# **6 SAFEGUARDING**

## QUIZ 1 (12 POINTS TOTAL)

## True False (3 points)

- 1. As a general rule, power-transmission apparatus cannot be protected by fixed enclosure guards.
  - a. true
  - b. false
- 2. Incidents due to contact with rotating objects are frequent, but the severity of injury is generally slight.
  - a. true
  - b. false
- 3. Robots are generally described as reprogrammable, multifunctional, mechanical manipulators.
  - a. true
  - b. false

### Multiple Choice (3 points)

- 4. What size opening has commonly been considered as relatively safe in the design of point-of operation safeguards?
  - a. 2 inches
  - b. 7/8 inch
  - c. 3/8 inch
  - d. ¼ inch
- 5. Interlocking barrier guards can be:
  - a. mechanical
  - b. electrical
  - c. pneumatic
  - d. all of the above
- 6. What is the current term indicating a machine at total rest?
  - a. locked out
  - b. deactivated
  - c. energy isolation
  - d. energy restraint

### Short Answer (4 points)

7. What are nip points or bites?

8.	What three requirements must an effective interlocking guard satisfy?
9.	In what two general areas do rotating, reciprocating, and transverse motions create hazards?
10.	What are the three means of power for robots?
	t Essay (2 points) What are some drawbacks to makeshift safeguards?
12.	What are the principal hazards in using robots?
QUIZ	Z 2 (12 POINTS TOTAL)
	False (4 points)  Purchasers of the same machine model may use it in different ways.  a. true  b. false

2.	Substituting one type of machine for another is not an appropriate way to reduce machine hazards.  a. true  b. false
3.	Modifying a machine may invalidate the manufacturer's warranties. a. true b. false
4.	Workers can experience fatigue at a machine station from boredom with monotonous operations. a. true b. false
Mult	iple Choice (2 points)
5.	What is generally an effective machine workstation work height from floor to work surface?  a. 41 inches with a chair height from 25 to 31 inches  b. 36 inches with a chair height of 28 inches  c. 44 inches with a stool height of 28 inches  d. 39 inches with a chair height from 26 to 30 inches
6.	Under most circumstances, what is the preferred material for guards?  a. plastic  b. metal  c. safety glass  d. wood
Shor	t Answer (4 points)
	Define safeguarding.
8.	List three examples of types of action and motion that require protection.
9.	What actions or motions are the most hazardous exposures?

10.	What are four applications or processes in which robots are used?
	t Essay (2 points)  What are the advantages of built-in machine safeguards over safeguards made by the user?
12.	What are some of the drawbacks to guards made of wood?
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