

## 24 COLD FORMING OF METALS

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### QUIZ 1 (20 POINTS TOTAL)

#### *True/False (5 points)*

1. The safety of power presses depends in part on adequately safeguarding the point of operation.
  - a. true
  - b. false
2. Power presses whose stroking cannot be interrupted during the closing or opening of the stroke cannot use a press-controlling device.
  - a. true
  - b. false
3. Fatigue and abdominal strain are two injuries typically associated with kick presses.
  - a. true
  - b. false
4. Two-hand control can never be used as a point-of-operation safeguarding device for the single-stroke method of operation.
  - a. true
  - b. false
5. The antirepeat function requires that 95% of actuating mechanisms be released before another stroke can be initiated.
  - a. true
  - b. false

#### *Multiple Choice (6 points)*

6. Which of the following does not apply to magazine feeds?
  - a. They increase manual handling of blanks.
  - b. They can take blanks of various shapes and sizes.
  - c. They increase the rate of production.
  - d. They can be nearly automatic.
7. Which of the following types of guards is a die space barrier that can be attached to either the press component frame or the bolster plate?
  - a. an adjustable-barrier guard
  - b. an interlocked-barrier guard
  - c. a fixed die-enclosure guard
  - d. a fixed-barrier guard
8. Which of the following occurs only as long as the operator's controls are activated?
  - a. continuous
  - b. continuous on demand
  - c. maintained continuous
  - d. all of the above

9. What is the first step in safely removing a die?
  - a. Disconnect the power and lock out the switch.
  - b. Shut off the air supply to the automatic blowout system used in the die.
  - c. Dismantle the point-of-operation safeguard.
  - d. Make sure that the working space is cleared of all stock, containers, tools, and other items.
  
10. Which of the following can be used as a point-of-operation safeguard for a press brake?
  - a. the safe-distance method
  - b. a die guard
  - c. two-hand operator controls
  - d. all of the above
  
11. Which of the following is the most important necessary component of a piece-part bending system?
  - a. the tooling designed to perform the required bend
  - b. the means of safeguarding
  - c. the operator's function for loading, operating, and unloading the piece-part
  - d. the power press brake used and its operating control stations

**Short Answer (7 points)**

12. A company's policy on power press safeguards should cover three points. Name these points.

13. What is a die shoe and what is its purpose?

14. Pullback devices are usually limited to what kind of operations and jobs?

15. What are the six main types of semiautomatic feeds?

16. Oil-wet clutches have many of the same maintenance characteristics as dry-friction clutches-with three exceptions. What are these exceptions?

17. What is the difference between a general-purpose press brake and a special-purpose press brake?

18. ANSI B11.3 describes two major areas of hazards associated with power press brakes. What are they?

***Short Essay (2 points)***

19. Safeguarding the point of operation is an umbrella term. What two basic categories fall under this term and what are their definitions?

20. Setting up and removing power press dies are hazardous jobs for press operators. What are some of the injuries associated with these jobs and how are they caused?

**QUIZ 2 (20 POINTS TOTAL)**

***True/False (5 points)***

1. Secondary operations are easier to guard than primary operations at the point of operation.
  - a. true
  - b. false

2. Hand tools can save a worker's fingers and hands as well as speed up operations.
  - a. true
  - b. false
3. Foot controls should be shielded and protected so that their accessibility is controlled.
  - a. true
  - b. false
4. Regulatory standards may require that each press be inspected every week to determine the condition of the clutch/brake mechanism, antirepeat feature, and single-stroke mechanism.
  - a. true
  - b. false
5. Many general-purpose tools are designed to eliminate the need for an operator to hold the piece-part component's blank while one a forming operation is being performed.
  - a. true
  - b. false

**Multiple Choice (6 points)**

6. Which of the following is attached to the top of the bed of the press component and has drilled holes or T-slots for attaching the lower die or die shoes?
  - a. the stripper
  - b. the bolster plate
  - c. the counterbalance
  - d. the knockout
7. Which of the following provide the most complete protection for the operator?
  - a. adjustable-barrier guards
  - b. interlocked-barrier guards
  - c. fixed die-enclosure guards
  - d. fixed-barrier guards
8. Which of the following types of guards cannot be used on a full-revolution clutch power press?
  - a. adjustable-barrier guards
  - b. interlocked-barrier guards
  - c. fixed die-enclosure guards
  - d. fixed-barrier guards
9. What is the first step in setting a die?
  - a. Disconnect the point-of-operation safety device.
  - b. Clean off the bolster plate.
  - c. Remove pullback devices and presence-sensing devices
  - d. Check the die to make sure it is in good working order.



16. All two-hand controls, regardless of the means of point-of-operation safeguarding, need to comply with one main standard. What is this standard?

17. Safeguarding for power squaring shears has three purposes. What are they?

18. What is the definition of a full cycle? A half cycle?

***Short Essay (2 points)***

19. What is the definition a two-hand trip?

20. In general, what are alligator shears used for and what are some of the safety issues associated with them? What are the principal hazards of an alligator shear?