

## P2 Electricity Quiz

1. What is the frequency of the mains electricity supply in the UK?
2. Give an advantage of using a RCCB to switch off a circuit rather than a fuse.
3. How does an increase in temperature affect a thermistor?
4. What is the difference between ac and dc current?
5. How do a fuse and the earth wire protect against an electric shock in a faulty metal kettle where the metal casing becomes live?
6. Describe the structure of a cable that is used to connect a hob to the mains electricity supply.
7. Define electric current.
8. Define potential difference.
9. Why does the resistance of a light bulb increase with p.d.?
10. Why is it dangerous to use a piece of aluminium as a fuse?
11. Why do your hairs stand on end when you are connected to the Van de Graaff generator?
12. What name is given to the rate of flow of charge?

13. Explain why it is a good idea for electricians to wear boots with rubber soles.
14. From a safety point of view, is 50Hz a suitable frequency?
15. Fine powders poured through a pipe can become negatively charged. How?
16. Place a charged rod on an insulated balance. Take a second charged rod and hold it above the rod on the balance. The reading on the balance increases. Why?
17. Define double insulated.
18. How do you calculate the total resistance of two resistors in series?
19. What is the mains p.d. in the UK?
20. What are the colours of the live, earth and neutral wire inside a 3 pin plug?
21. An appliance requires 5A. What size fuse do you use - 1, 3, 5 or 13A?
22. How does the resistance of an LDR change with light intensity?
23. How does a spray gun work which is used to cover car panels in paint?
24. In a parallel circuit the potential difference across each component is.....
25. In a series circuit the potential difference of the power supply is....

26. Draw a current-voltage graph for a diode.
27. Draw a current-voltage graph for a filament lamp.
28. Draw a current-voltage graph for a metal wire.
29. People working with computer chips are required to wear a special bracelet that is attached to a wire that joins to earth. Why?
30. What is the circuit symbol for a diode?
31. What is the circuit symbol for a variable resistor?
32. What is the circuit symbol for a thermistor?
33. What is the circuit symbol for an LDR?
34. What is the circuit symbol for an LED?
35. Where would you find a thermistor inside your home?
36. Which type of resistor is found in a circuit that automatically switches on lights when it gets dark?