Answer on Question #52274-Physics-Other

Which of the following types of fuse should be used in a plug to connect an electrical appliance with power rating of 3.4 kW running on a 240V- mains?

13A fuse

16A fuse

6A fuse

14.2A fuse

Solution

$$I = \frac{P}{U} = \frac{3.4\ \text{kW}}{240V} = 14.17A.$$

So, $I_{fuse} = 14.2A$.

Answer: 14.2A fuse.

12 An auditorium is provided with the following appliances: two 1.0 kW water dispensers, ten 90 W electric fans, ten 60 W lighting bulbs and two 1.4 kW air conditioners. Calculate the current drawn by the appliances on a 240V- mains

12A

9A

17A

22A

Solution

$$P_{tot} = 2 \cdot 1.0\ \text{kW} + 10 \cdot 90\ \text{W} + 10 \cdot 60\ \text{W} + 2 \cdot 1.4\ \text{kW} = 6.3kW.$$

$$I = \frac{P_{tot}}{U} = \frac{6.3kW}{240V} = 26A.$$

Answer: 26A.

13 The four possible ways of contacting with chemicals in a labouratory are :

Inhalation, ingestion, direct contact with spills and indirect contact

Inhalation, Egestion , direct contact with spills and indirect contact

Exhalation, ingestion, direct contact with spills and indirect contact

Inhalation, ingestion, direct contact with spills and digestion

Answer: Inhalation, ingestion, direct contact with spills and indirect contact.

14 Classification of domestic cables is based on their ----------

current density

cross-sectional area

physical strength

length

Answer: cross-sectional area.