

O Level Combined Physics MCQs

Practical Electricity Test 1.0

Q1

The cable to an electric fan becomes so worn that the live wire makes electrical contact with the metal case. The case is earthed. The plug to the fan contains a 5.0 A fuse. There is a current of 4.0 A when the fan works normally.

What will happen when the switch to the fan is turned on?

- A The current will flow to the earth and electrical energy is wasted.
- B The fan will work normally because all safety measures have been taken.
- C The fuse will melt and switch off the circuit.
- D The metal case will become live and dangerous.

Q2

Ian uses his room's air-conditioner 10 hours per day. The conditioner is rated at 240 V, 2000 W. Each unit of electricity costs \$0.24.

The monthly (30 days) cost of using the air-conditioner is

- A \$3.45.
- B \$60.00.
- C \$144.00.
- D \$345.60.

Q3

Which of the following explains why switches are connected to the live wire instead of the neutral wire?

- A current flows in the live wire instead of the neutral wire
- B current flows through the live wire before the neutral wire
- C current in the live wire is higher than that in the neutral wire
- D the switch disconnects the high potential of the live wire

Q4

The cable to an electric fan is worn out. The live wire makes contact with the metal casing which is earthed. The 3-pin plug to the fan contains a 5 A fuse. When the fan is working normally, a current of 4 A flows.

Which of the following scenarios will happen when the switch is closed?

- A The metal case heats up to a very high temperature.
- B The fuse will melt and disconnect the fan from the mains supply.
- C The metal case will become live and dangerous.
- D The current will flow to earth and the fuse will not be affected.

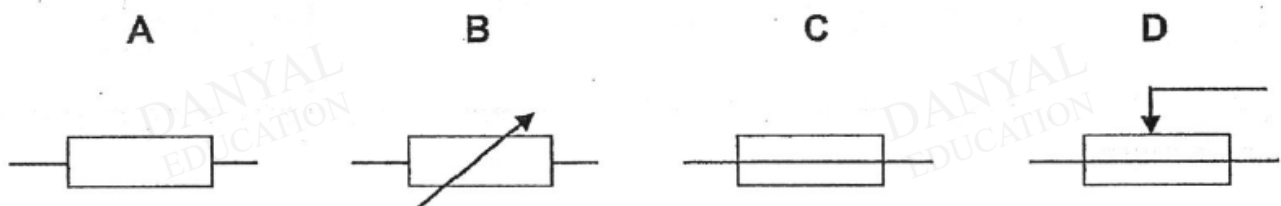
Q5

The Earth wire is wrongly wired to the live terminal in the 3-pin plug of an electrical appliance with metal casing. Which of the following will happen when the electrical appliance is turned on?

- A The electrical appliance will not operate.
- B The fuse will blow.
- C The circuit breaker will trip.
- D The user who touches the metal casing will get an electric shock.

Q6

Which of the following is the circuit symbol of a fuse?



Q7

Which of the following statements concerning a fuse is/are correct?

- I A fuse should be installed at the live wire of an electrical appliance.
- II Fuse rating is the minimum current that can flow through the fuse.
- III The fuse rating should be slightly higher than the operating current of an electrical appliance as the voltage may fluctuate.

- A I is correct
- B II is correct
- C I and II are correct
- D I and III are correct

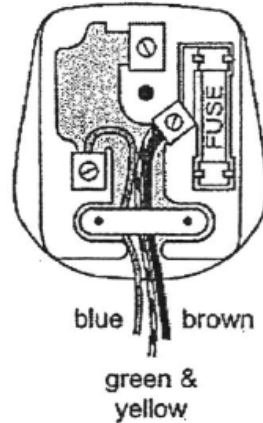
Q8

Which of the following appliances, used on a 240 V mains supply, will melt its fuse?

	appliance	fuse
A	100 W lamp	1.0 A
B	1 kW vacuum cleaner	5.0 A
C	2 kW heater	8.0 A
D	3kW electric cooker	13.0 A

Q9

A plug is wrongly wired as shown in the diagram below. It is connected to an old vacuum cleaner which has a metallic case.



What will be the effect of using the plug wired in this way?

- A The fuse in the plug will blow.
- B The metal case will be live.
- C The neutral wire will melt.
- D The vacuum cleaner will catch fire.

Q10

An electric kettle should always be fitted with an earth connection as a protective device.

What is being 'protected' by the earth connection?

- A the cable connecting the kettle
- B the fuse in the circuit
- C the casing of the electric kettle
- D the person using the kettle

Answers

Practical Electricity Test 1.0

Q1 C

Q2 C

Q3 D

Q4 B

Q5 D

Q6 C

Q7 D

Q8 C

Q9 B

Q10 D

DANYAL
EDUCATION

DANYAL
EDUCATION

DANYAL
EDUCATION

DANYAL
EDUCATION

DANYAL
EDUCATION