

Module 30:  
Safety  
Instructor Guide – Answer Key



Exercise

1. The three principal approaches to hazard control are: engineering controls, administrative controls and personal protective equipment.
  2. An individual inhales a high concentration of chlorine gas and develops an irritation of the eyes, nose, and throat, followed by coughing, wheezing, and chest pain. This is an example of acute exposure.
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Exercise

1. What is aluminum sulfate used for?  
**Ans:** As a coagulant.
  2. How is sulfur dioxide usually shipped?  
**Ans:** As a liquefied compressed gas.
  3. What are the hazards and symptoms of exposure for sodium hypochlorite?  
**Ans:** It causes irritation of the eyes, skin, mouth and lungs. Prolonged exposure can burn the skin and cause permanent eye and lung damage.
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Calculation

A motor produces a sound level of 93 dBA and you have been provided with earplugs with an NRR of 25. What would the effective noise reduction from the earplugs be?

**Ans:**  $25 \text{ (NRR)} - 7\text{dBA} = 18 \text{ dBA (NRR)}$   
 $93 \text{ dBA} - 18 \text{ dBA} = 75 \text{ dBA effective NRR}$

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There are also some less obvious consequences of fire. What do you think some of those consequences are?

**Ans:** Loss of production, destruction of business records, costs of reconstruction or clean-up, direct costs for losses not covered by insurance, increased insurance premiums and water and smoke damage to equipment and property.

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What are some other examples of indirect promotion?

Possible answers can include:

Safety contests.

Incentive programs or reward programs.

Promotional items such as jackets, hats, t-shirts for good safety performance.

Monetary bonuses.

Large item prizes.

Lottery drawings or "safety Bingo" contests based on performance.