

# ELECTRICAL SYSTEMS



## WHEN ELECTRICITY MISBEHAVES

Name \_\_\_\_\_

Class \_\_\_\_\_

**Directions:** Read each scenario below and answer the questions that follow using what you have learned about electrical systems.

1. You are flying at night, and have been in a prolonged idle power descent. The lights begin to dim every time you transmit on the radio. You then notice that a red light labelled “voltage” is illuminated. A glance at the ammeter shows a deflection towards the negative side of the gauge.

Which electrical part of your electrical system is most likely malfunctioning? Explain your reasoning.

What corrective actions would you take to solve the problem? Explain why you would take those actions.

2. While on a flight over your local town, you and a passenger notice the smell of something burning. You scan the panel and the only thing out of the ordinary that you notice is the ammeter is pegged to the top of the positive side of the gauge.

Which electrical part of your electrical system is most likely malfunctioning? Explain your reasoning.

What corrective actions would you take to solve the problem? Explain why you would take those actions.



3. During a cross country flight, the circuit breaker for your second communications radio (COM2) keeps tripping or popping. During a postflight inspection, the aviation mechanic discovered that the power connector to the COM2 radio was loose. There was also some light scorching in the connector area.

Explain what you think was happening to make the circuit breaker trip during flight.

PROPRIETARY