 (b) (2 marks)

Question 20

Active and neutral connection for each circuit. (2 marks)

Clause 2.10.5.4 (2 marks)

Question 21

No (2 marks)

Clause 3.9 (2 marks)

Question 22

Loss of supply to other safety services (2 marks)

Clause 7.2.4.1 (i) (2 marks)

AS/NZS 4836:2023 Safe working on or near low-voltage and extra-low voltage electrical installations and equipment

Question 23

'Electrical equipment to be worked on' OR 'Points of isolation' OR 'All energy sources' (2 marks)

Clause 3.1.2 (a) OR (b) OR (c) (2 marks)

Question 24

All stages (2 marks)

Clause 2.6 (2 marks)

Question 25

No (2 marks)

Clause 3.1.4.3.1 (2 marks)

Question 26

3 m (2 marks)

Clause 2.3.7 (2 marks)

Question 27

The general mass of earth (2 marks)

Clause 3.1.6 (2 marks)

Prospective Short Circuit Calculations

Question 28

Transformer impedance

230/24500 (2 marks)

0.00939Ω (1 mark) Answer must be to **5 decimal places**.

Main switchboard prospective fault

230/ (0.00939 +0.0019) (2 marks)

20,372A (1 mark)

Distribution board prospective fault

230/ (0.00939 + 0.0019 + 0.0116) (2 marks)

10,048A (1 mark)

Deduct 1 mark for no or incorrect units in final answer.

SAMPLE