G063A SECTION 5 WORKSHEET

RCD Earth Leakage Protection

1. **What is the main type of protection provided by a 'residual current device' or RCD?**

   It automatically disconnects the supply when a person comes in contact with a live component while in contact with earth.

2. **To what value of tripping current are small domestic RCDs commonly set?**

   10 - 30mA

3. **What is another name for a current operated 'core balance earth leakage circuit breaker'?**

   Safety Switches

4. **At what earth leakage current is a Type I RCD designed to trip?**

   Not exceeding 10mA

5. **At what earth leakage current is a Type II RCD designed to trip?**

   Exceeding 10mA but not exceeding 30 mA

6. **Does an RCD provide protection against electric shock if a person comes in contact with the active and neutral at the same time?**

   No

7. **All lighting and power final subcircuits in a domestic installation must be protected by an RCD. What is the exception?**

   Clause 2.6.3.1, Page 99, Exception 1 – 3 Dialysis machines, certain alteration & additions, fixed or stationery electric cooking appliance

8. **What is the minimum number of RCDs which must be installed in a domestic or residential type electrical installation in W.A.?**

   2

9. Is it compulsory for socket-outlets in residential installations to be protected with residual current devices? Give the AS/NZS 3000 Clause number.

Yes! in most circumstances Clause 2.6.3.2.1, Page 101, Exception 1 - 7

10. Draw the consumer's switchboard layout for a single phase domestic installation consisting of the following circuits, with RCD protection as required by AS/NZS 3000.

2 x Lighting circuits - use 10 amp circuit breakers

1 x Power circuit for a 4 kW 240 V fixed cooking appliance - use Table C4 (Pg 373) to determine circuit breaker size

2 x Power circuits for 10 A 240 volt outlets - use 16 amp circuit breakers

1 x 3.6 kW storage hot water system - calculate circuit breaker size.