American Gunsmithing Institute Master Armorer
Certification Test Version 3 (July 2023)

The following test is a mixture of True/False and Multiple Choice questions. Your score is based on a percentage of correct responses (answers) out of the total number of questions. Unanswered questions will be counted as an incorrect response. Try to answer all of the questions.

For True/False questions: Please read each question in its entirety before responding. The question has only one correct response. There are no questions that have both True and False as a possible response. Decide if each statement is either true or false and choose the correct response.

For the multiple choice questions: Please read each of the questions in its entirety before responding. Each statement has multiple responses listed but only one is the correct or most correct response. Pay close attention to all possible responses and select the single response that best matches the statement.

Some questions may have options that indicate the possibility of two or more responses being correct. For example: *Answer D states: Both A and B.* If A and B are both correct then D would be the most correct answer even though choosing either A or B would be partially correct. Choosing a partially correct response will not be credited as a correct response. Remember, only one response can be the most correct. However, having an option for more than one correct response (answer) is not necessarily an indication that the best answer includes more than one response (answer). Ultimately there is only one correct response for each statement.

Special Note: Sometimes the instructors do not call a part by the manufacturer's name for the part. Different manufacturers do not always call a part that looks the same, and performs the same function, by the same name. Company "A" may call a part the "buffer tube" and Company "B" may call that same exact part the "receiver extension." So, having hundreds of firearms made by dozens of manufacturers often leads instructors to using generalized names that are based on what the part does or simply by personal preference.

Some of the test questions use the manufacturer's specific name for a part. Courses generally have an exploded diagram or manufacturer's diagram on the disk, located in a file called "Extras." It is best practice to familiarize yourself with the manufacturer's nomenclature. This not only assists with the test, but also assists with purchasing parts from manufacturers and/or suppliers for armorer maintenance.

Additional Testing Instructions:

Answer the questions selecting the Most Correct answer, then click NEXT to go to the next question, continue until you have gone through the entire test. Then the option will come up to review or submit/complete.

How to use the "Mark" Button: Use this only when you are unsure about an answer and want to go back to review the answer before you submit the test. When you click the button "Mark" it

puts that question into a holding queue, and before you can submit the entire test, you will need to go back and clear each question you “marked” before you can submit the test.
Submit Button: After answering all questions and when you are sure of your answers after reviewing any marked questions. Click the submit button and the test will be instantly graded, and it will let you know if you have passed or failed that module. If you pass you are done with the module, and it will say completed on your dashboard. You will not be able to reopen successfully completed tests. Successfully completed tests will have a green indicator icon where failed tests will have a red indicator.

If it says that you Failed, scroll down and it will tell you which questions that you got correct and which questions you failed. For each question there will be either be (correct) or (wrong) after the question which will indicate their status. For all questions the answer you chose will be noted below the question. Pay close attention to the questions labeled (wrong). These questions will show the answer that you gave. They will NOT provide you with the correct answer.
You may immediately test again. You have an unlimited number of retests.
Remember the objective is to learn all of the information, not just to pass the test.

When you have successfully passed and completed all of the test sections, you will be able to download your temporary certificate of completion and the official certificate and Master Armorer’s Patch will be sent to you within approximately 30 days.

Beretta 92 Pistol

1. The Beretta 92 has a firing pin block in the slide that is disengaged by
   A. A tall hump on the top of the trigger bar, similar to a Glock.
   B. The hammer pushes on a lever during forward rotation.
   C. The grip safety pushes on the firing pin block lever.
   D. The trigger bar pushes on a vertical pin in the frame.
   E. The trigger bar pushing on the firing pin block lever.

2. The extractor on the Beretta 92 is unusual for most handguns.
   A. The hook has a negative angle.
   B. The extractor is dovetailed into the slide.
   C. The front edge is arched (curved).
   D. The extractor is Titanium alloy.
   E. The front edge is square (flat).

3. If the Beretta 92 has a failure to feed stub jam, the most likely cause is
   A. The extractor is missing and the cartridge case slips off.
   B. The barrel has excessive loose breech.
   C. The magazine follower is in backwards.
   D. The bottom corner of the extractor hook is too sharp.
   E. The barrel hood is pitted, gouged, or rusty.

4. The firing pin hole in the breech face of the Beretta 92 slide
   A. Is .050” above center because the barrel tips up to lock.
   B. Is part of the replaceable breech face insert.
   C. Should never be chamfered or rounded, that is a defect.
   D. Should be .025” to .032” diameter to prevent primer flow.
   E. Is chamfered or rounded to prevent shaving brass.

5. The Beretta 92 has an extractor, however when the gun is fired, due to inertia, the extractor does not usually apply much extraction force. The main purpose of the extractor on a Beretta 92 is
   A. To prevent the cartridge from sliding beyond the top of the slide.
   B. To hold the cartridge case on the breech face for ejection.
   C. To hold the cartridge back from going too deep into the chamber.
   D. To act as the firing pin blocking safety retainer.
   E. To act as a guide for barrel to slide alignment.

6. All Beretta 92 original factory recoil springs manufactured after 1962 have a problem with coil binding when +P ammunition is used.
   A. True
   B. False

Beretta PX4 (Storm)

1. The Beretta PX4 uses what type of locking system?
   A. A tilt barrel locking system.
   B. A pivoting barrel cam lock system.
   C. A link lock pivoting barrel locking system.
   D. A rotary (rotating) barrel and roller lock system.
   E. A rotary (rotating) barrel locking system.

2. The Beretta PX4 DAO (Double Action Only) the sear
   A. Catches the hammer in the half-cock notch.
   B. Catches the hammer in the semi-auto notch
   C. Catches the hammer in the full-cock notch.
   D. Also activates the firing pin block safety.
   E. Catches the trigger bar after each shot.

3. To fix loose breech properly on a Beretta PX4, you would
   A. TIG weld the slide breech face then fit the barrel hood to the slide.
   B. Hammer peen the barrel hood to extend it .030” then fit to the slide.
   C. Silver braze the barrel hood then fit it to the slide
   D. TIG weld the barrel hood then fit it to the slide.
   E. MIG weld the barrel hood then fit it to the slide.

4. Disconnecting the trigger from the sear on the Beretta PX4 is accomplished by
   A. The slide hitting the disconnector pin to disengage the trigger bar and sear.
   B. A stud on the trigger bar hit by the slide, which forces the trigger bar away from the connector.
   C. The slide hitting a hump on the trigger bar, forcing it out of engagement.
   D. The slide hitting a bar in the FCU, which pushes the trigger bar down.
   E. A stud on the hammer hitting a hump on the trigger bar, forcing it down, out of engagement.

5. The Beretta PX-4 hammer pivot pin is
   A. A solid pin with large diameter head on one end and it goes in left to right.
   B. A hollow pin, held in place by a spring that fits into a slot (notch) in the pin.
   C. A hollow pin, held in place by the grip module, it goes in either left or right.
   D. A solid pin held in place by a spring that rides in a groove to act as a retainer.
   E. A hollow pin, held in place by two “C” clips and it goes in either left or right.

6. The Beretta PX4 extractor uses two extractor springs, wound in different directions to prevent binding together.
   A. True
   B. False

Bond Arms Derringers

1. Besides locking the gun closed, what other function does the lock lever flipper (locking block) perform on a Bond Arms derringer?
    A. The lock lever flipper prevents the barrel hinge screw from unscrewing when firing the derringer.
    B. The lock lever flipper acts as a trigger safety.
    C. The lock lever flipper, in the forward position, acts in conjunction with the extractor to eject spent cases.
    D. The lock lever flipper acts as a hammer block safety.
    E. The lock lever flipper shifts the hammer head to select which barrel fires.

2. What does the spring that is staked onto the right side of the hammer of a Bond Arms derringer do?
    A. It spring loads the selector cam.
    B. It acts as the safety detent.
    C. It rebounds the hammer.
    D. It is the sear selector spring
    E. All of the above.

3. Why is it important for the trigger of a Bond Arms derringer to be engaged in the safe/half cock notch of the hammer after the gun has been fired and is at rest?
    A. Because if it doesn't, the gun is not safe to be used and it should be repaired right away!
    B. Because that would indicate that the hammer rebound system is not operating safely and correctly!
    C. Because if the hammer were dropped or anything moved the hammer forward and the gun was loaded, the gun would fire!
    D. All of the above.
    E. Actually, it doesn't matter, the transfer bar does not move up until the trigger is pulled.

Browning Hi-Power Pistols

1. After a Hi-Power pistol has been fired, and the barrel and slide move rearward a short distance together as a unit. What system unlocks and locks the gun?
    a. The link Lock system
    b. The cam lock system
    c. The toggle lock system
    d. The roller lock system

2. What part of a Hi-Power pistol makes contact with the sear to trips the hammer and fire the gun?
    a. The trigger
    b. The trigger bar (sear lever)
    c. The trigger lever (trigger connector)
    d. The actuator

3. Which one of the following statements about the Browning Hi-Power pistol's magazine disconnector system is correct?
    a. There is no magazine disconnect system found in the design of the Hi-Power pistol.
    b. The magazine disconnect system is enable when the magazine is out of the magazine well, which allows the spring-loaded magazine safety to move forward. This causes the trigger connector (trigger lever) to move rearward enough so that it doesn't make contact with the trigger bar (sear lever) if the trigger was pulled, thus preventing the gun from being fired. When the magazine is inserted back into the pistol, it pushes the magazine safety rearward, causing the trigger connector to move forward, enabling the trigger connector to make contact with the trigger bar, which enables the gun to be fired when the trigger is pulled.
    c. The magazine disconnect system is enable when the magazine is out of the magazine well, which allows the spring-loaded magazine safety to move rearward. This causes the trigger connector (trigger lever) to move forward enough so that it doesn't make contact with the trigger bar (sear lever) if the trigger was pulled, thus preventing the gun from being fired. When the magazine is inserted back into the pistol, it pushes the magazine safety forward, causing the trigger connector to move rearward, enabling the trigger connector to make contact with the trigger bar, which enables the gun to be fired when the trigger is pulled.
    d. The magazine disconnect system is enabled when the magazine is out of the magazine well, which allows the spring-loaded magazine safety to move forward. This causes the trigger connector (trigger lever) to move rearward enough so that it makes contact with the trigger bar (sear lever) if the trigger was pulled, thus preventing the gun from being fired. When the magazine is inserted back into the pistol, it pushes the magazine safety forward, causing the trigger connector to move forward, enabling the trigger connector to make contact with the trigger bar, which enables the gun to be fired when the trigger is pulled.

4. What does the manual/thumb safety block on a Hi-Power pistol when it is set to the safety "On" position?
    a. The trigger
    b. The sear
    c. The hammer
    d. The manual safety lifts the trigger too high for the trigger connector to hit it

Charter Arms Bulldog Revolver

1. When the hand rotates the cylinder of a Charter Arms revolver,
    A. the hand pushes the cylinder and crane into the frame, similar to a Colt revolver's design.
    B. the hand pushes the cylinder and crane away from the frame, similar to a Smith & Wesson revolver's design.

2. When the trigger of a Charter Arms revolver is pulled rearward during the double action mode of operation, the trigger hits the hammer pawl (or stirrup), which will rotate the hammer rearward until the trigger loses engagement with the hammer pawl, causing the hammer to fall forward and makes direct contact with the transfer bar, thus firing the gun.
    A. True
    B. False

3. What part of a Charter Arms revolver makes contact with the cylinder stop to cause the ball of the cylinder stop to move down and out of engagement with the cylinder notch so that the cylinder can rotate?
    A. The hammer
    B. The transfer bar
    C. The trigger
    D. The hammer pawl
    E. The cylinder stop bushing

4. What determines when a Charter arms cylinder will begin to rotate?
    A. The length of the hand.
    B. The width of the hand.
    C. Both the length and the width of the hand.
    D. The length of the hand window in the frame.
    E. The length of the hammer pawl.

5. What determines how far the cylinder will rotate?
    A. The length of the hand.
    B. The width of the hand.
    C. The length and the width of the hand.
    D. The length of the hammer pawl.
    E. The length of the hand window in the frame.

6. Why should you always wear a mask if you do any fitting or grinding to a Charter Arms revolver's firing pin?
    A. The firing pin is made from a Barium Nickel alloy and is extremely hazardous.
    B. The firing pin is made from Beryllium Nickel and is extremely hazardous.
    C. The firing pin is plated with a Beryllium Aluminum alloy and is extremely hazardous.
    D. The firing pin is made from Beryllium Copper and is extremely hazardous.
    E. The firing pin is plated with Barium Hydroxide to prevent rust and is extremely hazardous.

7. Why is there a hole in the mainspring guide rod?
    A. The hole is for the CNC fixture that holds the part during machining operations.
    B. To lighten the mainspring sub-assembly to achieve a lighter trigger pull.

C. To facilitate the disassembly and reassembly of the mainspring and hammer.
D. To increase the speed of the hammer for increased primer ignition reliability.
E. It is the pivot point for the mainspring lever and trigger return.

CZ-75 / E.E.A. Witness

1. The CZ-75 is a locked breech, tipping barrel, cam lock design. What acts as the cam to lock and unlock the barrel from the slide?
   A. A slot in the barrel lug and the shaft of the slide stop lever.
   B. A locking block insert in the frame and the bottom of the barrel lug.
   C. The bottom of the barrel lug and a camming surface milled into the frame.
   D. A pivoting insert in the barrel and two lugs in the frame.
   E. A slot in the barrel and the shaft of the trigger pivot pin.

2. In a CZ-75 pistol, if the locking lugs do not have enough engagement, the slide will wear away the locking surfaces of the barrel and cause a condition known as
   A. Gas blowback
   B. Locked breech
   C. Failure to open
   D. Loose breech
   E. Failure to feed

3. The CZ-75 newer model have what added safety feature?
   A. A firing pin shorter than the firing pin housing in the slide.
   B. A firing pin rebound spring.
   C. A lever on the trigger that hits the frame.
   D. A manual safety on the slide.
   E. A firing pin blocking safety.

4. The CZ-75 has a thin metal strip pinned to the frame inside the magazine well. What is the purpose of that piece?
   A. To act as a heat shield for the magazine.
   B. To prevent damage to the hammer spring and during magazine insertion.
   C. To prevent the magazine from snagging on the frame.
   D. To add tension to the magazine for better retention.
   E. To add tension to the magazine for better alignment with the slide face.

5. The CZ75 safety is held in the frame by
   A. The forward edge of the hammer strut.
   B. The safety detent and spring.
   C. The left side of the sear housing.
   D. The hammer / safety retaining pin.
   E. A front leg of the sear spring.

6. CZ-75 pistols require slave pins for easier reassembly. One slave pins is used to keep the sear spring in the sear during installation. What is the other slave pin for?
   A. Keeping the hammer strut in the hammer during installation.

B. Keeping the trigger spring in the trigger during installation.
C. Keeping the trigger bar in the trigger during installation.
D. Keeping the sear spring above the safety during installation.
E. Inserting the magazine spring into the magazine catch during installation.

Colt Model 1911

1. What type of locking system does the Model 1911 pistol utilize?
   A. Cam lock
   B. Link lock
   C. Toggle lock
   D. Roller lock
   E. Straight blow-back

2. After a Model 1911 pistol has been fired, the link is what pulls the barrel downward, out of the locked position, and the slide stop is what stops the forward motion of the gun's barrel.
   A. True
   B. False

3. How does the grip safety on a Model 1911 pistol function?
   A. It blocks the sear tail.
   B. It blocks the firing pin safety lever.
   C. It blocks the trigger stirrup (bar)
   D. It blocks the disconnector spade from pushing the sear.
   E. It pushes the disconnector down, disconnecting it from the sear.

4. What part of a Model 1911 pistol controls the downward movement of the disconnector after the gun has been fired?
   A. The sear
   B. The trigger
   C. The grip safety
   D. The slide
   E. The firing pin lock lever.

5. When the trigger of a Model 1911's pistol is pulled rearward to fire the gun, the rear of the trigger bow bumps into the sear, which in turn bumps into the disconnector spade, which causes the hammer to fall forward.
   A. True
   B. False

6. What does the manual/thumb safety on a 1911 pistol block?
   A. The sear
   B. The trigger stirrup
   C. The disconnector
   D. The firing pin safety lever
   E. The hammer.

7. The right leg of the sear spring tensions which part?
    A. The trigger
    B. The sear
    C. The grip safety
    D. The disconnector
    E. The firing pin safety lever.

8. On a Model 1911 pistol, what acts upon the slide stop to lock the slide rearward after the last shot has been fired and the magazine is empty?
    A. The slide stop plunger
    B. The sear spring
    C. The magazine follower
    D. The magazine catch
    E. The last cartridge in the magazine
    F. None of the above

9. An internal extractor on a Model 1911 pistol
    A. Is safer than an external extractor.
    B. Acts as its own spring.
    C. Acts as a firing pin retainer on Kimber 1911s.
    D. Retains the firing pin stop.
    E. Should have a slightly negative angle for better ejection.

10. The Kimber 1911's firing pin blocking safety is turned off (allowing the firing pin to strike a primer)
    A. When the trigger is pulled, contacting the safety plunger lever.
    B. When the grip safety pushes the pushrod up.
    C. When the trigger rotates the sear actuator lever.
    D. When the hump on the trigger bar hits the safety lever.
    E. When the hump on the trigger disengages the firing pin safety.

11. The engagement of the magazine catch to the magazine
    A. Must be passive to function correctly.
    B. Must be slightly negative to function correctly.
    C. Must have over .125" engagement to function correctly.
    D. Must be neutral to slightly positive to function correctly.
    E. Must be completely neutral to function correctly.

Colt Single Action Revolvers

1. When you pull the trigger of a Colt Single Action Army (SAA) revolver, the hammer moves rearward. The hand, being attached to the hammer, will move up through its slot in the frame, as it is being pushed forward by the hand spring, until the top of the hand makes contact with the ratchet pads of the cylinder.
    A. True
    B. False

2. The ball of the bolt on a Colt SAA must…
    A. Pop back up as soon as the hammer gets to the load notch or slightly before.
    B. Have the leading edge lower than the trailing edge to aid clearing the notch.
    C. Remain in the cylinder notch until the hand pushes a ratchet, to speed rotation.
    D. Clear the cylinder notch before the hand begins the rotate the cylinder.
    E. Pop back up within 10-15% of the movement to the next chamber.

3. When a Colt SAA revolver is ready to fire,
    A. The hand is on the ratchet pad
    B. The ball of the bolt in engaged in the cylinder notch.
    C. The trigger is in the full cock notch of the hammer.
    D. Only B and C above are true.
    E. A, B & C are true.

4. What causes the bolt of a Colt SAA to move down and out of engagement with the cylinder notch?
    A. The trigger nose making contact with the bolt.
    B. The bolt tail slipping past the base of the hand.
    C. The bolt tine catching on the hammer cam.
    D. The hand contacting the nose of the bolt.
    E. The hammer safe notch pushing the bolt tine.

5. The hammer from a Colt SAA revolver has three notches. What is the correct order of notches that the trigger falls into as the hammer is drawn back rearward?
    A. Safe notch, load notch, full cock notch.
    B. Load notch, safe notch, full cock notch.
    C. Load notch, carry notch, full cock notch.
    D. Cylinder release notch, safe notch, full-cock notch
    E. Load notch, half notch, full-cock notch.

6. As an Armorer working on a Colt SAA revolver, you should know that…
    A. the screws that hold the backstrap and trigger guard onto the frame are all interchangeable and can be used in any order when reassembling the gun.
    B. the screws that hold the backstrap and trigger guard onto the frame are not interchangeable and each screw should go back to where it came from when reassembling the gun.

7. The Colt SAA should be cocked before removing the mainspring from the revolver.
    A. True
    B. False

8. Many versions of the Single Action Army revolver utilize which part of the gun to become a hammer blocking safety?
    A. The trigger
    B. The load gate
    C. The firing pin
    D. The base pin
    E. The ejection rod

9. What holds the gate of a Colt SAA open and closed?
    A. The loading latch
    B. Friction against the base pin
    C. A plunger and spring
    D. The right guard screw
    E. The left guard screw

10. What determines how far the hand of a Colt SAA revolver will rotate the cylinder?
    A. The width of the hand.
    B. The length and width of the hand.
    C. The length of the hand measured from the pivot point of the hand to the first stage shelf of the hand.
    D. The length of the hand measured from the pivot point of the hand to the second stage shelf of the hand.
    E. Both a and c above

CZ-52 Pistols

1. When a CZ -52 pistol is in battery (locked up, closed and ready to be fired), what is locking the barrel to the slide?
    A. The link and barrel lugs.
    B. The takedown latch.
    C. The left and right rollers (balls).
    D. The roller cam and slide engagement.
    E. The locking cam and slide lugs

2. On a CZ-52, what pushes the rollers into place and holds them in place until the gun is fired?
    A. The barrel.
    B. The trigger.
    C. The roller cam.
    D. The trigger bar.
    E. The breech lock.

3. After a CZ-52 has been fired, what two parts stop against the frame before the slide continues its rearward motion?
    1. The extractor
    2. The recoil spring
    3. The roller cam
    4. The barrel
        A. 2 and 4
        B. 3 and 4
        C. 1 and 2
        D. 2 and 3

4. Which one of the statements below best describes the correct cycle of operation to fire a CZ-52?
    A. The trigger is pulled rearward, which moves the trigger bar/disconnector rearward until it hits the sear, causing the sear loses its engagement with the hammer. The hammer falls and the gun fires.
    B. The trigger is pulled rearward, which moves the trigger bar/disconnector forward until it hits the sear, causing the sear loses its engagement with the hammer. The hammer falls and the gun fires.

5. What turns the CZ 52's firing pin retractor/lock off so that the firing pin can move far enough forward to ignite the cartridge's primer when it is hit by the hammer?
    A. The hammer strut.
    B. The roller cam.
    C. The trigger
    bar. D. The sear.
    E. The extractor.

6. What part disconnects the CZ-52 by breaking the connection between the sear and the trigger bar/disconnector, thus not allowing the sear to be tripped by pulling the trigger?
    A. The slide.
    B. The roller cam.
    C. The barrel.
    D. The right roller.
    E. The actuator lever.

FNH / FNP 9/40 Pistols

Some of the questions may refer to parts differently than the instructor. Some part names below the actual manufacturer names from the schematic attached to the video.

1. The FNH / FNP pistol in the course has what type of recoil spring?
    A. A two-coil standard spring sub-assembly that is not easily disassembled.
    B. A single coil standard spring and guide rod assembly.
    C. A wound wire coil spring and guide rod assembly.
    D. A single coil flat wire spring and guide rod assembly.

E. A double spring sub-assembly that is easily disassembled for maintenance.

2. According to Bob Dunlap, FNH/FNP pistol in the course is a two sear system. Bob calls one sear the “full cock” sear (FN: sear). The second sear, according to Bob, is the
   A. Sear lever
   B. Disconnector lever
   C. Trigger connector
   D. Safety sear
   E. Trigger sear

3. The FNH/FNP trigger bar connects the trigger to the sear actuator, which raises the actual sear. What other function does the sear actuator have?
   A. Disengages the firing pin block.
   B. Disconnects the trigger bar safety from the sear.
   C. Decreases the felt trigger pull weight.
   D. Acts as a hammer transfer bar.
   E. Acts as the pivot pin for the sear.

4. The firing pin block and spring are held in place by a roll pin
   A. True
   B. False

5. The unlocking block (FN: block, unlock) is held by the front frame rails. To remove the unlocking block, frame rails, and horseshoe shaped spreader bar, you must do what?
   A. Remove two unlocking block roll pins and lift the block up.
   B. Remove the trigger bar before prying the block up.
   C. Remove the horseshoe shaped spreader and fold the rails inward.
   D. The unlocking block is molded in place and not meant to be removed.
   E. Spread the polymer grip frame and pry the block up.

6. The rear rails are held in place by
   A. A roll pin and two spring clips.
   B. A pin and two “C” clips.
   C. A “U” spring with unequal length sides.
   D. A “U” spring with equal length sides.
   E. A “W” spring with end bent slightly outward to catch the rails.

7. When reinstalling the trigger pivot pin (during reassembly),
   A. The pin is held by two “C” clips that install inside the frame (internal).
   B. The pin has two retaining grooves and can go in either direction.
   C. The pin has one retaining groove that must be on the left side of the frame.
   D. The pin has one retaining groove that must be on the right side of the frame.
   E. The pin is held by two “C” clips that install outside the frame (external).

Glock Pistols

1. When a Glock pistol is closed and locked up…
    A. The slide stop lever extends into the cam slot of the locking block.
    B. The front barrel lug is resting in the cam slot of the locking block.
    C. The bottom of the rear barrel lug is on top of the locking block.
    D. The bottom of the rear barrel lug is on top of the trigger pivot pin.
    E. The bottom of the front barrel lug is locked into the slide.

2. What causes the Glock pistol to unlock after the gun has been fired?
    A. The slide and barrel start rearward due to force exerted on the cartridge base.
    B. The forward barrel lug contacts the locking block camming surface.
    C. The locking block cams the rear of the barrel down.
    D. The barrel unlocks and stops, the slide continues rearward.
    E. All of the above are true.

3. How does a Glock pistol's trigger safety prevent the gun from firing unless the meat of your trigger finger deliberately pulls the trigger rearward so that in situations when the pistol is dropped or the trigger is merely snagged, the pistol will not fire?
    A. There is a lever that is incorporated into the trigger that disengages the trigger bar if the gun is dropped or snagged.
    B. There is a lever incorporated into the trigger that stops against the frame if the gun is dropped or snagged.
    C. There is a plunger system incorporated into the frame that will prevent the trigger from moving if the gun is dropped or snagged .
    D. There is a plunger system incorporated into the trigger that will prevent the trigger from moving if the gun is dropped or snagged .
    E. The trigger hinges forward and prevents the safety lever to from entering the frame in case the gun is dropped or the trigger is snagged.

4. What part of a Glock pistol will turn the firing pin blocking safety off, allowing the firing pin to move forward far enough to fire the gun?
    A. The cruciform piece
    B. The push rod
    C. The connector
    D. The trigger lever
    E. The trigger bar

5. Which of the below functions is the trigger bar responsible for when the trigger is pulled rearward on a Glock pistol?
    1. The firing pin blocking safety is turned off by the trigger bar.
    2. The firing pin tail is drawn back by the trigger bar.
    3. When the trigger bar makes contact with the connector, the trigger bar moves down and cause the striker to be released to fire the gun.

4. When the gun is at rest, the trigger bar acts as a drop safety by blocking the forward movement of the trigger and the trigger bar is situated forward on the trigger mechanism housing's safety ramp, which prevents the trigger bar from moving rearward and lowering, thus preventing the striker to be released until the trigger is pulled.
    A. 1 and 3
    B. 1, 2 and 3
    C. 1 and 2
    D. 1,2, 3 and 4

6. After a Glock pistol has been fired, and the trigger is released forward, all of the safety features automatically reengage.
    A. True
    B. False

7. How does a Glock pistol disconnect?
    A. The slide forces the connector to the right, which frees the trigger bar to rise and reconnect with the firing pin.
    B. The slide forces the hump on the trigger bar down, which disconnects the trigger bar from the connector.
    C. The slide forces the connector down, which frees the trigger bar to rise and reconnect with the firing pin.
    D. The slide forces the connector to the left, which frees the trigger bar to rise and reconnect with the firing pin.
    E. The slide forces the connector rearward, which frees the trigger bar to rise and reconnect with the firing pin.

8. The slide stop lever on a Glock pistol …
    A. Is spring loaded up.
    B. Is on the right side only.
    C. Is spring loaded down.
    D. Is also the take-down lever.
    E. Has been ambidextrous since 1982.

9. Glock pistols of newer manufacture have incorporated a loaded chamber indicator. Where is this loaded chamber located on the gun?
    A. A thin slit in the barrel hood.
    B. A small pin that protrudes from the barrel hood.
    C. A lever on the slide, above the extractor.
    D. A lever on the slide, rearward of the barrel hood.
    E. A protrusion on the extractor.

10. When reassembling a Glock pistol, it is important to make sure that the slide lock goes back into the frame in the right position or you may spoil some parts when you shoot the gun again. Which one of the answers below is the correct way to install the slide lock?
    A. The tiny recess on the bottom of the slide lock fits on top of the slide stop spring and the lip on the top of the slide stop point to the rear.
    B. The tiny recess on the bottom of the slide lock fits on top of the slide stop spring and the lip on the top of the slide stop points to the front.

H&K USP

For correct manufacturer nomenclature, refer to the schematic

1. The USP is a cam lock barrel design. What components cause the camming action?
    A. The barrel lugs engaging the recoil guide rod.
    B. The barrel lugs engaging the locking block.
    C. The barrel lugs engaging the slide locking surface.
    D. The barrel lugs engaging the slide stop pin.
    E. The recoil guide rod engaging the locking block.

2. When the USP pistol is fired double action, the trigger bar contacts and pulls the double action notch at the bottom of the hammer. The trigger bar moves forward and rotates the hammer until the double action notch moves up and the trigger bar slips off, allowing the hammer to fall. What prevents the trigger bar from moving up and staying engaged with the hammer?
    A. The end of the trigger bar is under the hammer axle and cannot move up.
    B. The trigger bar rides in a slot in the frame and cannot move up.
    C. The trigger bar rides under the slide stop axle and cannot move up.
    D. The disconnector hump is held down by the slide so the bar cannot move up.
    E. The trigger bar has a slot that the sear pin goes through and stops the bar from moving up.

3. If you manually cock a USP (with a full size hammer) and your thumb slips off of the hammer accidentally before getting to full-cock, the hammer will be caught by the safety catch.
    A. True
    B. False

4. The USP compact version recoil spring and guide
    A. Are the same dual spring buffering system as the full-size, except for length.
    B. Are a shorter dual spring system except the inner spring is heavier wire than the full size versions.
    C. Are a shorter dual spring system but the locking block was moved to the frame.
    D. Are a single spring flat wire system and the buffer system is mounted in the frame.
    E. Are a single spring assembly with a tough polymer or Nylon buffer.

5. There are a few parts that are not removed from the frame during disassembly. The front and rear rails are parts that are not removed, what other part(s) should not be removed unless necessary?
    A. The magazine catch and spring.
    B. The hammer spring (main spring).
    C. The trigger spring.
    D. The sear spring.
    E. The trigger and spring.

6. To aid reassembly of the USP, Bob Dunlap states that some specialty tools are necessary but can be made. What are those tools?
    A. A screwdriver ground with a convex end, vise grips with the ground jaws for the recoil spring guide, and a slave pin.
    B. A screwdriver ground with a concave end, vise grips for the recoil spring guide, and a slave pin.
    C. A screwdriver ground with a concave end, a small flat tool for the trigger bar plunger, and special vise grips.
    D. A screwdriver ground with a radius, a small flat tool for the trigger bar, and a tool for rotating the firing pin into position.
    E. A screwdriver ground with a concave end, a small flat tool for the trigger bar, and a slave pin.

7. The USP manual thumb safety blocks the
    A. Hammer
    B. Sear
    C. Sear actuator
    D. Trigger bar
    E. Disconnector lever

Hi- Standard Auto Pistols

1. On a Hi-Standard HD Military pistol what does the manual safety block?
    A. The trigger
    B. The sear
    C. The hammer
    D. The leg of the trigger bar
    E. The firing pin

2. On late model versions of the Hi-Standard auto pistol, what does the manual safety do?
    A. Engages the hammer and pivots it back slightly from the sear.
    B. Blocks the trigger and the hammer.
    C. Blocks the sear and disconnects the trigger bar from the sear.
    D. Blocks the sear from disengaging from the hammer.
    E. Blocks the trigger bar from contacting the sear release lever.

3. There is an Allen screw on the back of the frame found on late model Hi-Standard Auto pistols. What is that screws function?
    A. It tensions the sear spring to adjust the trigger pull weight.
    B. It controls trigger over travel.
    C. It tensions the trigger to adjust trigger pull weight
    D. It is the takedown screw when disassembling the slide from the frame.
    E. It tensions the mainspring to ensure solid firing pin strikes.

4. When you pull the trigger on a Hi-Standard Auto pistol what direction does the trigger bar move?
    A. Up
    B. Forward
    C. Down
    D. Rearward

5. Which one of the statements below best describes how a Hi-Standard Auto pistol is disconnected?
    A. The hammer pushes the trigger bar down, out of engagement with the sear.
    B. The slide pushes the trigger bar down, out of engagement with the sear.
    C. The trigger bar rotates under the sear when the hammer falls and disconnects.
    D. The trigger bar rides over the sear when the hammer falls and disconnects.
    E. The stud on the side of the hammer hits the sear trip lever and disconnects the sear.

Luger Pistols

1. The Luger pistol utilizes a toggle lock system to insure that the gun is closed and securely locked up. What position is the toggle in just before the pistol fires?
    A. The toggle is slightly above center.
    B. The toggle is in line (dead center).
    C. The toggle is slightly below center.
    D. The actual position of the toggle has no bearing on the gun's lock up.

2. What unlocks the action of a Luger pistol after it has been fired?
    A. The "knuckle" making violent contact with the inclined plane of the frame.
    B. The "knuckle" returning to its forward most position after recoil has occurred receiver and going over center.
    C. Both a and b
    D. None of the above

3. The rear toggle pin (or connector pin) is vitally important to the Luger pistol's safe operation. If the Luger was fired without this the rear toggle pin or even a damaged pin, death or severe injury could occur to the shooter.
    A. True

B. False

4. What retracts the firing pin when the Luger pistol is fired?
    A. The sear.
    B. The front/center toggle link.
    C. The coupling link.
    D. The rear toggle link.

5. The sear (sear bar) is located on the right side of the frame of a luger pistol and directly engages the firing pin/striker, which draws the firing pin rearward and holds it there when the pistol is cocked.
    A. True
    B. False

6. The rear end of a Luger's sear bar moves in which direction when it loses engagement with the firing pin as the trigger is pulled rearward to fire the gun?
    A. Up
    B. Down
    C. To the left.
    D. To the right.

7. The Luger's ejector is located on the right side of a Luger pistol's upper receiver.
    A. True
    B. False

8. What part of a Luger's side plate is moved by the trigger to in turn move the sear enough to release the striker and fire the gun?
    A. There is no such part in the side plate, the part is found in the upper receiver.
    B. The locking bolt spring
    C. The ejector
    D. The trigger lever
    E. The extractor

Makarov Pistols

1. What type of locking system does the Makarov pistol utilize?
    A. Toggle lock
    B. Link lock
    C. Cam lock
    D. Hesitation lock
    E. There is no locking system, the Makarov is a straight blowback operated pistol.

2. What is unique about the Makarov's extractor design?
    A. The Makarov pistol does not use an extractor, it is a straight blowback pistol.
    B. The extractor is designed to stay in place in the gun and not get blown out of the pistol in case of head separation or case failure.
    C. The Makarov uses two extractors, a left and a right extractor.
    D. The Makarov extractor is conventional and there is nothing unique about its design.
    E. The extractor is on the left side of the slide and ejection is to the left.

3. The Makarov extractor is designed to…
    A. Act as a loaded chamber indicator
    B. Slip under the rim of the cartridge case
    C. Work on the left side of the slide and eject to the left
    D. Snap over the rim of the cartridge case
    E. The Makarov design does not utilize an extractor.

4. To insure that a Makarov pistol does not suffer from "stub jams", you must make sure that…
    A. The barrel ramp is above the magazine box ramp.
    B. The barrel is below the magazine box ramp.

5. What part of a Makarov pistol moves the hammer rearward in double action and releases its engagement on the sear to fire the gun in single action?
    A. The connector rod
    B. The sear activator
    C. The leg on the ejector/slide stop
    D. The carrier
    E. Hammer drop lever

Ruger Double Action Revolvers

1. Ruger GP100 and Redhawk revolvers use ideas from other firearm designs. The trigger / hammer movement in double action was basically copied from?
    A. Korth
    B. Colt
    C. Smith & Wesson
    D. Dan Wesson
    E. Charter Arms

2. Ruger double action revolvers have a safety feature to prevent accidental firing if the trigger is not pulled. What is that safety feature?
    A. A firing pin block.
    B. A transfer bar.
    C. A hammer locking bar.
    D. A two piece firing pin.
    E. The hand won't rotate the cylinder.

3. Rotation of the Ruger double action cylinder is mainly a function of the pawl (hand). The height of the pawl (hand) above its pivot point determines what?
    A. When the cylinder stops rotating.
    B. How far the cylinder rotates.
    C. When the cylinder starts to rotate.
    D. How easily the cylinder rotates.
    E. What direction the cylinder rotates.

4. Rotation of the Ruger double action cylinder is mainly a function of the pawl (hand). The width of the pawl (hand) determines what?
    A. How far the cylinder rotates.
    B. When the cylinder stops rotating.
    C. When the cylinder starts to rotate.
    D. How easily the cylinder rotates.
    E. What direction the cylinder rotates.

5. The Ruger double action firing pin should not be removed unless broken. The bushing that holds the firing pin…
    A. Is threaded (left hand threads) and unscrews rearward (toward the hammer).
    B. Is punched forward (toward the cylinder) to remove it.
    C. Is punched rearward (toward the hammer) to remove it.
    D. Is threaded and unscrews rearward (toward the hammer).
    E. Is threaded and unscrews forward (toward the cylinder).

6. On the Ruger double action, to remove the crane (yoke) from the cylinder, the ejector (extractor) rod must be removed first. The ejector rod is held to the cylinder and crane by…
    A. A roll pin that must be punched out.
    B. It is threaded into the crane with left hand threads.
    C. A pin that is cross locked by a plunger and spring.
    D. It is threaded into the crane with right hand threads.
    E. It is held by an angled plunger in the front of the trigger guard.

7. The ejector retainer has a right hand thread, but a special split screwdriver is required to remove it from the cylinder.
    A. True
    B. False

Ruger Single Action Revolvers

1. The old model Ruger single action revolvers (1953-73) can be converted to contain a safety feature that was introduced with the Ruger New Model single action revolvers (1973-present). Which one of the statements below best describes that feature?
    A. Ruger added a third notch, the safe notch, like the Colt single action design.
    B. Ruger added a cross bolt safety that blocks the hammer.
    C. Ruger added a transfer bar between the trigger and sear.

D. Ruger added a cross bolt safety that blocks the trigger.
E. Ruger added a transfer bar between the hammer and firing pin.

2. How does the new safety feature that was incorporated into the design of the Ruger single action revolvers in 1973 work?
    A. A detented bolt that has a recess milled into it moves from right to left to prevent and allow the trigger to move rearward.
    B. A safe notch is cut into the hammer during the manufacturing process and is a conversion part.
    C. A detented bolt that has a recess milled into it moves from left to right to prevent and allow the hammer to fall forward from the full cock notch when the trigger is pulled.
    D. The transfer bar moves up when the trigger is pulled rearward to release the hammer. The hammer then falls and hits the transfer bar, which hits the firing pin.
    E. The transfer bar moves up as the hammer is drawn rearward into the full cock notch. When the trigger is pulled, the hammer falls and hits the transfer bar, which hits the firing pin.

3. When the hammer of a Ruger single action revolver is pulled rearward, what makes the cylinder latch (cylinder stop) move out of engagement with the cylinder notch, allowing the cylinder to rotate?
    A. The hammer cam.
    B. The hammer plunger.
    C. The lobe on the bottom of the hammer.
    D. The trigger nose.
    E. The hand.

4. When the hammer is drawn back rearward on a Ruger single action revolver, the pawl, being attached to the hammer, moves up and forward to rotate the cylinder.
    A. True
    B. False

5. What occurs when the loading gate of a new model Ruger single action revolver is opened? Select the best answer from below.
    A. The pawl is retracted from engaging the cylinder ratchets.
    B. The loading gate pushes on the trigger, which forces the cylinder latch down.
    C. The loading gate moves the hammer plunger to force cylinder latch down.
    D. The cylinder latch spring plunger pushes the cylinder latch down.
    E. The cylinder latch plunger cams the hammer back into its load notch.

Ruger SR9 / SR40 / SR45

1. The Ruger SR series pistol has two firing pin safety features. How are the two firing pin safeties deactivated to allow the firing pin to strike a primer?
   A. The trigger bar and the firing pin block lever.
   B. The trigger bar and the magazine.
   C. The trigger bar and the hammer lever.
   D. The trigger bar and a transfer bar.
   E. The trigger bar and the sear actuator lever.

2. Armorers that work on the Ruger SR series pistols perform inspections and maintenance. During an inspection, you find that one or both of the firing pin blocking safeties are rounded, nicked, or worn where the firing pin/striker hits it. What should you do?
   A. Turn the worn safety so an unworn area is facing the firing pin/striker.
   B. Replace only the front safety block (because it is the most important).
   C. Replace both safety blocks as a precaution (preventative measure).
   D. Replace only the rear safety block (because it is the most important).
   E. Replace the front safety block and eliminate the magazine safety because it is a bad thing to have in a duty weapon.

3. The Ruger SR series pistols have basically a Glock trigger bar / sear / striker system. The piece that causes the trigger bar sear surface to move down is called the Trigger Bar Reset by Ruger (Glock calls it a Connector). What other function does it have?
   A. It deactivates the ejector.
   B. It disconnects the trigger bar.
   C. It locks the slide into battery.
   D. It aids in returning the trigger bar forward.
   E. It supports the rear frame rails.

4. An extractor on a center-fire, semi-automatic pistol, such as the Ruger SR series, according to the instructor, should have spring-out for proper purchase on the case rim. What is the spring-out range suggested by the instructor?
   A. .00015” to .00025” (fifteen to twenty-five hundred thousandths of an inch).
   B. .010” to .035” (ten to thirty-five thousandths of an inch).
   C. .0015” to .0025” (fifteen to twenty-five ten thousandths of an inch).
   D. .015” to .025” (fifteen to twenty-five thousandths of an inch).
   E. .015” to .050” (fifteen to fifty thousandths of an inch).

5. The Ruger SR series has a manual thumb safety. What does the thumb safety block?
   A. The firing pin / striker.
   B. The trigger bar reset (connector).
   C. The trigger.
   D. The sear.
   E. The trigger bar.

6. The rear takedown pin (Fire Control Housing Pin) has a flat on one side (left side of handgun). The pin is held in place by
   A. The extractor
   B. The sear lever
   C. The ejector
   D. The trigger bar
   E. An internal “C” clip

Ruger Standard Auto .22 Pistols

1. The Ruger Standard Auto pistol is a straight blowback operated gun. The recoil spring closes the bolt but what actually holds the bolt safely closed at the instant the gun is fired?
   A. The bolt stop plunger.
   B. The mass/weight of the bolt assembly.
   C. The sear toggle acts as a locking system.
   D. The rear of the bolt rests in a notch in the frame.
   E. The top rear of the bolt rest in a notch in the tubular receiver.

2. What disconnects the trigger from the sear on a Ruger Standard Auto pistol after it has been fired?
   A. The sear interrupter lever.
   B. The sear toggle lever.
   C. The bolt stop plunger.
   D. The disconnector/trigger bar.
   E. The hammer plunger.

3. What does the manual safety block on a Ruger Standard Auto?
   A. The sear.
   B. The hammer.
   C. The trigger.
   D. The bolt stop plunger.
   E. The trigger lever.

4. If a Ruger Standard Auto was fired when missing its bolt stop pin, the slide would fly off the frame of the gun and would almost assuredly injure the shooter.
   A. True
   B. False

5. On a Ruger Standard Auto pistol the main function of the extractor is
   A. To hold the case in position for the ejector.
   B. To act as the ejector.
   C. To push the cartridge into the chamber.
   D. To align the cartridge with the firing pin.
   E. To act as the firing pin retaining pin.

Ruger LCP/LC9 and Kel-Tec P-3AT Pistols

1. The trigger bar on a Ruger LCP
    A. Trips the hammer catch/sear.
    B. Deactivates the firing pin block
    C. Functions as the disconnector.
    D. Is blocked by the safety.
    E. Both a and c
    F. Both a and d

2. The trigger spring on a Ruger LCP is also the spring that holds the trigger bar up.
    A. True
    B. False

3. The Ruger LCP is a cam lock gun. What does the barrel lock and unlock against?
    A. The slide stop pin.
    B. The takedown pin
    C. The locking block in the frame.
    D. The trigger pivot.
    E. The frame insert pin.

4. There is a lever that will move upward at the end of the trigger pull of a Ruger LC9? What does that lever do?
    A. That is the front tail of the hammer catch. The front of that lever doesn't do anything but run up into a void in the slide, but the rear end of the hammer catch will release the hammer to fire the gun.
    B. That is the blocker lever and it turns the firing pin blocking safety off.
    C. That is the slide lock.
    D. That is the disconnector.

SIG Auto Pistols

Sig Sauer refers to the P220 / P225 / P226 / P228 / P229 pistols as "Classic" or "Classic Series." The following questions will use the term "Sig classic" when referring to any model in this series.

1. The Sig classic pistols do not have a manual safety but have three passive safeties (meaning automatic, not manually activated). The passive safeties are:
    A. The de-cocking lever, the firing pin blocking safety, and sear safe notch
    B. The hammer pin/trigger bar engagement, the sear safe notch, and the de-cocking lever
    C. The firing pin block, de-cocking lever, and hammer pin/trigger bar engagement.
    D. The firing pin blocking safety, slide slot/disconnector, and sear safe notch

2. What part directly de-activates the firing pin blocking safety on the Sig Classic series?
    A. The trigger bar disconnector hump

B. The safety lever
C. The trigger lever
D. The sear actuator
E. The firing pin release lever

3. On the Sig Classic series the de-cocking lever pushes what gun part out of the way in order to drop the hammer?
   A. The trigger bar
   B. The hammer safe notch
   C. The sear
   D. The actuator
   E. The hammer full cock notch

4. When a Sig Classic series pistol is de-cocked, what safety feature(s) does the de-cocker activate?
   A. The disconnector
   B. The firing pin block
   C. The thumb safety
   D. The sear safety notch
   E. B and D above.
   F. A and D above

5. On a Sig Classic series, after the firing pin retaining pin (firing pin positioning pin) is driven out, what part, if any, must be moved or removed in order to get the firing pin out of the slide?
   A. The extractor roll pin
   B. The safety lever
   C. The slide end plate
   D. The firing pin blocking safety
   E. None, it will pop out after removing the positioning pin

6. In order to take the locking insert (locking block) out of a Sig Classic series frame, what part must come out first?
   A. The trigger
   B. The takedown lever
   C. The de-cocking lever
   D. The slide release (slide lock)
   E. The slide release spring

7. On a Sig Classic series pistol, the notches in the trigger pivot pin must face in what direction to allow the locking insert (locking block) to go back into the frame properly?
   A. 20-30 degrees, facing forward
   B. 45 degrees, facing up
   C. 20-30 degrees, facing rearward
   D. 45 degrees, facing down
   E. 90 degrees (straight up and down)

8. One significant difference between early and later Sig Classic pistols is a stamped steel slide with a removeable steel breech block insert.

A. True
B. False

9. On a Sig Classic series, two parts retain the de-cocking lever bearing. One is the de-cocking lever. What is the second retainer or method of retention?
A. The de-cocking lever “C” clip.
B. Slots in the frame.
C. The de-cocking lever roll pin.
D. The de-cocking lever spring.
E. The left side grip panel.

Sig Sauer P320

1. What is the main or most significant component that was added to the fire control unit during the P320 2017 factory upgrade?
A. A new extractor.
B. A take-down safety lever.
C. A disconnector.
D. A safety lever spring.
E. A firing pin block.

2. What causes the P320 striker safety lock to move up, out of engagement with the striker?
A. The striker safety lock elevator
B. The disconnector
C. The safety lever
D. The safety pivot
E. The sear lever

3. The P320 has a takedown safety lever. One function of the takedown safety lever is to prevent a magazine being in the magazine well during take-down. What other function(s) does the takedown safety lever have?
A. Acts as the lock for the slide, preventing the slide from coming off.
B. Acts to lower the sear from engagement with the striker.
C. Acts as a secondary lock to keep the takedown lever in the FCU
D. Acts as a block to prevent the slide catch from falling out of the FCU.
E. B and C above.
F. B and D above

4. What component prevents the striker firing pin from moving forward unintentionally in the P320?
A. The safety lever spring.
B. The disconnector.
C. The striker safety lever.
D. The safety lever.
E. The takedown safety lever.

5. Starting with the 2017 factory upgrade, what component was removed from the P320?
A. The disconnector spring.

B. The safety lever detent.
C. The slide disconnector recess.
D. The striker reset spring.
E. The safety lever spring.

6. During reassembly of the P320, the rear of the takedown safety lever is reinstalled into a slot in the fire control unit. What component must be moved rearward to allow the takedown safety lever to go into the slot?
   A. The takedown safety lever pin.
   B. The takedown safety lever spring.
   C. The sear and safety lever.
   D. The takedown lever.
   E. The sear housing rolled coil spring.

7. The slide catch, spring, and spring post are best installed with the FCU Upside-Down.

   A. True
   B. False

8. The Trigger Bar directly activates what component(s)?
   A. The disconnector.
   B. The sear and safety lever.
   C. The trigger and sear lever.
   D. The takedown safety lever spring.
   E. The striker safety lever.

9. The Sig P320 has a very small coil spring in the striker housing. What is the function of that spring?
   A. Adds extra spring tension to the striker for hard military primers.
   B. Moves the striker spring lever out of engagement with the striker.
   C. Assists in rebounding the striker rearward from the breach face.
   D. It prevents excessive force from striker hits to prevent punctured primers.
   E. It assists in resetting the safety lever and sear.

10. According to Sig Sauer, the P320 recoil spring should be replaced at set intervals (the instructor suggests that the entire spring and guide rod assembly should be replaced). What is Sig's replacement schedule?
   A. Every 20,000 rounds
   B. Every 5,000 rounds
   C. Every 1,000 rounds
   D. Every 10,000 rounds
   E. Every 15,000 rounds

Sig Sauer P365

Note: FCU will be used to denote the Fire Control Unit.

1. In a Sig Sauer P365, the disconnector is
   A. A hump on the trigger bar activated by the slide.
   B. A dovetailed bar on the right side of the FCU.

C. A lever in the FCU that blocks the sear.
D. A bar on the left side of the FCU that drops the sear.
E. A dovetailed bar on the left side of the FCU

2. The P365 takedown lever operates a part called the takedown safety lever. What is one function of the takedown safety lever?
   A. Acts to lower the sear from engagement with the striker.
   B. Acts as the lock for the slide, preventing the slide from coming off.
   C. Acts as a secondary lock to keep the takedown lever in the FCU
   D. Acts as a block to prevent the slide catch from falling out of the FCU.
   E. B and C above.
   F. B and D above

3. The P365 takedown safety lever has more than one function during weapon disassembly. What secondary function(s) does the takedown safety lever have?
   A. Acts as the lock for the trigger, preventing an accidental trigger pull.
   B. Acts as a secondary lock to keep the takedown lever in the FCU.
   C. Prevents any magazine from being in the pistol during disassembly.
   D. Acts as a block to prevent the slide catch from falling off of the FCU.
   E. A and C above.
   F. C and D above

4. The P365 comes in two basic slide lengths, standard and XL (extra-long). The recoil springs are different. What are the basic differences in the springs?
   A. The standard and XL are only different in length.
   B. The XL disassembles easily but the standard does not.
   C. The standard has one spring, the XL has two springs.
   D. The XL installs only one direction but the standard is bi-directional.
   E. The standard has two springs, the XL has one spring.

5. The P365 striker is retained in the slide _____.
   A. By a 2.5mm roll pin that is driven out top to bottom.
   B. By the slide end cap and lug on the polymer striker housing.
   C. By the striker safety catch, which must be depressed.
   D. By the extractor roll pin.
   E. By the striker spring cup, either the one-piece or two-piece design.

6. The P365 was upgraded from the old style extractor to the new style. Either of the extractors will work in any slide because Sig designed mutual compatibility.
   A. True
   B. False

7. The P365 extractor spring is different than most handgun extractor springs. Choose the answer that best describes the extractor spring.
   A. The spring has a larger first coil to hold better in the slide.
   B. The spring is actually two springs with left and right hand windings.
   C. The spring is completely made of a special polymer.
   D. The spring is a leaf spring formed in a V shape for long life.
   E. The spring has a required soft polymer inner buffer.

8. The tip of the P365 striker (firing pin), that contacts a cartridge primer has a special shape that is different from most “normal” firing pins. (Note: the shape is actually engineered to help with firing pin rebounding in the very fast slide unlocking and opening time).
    A. The tip is slightly squared.
    B. The tip is slanted.
    C. The tip is rectangular (similar to a Glock).
    D. The tip is parabolic.
    E. The tip is a special 1mm double radius

9. Sig Sauer recommends that cleaning and lubricating be done in a particular way. The method is different than what we learned in the past but is actually applicable to all striker fired handguns. What does Sig recommend?
    A. Use only water based, non-petroleum cleaners.
    B. Do not use automatic transmission fluid as a cleaner or lubricant.
    C. Do not clean the rear portion of the slide, especially the striker tunnel.
    D. Use only ultrasonic cleaning machines because they clean better.
    E. Do not lubricate the sear because the striker will slip off unintentionally.

10. During re-assembly, the short end of the P365 sear spring...
    A. Must fit into the takedown safety lever to act as a retainer.
    B. Must fit into the hole or cut-out in the sear to provide proper spring tension.
    C. Must be moved onto a “shelf” above takedown safety lever hole.
    D. Must be angled down to fit into a hole in the FCU housing for best tension.
    E. Must be installed after the sear and takedown safety pin are in place.

Smith & Wesson Double Action Revolvers

1. When the S&W revolver trigger is pulled in double action or when cocked in single action, what must occur?
    A. The trigger nose must start pulling the cylinder stop down before the cylinder rotates.
    B. The hand must start pushing on a cylinder ratchet pad as the cylinder stop starts to move down.
    C. The hammer safety block must start rising to act as a transfer bar just as the cylinder rotates to a new chamber and locks.
    D. The cylinder stop must be free from the cylinder notch before the hand pushes on a ratchet pad.
    E. The cylinder bolt must move from under the rear of the hammer to allow the hammer to cock.

2. On a S&W revolver used as a duty or defense weapon, when should the cylinder stop pop back up during the cylinder’s rotation to the next chamber?
    A. Approximately 10% to 15% of the way to the next chamber.
    B. Approximately 1/4 of the way to the next chamber.
    C. Approximately 50% of the way to the next chamber.
    D. Approximately 2/3 of the way to the next chamber.
    E. Approximately 75% of the way to the next chamber.

3. On the S&W revolver, one safety feature is the hammer block. What other part is also a safety feature that helps to prevent the hammer from accidentally striking a cartridge when the hammer is down?
   A. The rebounding feature of the main spring moves the hammer back.
   B. The transfer bar prevents the hammer from hitting the firing pin.
   C. The rebound cams the bottom of the hammer back and blocks it.
   D. The trigger sear nose blocks the hammer from rotating forward unless pulled.
   E. The cylinder does not align a cartridge when the hammer is down.

4. The S&W revolver cylinder center pin locks into the breech area of the frame. The front locking bolt on the barrel or in the barrel shroud locks into the extractor rod. The front locking feature is considered a strong addition to the rear locking.
   A. True
   B. False

5. When disassembling a S&W revolver, to lift out the hammer
   A. The hammer must be in the forward position for all frame sizes.
   B. The hammer must be in the forward position for all except the L frame.
   C. The hammer must be all the way rearward for the L frame, partially rearward for N frames, and forward for J & K frames.
   D. The hammer must be all the way rearward for all frame sizes.
   E. The hammer must be all the way rearward for all frames except the L frame.

6. Some S&W revolvers have a bolt locking safety that prevents the bolt from opening the cylinder under heavy recoil. Models that have the bolt locking safety…
   A. Have a hand with a long pin that protrudes through the trigger and engages the bolt locking safety.
   B. Have a long pin on the hammer that protrudes from the left side and engages the bolt locking safety.
   C. Have a trigger with an integral pin on the left side that engages the bolt locking safety.
   D. Have a pin in the rebound, usually in the spring hole, that engages the bolt locking safety.
   E. Have a pin on the hammer block that engages the bolt locking safety and pulls it down as the hammer block moves down.

7. S&W revolvers have a frame stud that is riveted in. What does the frame stud do?
   A. Acts as a stop for the cylinder, preventing it from opening too far, which allows easier loading.
   B. Is found only on heavy recoiling revolvers, acting as a reinforcement for the cylinder.
   C. Acts as a reinforcement and lock for the trigger pin and bushing when they are pressed into the frame.
   D. Acts as a stop for the bolt and thumbpiece, preventing unnecessary forward movement when the cylinder is opened.

E. Acts as a stop for the cylinder, preventing it from coming off of the yoke during ejection.

Smith and Wesson Centerfire Auto Pistols

The test will use the term “S&W classic autos” to describe the S&W centerfire auto pistols in course #1174DL.

1. In S&W classic autos, what causes the barrel to rise and lock up when the slide closes?
   A. The barrel lug cammed up by the slide stop pin.
   B. The barrel lug hitting an inclined plane in the frame.
   C. The barrel link traveling just over top dead center.
   D. The barrel lug cammed up by the locking block.
   E. The barrel cam moving over the locking block.

2. On S&W classic autos, the ejector pivots up and down. The magazine pushes it up into position to act as the ejector in the breech face. What happens when the magazine is removed?
   A. The ejector plunger and spring push the ejector down.
   B. The ejector pushes the disconnector down.
   C. The trigger bar is disconnected from the sear.
   D. All of the above.
   E. A and B above

3. The safety on the S&W classic auto causes the hammer to fall if it is cocked (single action). What it the sequence of components for that to happen?
   A. Rotate the safety, which pushes the sear depressor (release lever), which pushes the draw bar, which disengages the sear from the hammer.
   B. Rotate the safety, which pushes the disconnector, which disconnects the sear from the hammer.
   C. Rotate the safety, which pushes the safety lever, which pushes the trigger bar out of engagement.
   D. Rotate the safety, which pushes the sear depressor (release lever), which pushes the sear out of engagement with the hammer.

4. What gun part causes the firing pin safety lever to deactivate the firing pin blocking safety feature?
   A. The disconnector.
   B. The safety.
   C. The sear release lever .
   D. The ejector plunger (when the magazine is inserted).
   E. The drawbar.

5. What does the hammer hit when the hammer is dropped by the action of putting the manual safety into the on-safe position?
   A. The rear firing pin (two-piece).
   B. A hump on the drawbar.
   C. The back of the safety.
   D. The slide.
   E. The frame.

6. During reassembly of the S&W classic series, the trigger spring goes in after the trigger is installed. What is the difference in the trigger spring between the 3rd Generation handguns and the 1st/2nd Generation (Gen) handguns?

   A. The trigger spring is lighter in the 1st/2nd Gen guns, making the spring less reliable.
   B. The trigger spring hole is tapered in 3rd Gen guns, it doesn't drag on the hole and feels better.
   C. The trigger spring is chrome steel and lighter in the 3rd Gen, making it more reliable and feel better.
   D. The trigger spring hole is straight in the 3rd Gen guns which makes it more reliable.
   E. The trigger spring pressure was increased in 3rd Gen guns by about 5%, to make it more reliable.

Smith & Wesson M&P pistols

1. What deactivates the firing pin blocking safety on M&P series pistols?
   A. The top of the trigger bar.
   B. The sear actuator lever.
   C. The safety lever.
   D. The firing pin lock lever.
   E. The trigger link.

2. The M&P series extractor has a somewhat unique feature that helps retain the extractor if a cartridge blow-out (case rupture) occurs. The instructor states that the design was copied from what other pistol?
   A. Swiss Sig P210
   B. German Walther P38
   C. Italian Beretta M1951
   D. Soviet Makarov PM
   E. French Mab PA15

3. The M&P has a component for removing the slide.. The component depresses the sear without pulling the trigger. What is that component?
   A. Slide disassembly lever
   B. Sear deactivation lever
   C. Sear depressor lever
   D. Trigger bar deactivation lever
   E. Disassembly safety lever

4. The sear on the M&P series is
   A. A block that pivots down when the front is cammed up by the trigger bar.
   B. The rear surface of the trigger bar that moves down (like a Glock).
   C. A crescent sear that pivots forward when the bottom is pushed by the trigger bar.
   D. The rear surface of the trigger bar that is cammed out by the slide.
   E. A block that is directly connected to the trigger bar and pivots when the trigger bar moves rearward.

5. When a M&P pistol cycles, what disconnects the sear so it can re-engage with

the striker?

A. The rear surface of the trigger bar is cammed down by the connector.
B. The trigger bar is cammed to the side, from under the sear, by the slide.
C. The trigger bar is cammed down, so it can't contact the sear, by the slide.
D. The sear is cammed back up into engagement by a hump on the trigger bar.
E. The sear overrides the trigger bar due to an elongated hole, and pops back up.

6. During reassembly of the M&P striker, the correct order of parts onto the striker is

A. Striker, striker sleeve, striker spring, striker spring bushing (retainer) and return spring (reset spring).
B. Striker, return spring (reset spring), striker sleeve, striker spring, and striker bushing (retainer).
C. Striker, striker spring, striker sleeve, return spring (reset spring), and striker spring bushing (retainer)
D. Striker sleeve, striker, return spring (reset spring), striker spring, and striker bushing (retainer).
E. Striker, return spring (reset spring), reset spring retainer, striker sleeve, striker spring, and striker bushing (retainer).

7. During reassembly of the M&P pistol, to ease reassembly, a slave pin should be used for what sub-assembly?

A. The striker safety block, spring, spring cap, and rear sight onto the slide.
B. The trigger bar, trigger bar spring, slide stop, and locking block.
C. The sear and trigger bar into the sear housing assembly.
D. The trigger, trigger lock, trigger lock spring, and trigger bar.
E. The sear, sear actuator, and disconnector into the sear housing.

8. When reassembling the M&P pistol, the locking block goes into the frame before the trigger assembly, except for the .40 S&W version.

A. True
B. False

9. When re-installing the takedown lever into the M&P frame, the takedown lever is installed in a specific direction.

A. With the flat (notch) on the takedown lever facing up.
B. The flat (notch) on the takedown lever facing 3 o'clock.
C. The flat (notch) on the takedown lever facing 9 o'clock.
D. With the flat (notch) on the takedown lever facing down.
E. Trick question: it does not matter which direction the flat (notch) faces.

10. When reinstalling the fire control housing into the frame.

A. The ambidextrous safety lever and detent is installed after the housing is in the frame.
B. The trigger bar is inserted after the housing is in the frame but the safety is installed prior.
C. The trigger bar and safety are installed prior to inserting the housing but the detent goes in after.

D. The safety lever and trigger bar are installed before the housing goes into the frame.
E. The trigger bar and safety detent are inserted prior to inserting the housing into the frame, but the safety drops in afterward.

Springfield Armory XD/ XD-M® Pistols

1. When a cartridge is fired in a Springfield XD, the barrel and slide move back a short distance locked together. The camming surface on the barrel contacts the locking insert (locking block), which pulls the barrel down, unlocking the slide and barrel. The locking block stops the barrel and the slide continues rearward to extract and eject the empty case. The rearward motion of the slide is stopped by the recoil spring coil binding. When the slide returns forward, it picks up and chambers a new cartridge from the magazine, ready for the next shot.
    A. True
    B. False
2. In order to take the slide off of the frame of a Springfield XD pistol, the gun must be uncocked, so, the trigger must be pulled.
    A. True
    B. False

3. How does the Springfield XD pistol disconnect?
    A. The slide pushes the connector to the left, out of engagement with the trigger bar, which disconnects the trigger bar from the sear actuator.
    B. The slide pushes the hump on top of the trigger bar down out of engagement with the sear.
    C. The slide pushes the safety lever, which pushes the trigger bar out of engagement with the sear actuator lever.
    D. The trigger bar overrides the sear during rotation and the elongated slot and spring in the sear allows it to move back to engage the striker.
    E. The slide pushes the hump on top of the trigger bar to the right, which breaks the engagement with the sear.

4. When a Springfield XD pistol is out of battery (slide is not closed all the way), why won't the gun fire?
    A. The firing pin is not long enough to reach the primer.
    B. The striker is only partially cocked, not enough energy for primer ignition.
    C. The safety lever doesn't have enough leverage to move the striker safety.
    D. The trigger bar is still being pushed down and is disconnected.
    E. The striker has not been caught by the sear yet.

5. How is the striker safety disengaged on a Springfield XD pistol?
    A. When the trigger is pulled rearward, the tab on the trigger bar pushes the striker safety up and out of engagement with the striker.
    B. When the trigger is pulled back, the trigger bar moves rearward, contacting the striker safety lever, which rotates up and pushes the striker safety up and out of engagement with the striker.

C. When the trigger is pulled back, the trigger bar moves forward, contacting the striker safety lever, which rotates up and pushes the striker safety up and out engagement with the striker.
D. When the trigger is pulled rearward, the cutout on the trigger bar allows the spring-loaded striker safety to move downward and out engagement with the striker.
E. When the grip safety is pushed in by grasping the weapon, the safety lever is rotated, pushing the striker safety out of engagement with the striker.

6. What does the grip safety do on a Springfield XD?
   A. It blocks the trigger
   B. It disengages the striker block safety.
   C. It blocks the trigger bar
   D. It blocks the sear
   E. It disengages the sear safety lever.

Taurus Revolvers

1. The Taurus target revolvers have some unique feature that are not on the standard model. Those features are _____.
   A. A two-stage trigger and a lighter mainspring.
   B. An adjustable mainspring and a two-stage trigger.
   C. A honed internal frame and an adjustable mainspring.
   D. An adjustable mainspring and a trigger over-travel stop.
   E. A trigger over-travel stop and custom honed internal components.

2. Modern Taurus revolvers utilize a transfer bar system to act as a safety feature. The transfer bar eliminates the need for two components found on Smith & Wesson double action revolvers, which are _____.
   A. The rebound spring and cylinder bolt.
   B. The rebound slide and the cylinder bolt safety.
   C. The firing pin nose and hammer block.
   D. The rebound spring and rebound limiting pin.
   E. The rebound slide and the hammer block.

3. When the Taurus revolver when the hammer is lowered (resting position) and the trigger is forward (resting position), the hammer is stopped by _____ and the trigger forward travel is stopped by _____.
   A. The hammer rebound safety bar / trigger nose sitting on the hammer.
   B. The frame above the firing pin / trigger nose hitting the frame.
   C. The frame above the firing pin / trigger nose sitting on the hammer.
   D. The frame above the firing pin / trigger front engaging the cylinder stop.
   E. The hammer rebound safety block / trigger stop pin.

4. The Taurus revolver cylinder rotation is basically a copy of the Smith & Wesson with a couple differences to the cylinder ratchets and the hand.

A. The ratchet pads are rounded on the bottom, the top of the hand is rounded.
B. The ratchet pads are square and the top of the hand is less angled.
C. The ratchet pads have a flat and an angle, the top of the hand is angled.
D. The ratchet pads have a flat and an angle, the top of the hand is flat.
E. The ratchet pads are smoother and the top of the hand is more pointed.

5. The Taurus revolver cylinder stop spring and plunger are actually in the cylinder yoke and not directly in the frame.
   A. True
   B. False

6. How are the Taurus revolver mainspring and trigger spring are removed?
   A. The same as a standard Smith & Wesson double action revolver.
   B. By using a Brownell's rebound spring tool and a screwdriver.
   C. Both have holes in the guides and a pin will capture them for removal.
   D. By removing the mainspring tensioning screw and a post holding the trigger spring.
   E. By unthreading the tensioning screws on both spring guides.

7. How is the hand in a Taurus revolver trigger is spring loaded?
   A. Is activated by a spring almost identical to a Smith & Wesson.
   B. The spring is almost identical to a Ruger single action flat spring.
   C. It is activated by a spring and plunger in the trigger.
   D. The spring and plunger fit into a hole in the frame.
   E. It is activated by a spring and plunger in the hammer.

Walther PP Series & FEG PA63 Pistols

1. The Walther PP series of guns utilize what type of locking system?
   A. Link lock.
   B. Cam lock.
   C. Roller lock.
   D. Blowback.
   E. Lifting lock block.

2. The Walther PP series of guns have a loaded chamber indicator. Where is it and what does it do?
   A. A pin in the slide behind the barrel hood. It protrudes up if a round is chambered.
   B. The extractor has a protrusion. It sticks out to the right if a round is chambered.
   C. A lever in the slide behind the barrel hood. It raises if a round is in the chamber.
   D. A pin at the rear of the slide. It protrudes rearward if a round is chambered.

E. There is a slot in the barrel hood. If there is a round in the chamber, it is visible.

3. Which model of pistol has a slide lock feature that will lock the slide rearward after the last round in the magazine has been fired, the FEG PA63 or the Walther PPK?
    A. FEG PA63
    B. Walther PPK
    C. a and b, both models

4. A safety feature is enabled when the hammer is cocked to its full cock position in single action on a FEG PA63 and a Walther PPK. The sear rises and pushes the part up through the frame of the gun. What does that part do?
    1. Blocks the hammer on the Walther
    2. Blocks the trigger on the Walther
    3. Blocks the hammer on an FEG PA63
    4. Moves the FEG PA63 firing pin into alignment with the hammer.
    5. Blocks the trigger on the FEG PA63
        A. 1 and 4
        B. 2 and 3
        C. 1 and 3
        D. 2 and 4
        E. 2 and 5

5. When the manual safety (safety catch) of the Walther PP series is "on safe" what does it do?
    1. Blocks the firing pin from the hammer.
    2. Drops the hammer.
    3. Prevents the firing pin from protruding through the breech face.
    4. Prevents the sear from dropping the hammer.
    5. Blocks the trigger.
        A. A, B, and E
        B. B, D, and E
        C. A, B, and C
        D. A, C, and D
        E. B, and C

Benelli Semi-Auto Shotguns – Volume 1
Models: M1 / M2 / Super Black Eagle

1. The Benelli semi-auto shotguns operation system is described as
    A. A gas piston driven system.
    B. A direct impingement system.
    C. A long recoil system.
    D. An inertia driven system.
    E. A short recoil, gas assisted system.

2. The Benelli semi-auto series has what type of trigger system?
    A. Hammer, trigger, trigger bar, sear, and disconnector.
    B. Hammer, trigger, sear actuator, sear, and disconnector.
    C. Hammer, trigger with primary sear, secondary sear, and disconnector.
    D. Hammer, trigger bar, and sear.
    E. Hammer, trigger with primary sear, and secondary sear.

3. A customer bring in a Benelli M1 shotgun, complaining that when he/she pulls the bolt rearward, the gun will not feed a shell from the magazine. What is the possible problem?
    A. There is nothing wrong, that is the way it should operate.
    B. The carrier is likely bent, adversely affecting the cartridge stop.
    C. The carrier dog is worn, not allowing the carrier to drop low enough.
    D. The carrier latch (cartridge stop) is bent or broken.
    E. The number one problem, and most likely cause, is bad ammunition.

4. Benelli semi-autos have a large heavy bolt and a rotating bolt head. The bolt assembly has a unique component inside, a heavy coil spring. What is the function of the spring?
    A. A vibration dampener to make the action quieter during recoil.
    B. A recoil absorbing system for lighter felt recoil.
    C. It helps prevent excessive wear of the locking lugs.
    D. It stores energy to assist rearward bolt inertia.
    E. It absorbs unwanted energy surges during rearward bolt inertia.

5. The Benelli Super Black Eagle shown in disassembly and reassembly has a trigger housing a little different than the M1 shown during design and function. The carrier spring plunger and carrier spring uses a roll pin to retain the plunger in the trigger housing.
    A. True
    B. False

Benelli Semi-Auto Shotguns – Volume 2
Models: Vinci and M3

1. What is fairly unique about the Benelli M3 shotgun?
    A. It is pump operated and semi-automatic.
    B. It is both gas operated and inertia operated.
    C. It is semi-automatic and full-automatic.
    D. It is multi-caliber, shooting either 12 gauge or 20 gauge.
    E. It is the only shotgun made with a 2-stage trigger.

2. The Vinci shotgun is also fairly unique. The key to its uniqueness is
    A. It uses a plastic (polymer) stock with a unique color.
    B. It is modular and breaks into three sub-assemblies.
    C. It uses a gas assisted inertia recoil system and a recoil reducing stock.
    D. It is pump and semi-automatic.
    E. It was designed for military and law enforcement use.

3. In the M3 shotgun, when the bolt is locked to the rear, the bolt is held by the carrier dog. The bolt pushes on the carrier dog, trying to move it, which would lift the carrier, and let the bolt continue forward. The carrier cannot rise until the carrier latch is moved out of the way. What part prevents the carrier latch from moving and allowing the carrier to rise.
    A. The hammer latch lever.
    B. The cartridge drop lever.
    C. The cartridge latch lever.
    D. The cartridge stop.
    E. The carrier dog pivot.

4. The Vinci disassembles differently than other shotguns. The lower receiver, magazine tube, and forend come off as one unit. The lower unit is held to the barrel by
    A. A spring loaded plunger in the forend and a V lug on the barrel.
    B. A captured screw in the lower unit and a threaded lug on the barrel.
    C. A ring lug for the magazine tube and a threaded magazine cap.
    D. Tongue and groove interface and rotating lug on the end cap.
    E. A lug on the barrel and a threaded end cap on the forend.

5. On the Benelli M3, when reinstalling the carrier latch pivot pin (install from the bottom of the receiver), it is possible to push the pin too far into the receiver. It is not easy, but it is possible to see if it has been pushed too far by looking into the front of the receiver. The instructor shows an easy way to verify that the pin is installed properly, which is…
    A. Use dial calipers to verify the pin is .025 to .030 below the receiver bottom.
    B. Use the action bars, the pin must not interfere with the bars.
    C. Use a light and mirror to check for proper height.
    D. Use the barrel receiver extension, the pin must not interfere.
    E. Use the Benelli armorer's punch that has a stop shoulder.

Browning A-5, Remington 11, & Savage 720 Shotguns

1. The Browning A-5 barrel and barrel extension will be called "the barrel" in this question. At what point in the firing cycle does the locking block unlock from the barrel, causing the barrel to return to their forward position?
    A. When the shotgun is fired, the breech bolt and barrel are locked together and move rearward a short distance. The firing pin is retracted and unlocks the locking block from its engagement with the barrel and barrel returns to the forward position.
    B. When the shotgun is fired, the bolt assembly and barrel move rearward, all locked together until the rear of the firing pin hits the back of the receiver, pushing the firing pin forward, which will pull down and rotate the locking block out of engagement (remember, the firing pin is connected to the locking block). The barrel then returns forward.
    C. When the shotgun is fired, the bolt assembly and barrel move rearward, locked together, until the carrier dog is caught behind the operating handle

and the recoil spring begins to push the breech bolt forward. This unlocks the locking block from the barrel and the barrel returns forward.

D. When the shotgun is fired, the bolt assembly and barrel move rearward, locked together, until the carrier dog catches and pulls the link downward. This causes the locking block to unlock from the barrel and the barrel returns forward.

2. What is the secondary cartridge stop on a Browning A-5?
   A. The link latch.
   B. The interceptor latch.
   C. The locking block latch.
   D. The carrier dog latch.
   E. The carrier latch.

3. What is the first primary cartridge stop on a Browning A-5?
   A. The carrier dog latch
   B. The locking block latch
   C. The cartridge stop
   D. The carrier latch
   E. The magazine cut-off

4. What is the second primary cartridge stop on the Browning A-5?
   A. The cartridge stop
   B. The locking block latch
   C. The carrier dog latch
   D. The carrier latch
   E. The magazine cut-off

5. What trips the part called the cartridge stop on a Browning A-5?
   A. The shooter’s finger, by depressing its release button.
   B. The forward moving barrel.
   C. The next shell coming out of the magazine tube.
   D. The rising carrier.
   E. The carrier dog latch.

6. What pushes the carrier down over center of the carrier spring?
   A. The bolt.
   B. The carrier latch.
   C. The cartridge itself.
   D. The locking block latch.
   E. The carrier dog locking latch.

7. The sear system of a Browning A-5 consists of…
    A. a primary sear
    B. a binary trigger and sear
    C. a secondary sear
    D. a primary sear and tertiary safety sear.
    E. both a primary and secondary sear.

8. The engagement of a Browning A-5's secondary sear to the hammer should be...
    A. Positive
    B. Negative

9. The Browning A-5 brake system allows for light loads and heavy loads to be fired from the shotgun, what part of the gun makes direct contact with and constricts around the magazine tube to regulate the amount of braking action?
    A. The bronze friction piece.
    B. The friction ring
    C. The recoil spring
    D. The barrel ring
    E. The recoil spring lock

10. The Remington Model 11 brake system contains one or more extra components. What is/are the component(s) and why must you be concerned about the condition?
    A. They need an extra friction ring to slow down bolt assembly and barrel rearward travel. Without the extra friction ring functioning properly, the back of the receiver will eventually crack.
    B. A recoil spring extension. Without the extension, or if it is damaged, the barrel ring will eventually crack and/or break off of the barrel.
    C. A fiber cushion must be installed at the rear of the receiver. The fiber cushion cannot be missing, cracked or damaged to insure that there is not an accidental discharge if live cartridges are manually cycled through the action.
    D. The Model 11 braking system utilizes a friction ring compression ring to apply additional torque to the bronze friction ring. Without the compression ring, the bronze ring will not slow the bolt and the rear of the receiver will eventually crack.
    E. The Model 11 uses the components listed in A, C, and D. The Model 11 cycles faster than a Browning A5 due to its lighter barrel and requires all of these components to prevent damage.

H&R Topper Type Shotguns

1. How is an H&R Topper's barrel unlocked and pivoted open?
    A. When you push the release lever down, the relief cut in the release lever moves over the top of the locking plunger and the spring-loaded locking

plunger moves into the relief cut. With the locking plunger out of the path of the barrel lug, the barrel can now be pivoted open.

B. When you push the release lever down, it moves the locking block (barrel catch) back out of engagement with the barrel bite, allowing the barrel to be pivoted open.
C. When you push the release lever down, it cams the barrel lug forward and out of engagement with the barrel catch so that the barrel can be pivoted open.

Information found in Design and Function section at (00:05:00).

2. Once the barrel of an H&R Topper is closed and locked up, what holds the barrel closed?
    A. A coil spring in between the trigger guard and the locking block (barrel catch).
    B. A spring loaded plunger pushing on the release lever and the barrel lug.
    C. A locking lever attaching the release lever to the barrel lug and the barrel catch.
    D. The forend locking latch is spring loaded to lock into the barrel lug.
    E. The cross bolt and lever are spring loaded into the barrel lug.

3. What does the trigger extension do on a Topper shotgun?
    A. It cams the striker catch assembly up.
    B. It trips the ejector.
    C. It cams the sear out of engagement.
    D. It cams the extractor rearward and trips the hammer.
    E. It holds the striker catch assembly up.

4. What causes the striker catch assembly to rise on a Topper shotgun?
    A. The trigger extension
    B. The hammer
    C. The hammer strut
    D. The ejector latch
    E. The striker actuator

Mossberg 500 Series Shotguns

1. Where is the Primary cartridge stop located on a Mossberg 500?
    A. On the right side of the receiver.
    B. On the left side of the receiver.

2. What activates, deactivates and controls the movement of the primary cartridge stop of a Mossberg 500?

A. The interceptor lever.
B. The elevator.
C. The bolt slide.
D. The bolt.
E. The action bar.

3. What part raises the shell high enough for the bolt to push it into the chamber on a Mossberg 500 shotgun?
    A. The cartridge interrupter.
    B. The elevator.
    C. The escalator.
    D. The forward leg of the mainspring guide.
    E. The cartridge guide.

4. What prevents the next shell from coming out of the magazine tube as a live cartridge is being fed into the chamber of a Mossberg 500?
    A. The primary cartridge stop.
    B. The secondary cartridge stop.
    C. The action bar lock.
    D. The cartridge lock.
    E. The interceptor latch.

5. When the Mossberg 500 is closed and locked up, what locks the bolt slide in position?
    A. The bolt slide locking lever.
    B. The locking bolt.
    C. The action bar lock.
    D. The trigger stop.
    E. The bolt slide engagement bar.

6. The Mossberg 500's bolt utilizes two extractors. The right bolt must have negative engagement with the rim of the shell and the left extractor must have sharp positive hook to engage with the rim of the shell in order to insure strong ejection.
    A. True
    B. False

7. What cams the elevator up and down in a Mossberg 500?
    A. The rear of the bolt.
    B. The actuator lever.
    C. The locking bolt (locking block).
    D. The carrier retractor.
    E. The bolt slide.

8. Early Models of the Mossberg 500 shotgun only utilize one action bar in its design. How is the secondary cartridge stop turned on and off (activated and deactivated) on these early models?
    A. Just like the later model 500s, it is turned on and off by the action bar.
    B. The bolt slide activates and deactivates the secondary cartridge stop.
    C. Early model 500s do not have a secondary cartridge stop.
    D. The early models used a secondary cartridge stop activated by the elevator.
    E. When the shotgun fired, the hammer plunger activated a release lever.

9. What is the main difference in the old style and new style Mossberg 500 safety systems found within the fire control system of the trigger housing? Choose the best two answers.
    1. In the old style safety system the connector (safety) moves in an arc.
    2. In the old style safety system the connector (safety) moves straight up and down.
    3. In the old style safety system, the connector (safety) moves forward and back.
    4. In the new style safety system the connector (safety) moves in an arc.
    5. In the new style safety system the connector (safety) moves straight up and down.
    6. In the new style safety system, the connector (safety) moves forward and back.
        A. 1 and 5
        B. 2 and 4
        C. 3 and 6
        D. 1 and 4
        E. 2 and 5

10. What controls the movement of the action bar lock on a Mossberg 500?
    A. The trigger
    B. The connector
    C. The hammer
    D. The bolt lock
    E. The bolt slide

Remington 870 Shotguns

1. Remington solved a common problem with pump shotguns of the time when they designed the model 870. What was the design they created and patented?
    A. The ventilated rib barrels.
    B. Dual action bars.
    C. Action bar locks.
    D. Carrier lifting by the action bars.
    E. Chrome-Moly steel barrels to prevent ruptures.

2. When the model 870 has shells in the magazine tube and the action is closed, the first shell ready to exit the magazine tube is held by
    A. The carrier latch (left side).
    B. The primary action bar latch (right side).
    C. The primary shell latch (left side).
    D. The secondary shell latch (right side).
    E. The secondary action bar latch (left side)

3. What unlocks the action bar lock, disengaging it from the action bar, when the model 870 shotgun is fired?
    A. A pin on the side of the hammer.
    B. The hammer spring plunger.
    C. The disconnector.
    D. The carrier dog.
    E. The action bar latch.

4. How does the model 870 lock the bolt?
    A. A locking block engages the receiver above the bolt.
    B. The bolt forces out two rollers, left and right, into the barrel extension.
    C. A locking block engages the barrel extension above the bolt.
    D. The bolt tips at the rear, by the action bar cam, and engages in the receiver.
    E. The bolt tips and locks into the receiver, by action of the carrier camming surface.

5. To remove the bolt and carrier from a late model 870, what is the sequence after removing the barrel?
    A. Open the action, hold in the right shell latch, then pull the action bars, carrier, and bolt out through the front.
    B. Close the action, hold in left shell latch, then pull the action bars, carrier, and bolt out through the front.
    C. Close the action, hold in the right shell latch, then pull the action bars, carrier, and bolt out through the front.
    D. Open the bolt approximately one inch, drive out the carrier retention pin, then pull out the action bars, carrier and bolt.
    E. Remove the bolt handle, close the bolt, hold in the left shell latch, then pull the carrier and bolt out.

6. To remove the sear spring from the trigger plate on a model 870 it is recommended that you _____ then lift out the sear spring.
    A. The sear spring and sear are part of an assembly that should not be removed except by the factory.
    B. Remove the sear pin, which allows the sear to be removed, which covers the sear spring hole.
    C. Remove the rear trigger plate pin (trigger stop pin), then remove the sear spring retainer.
    D. Remove the trigger pin, trigger spring, and trigger, which relieves tension on the sear spring.
    E. Remove the rear trigger plate pin (trigger stop pin) to allow the trigger to go farther rearward, reducing tension on the sear spring.

7. To correct headspace on the model 870, the barrel hood must be welded and re-fitted to the locking block because Remington does not produce repair parts.
    A. True
    B. False

Remington 1100 & 11-87 Shotguns

1. Model 1100 and 11-87 shotguns have a component called the interceptor latch. The interceptor latch is a secondary cartridge stop but has another function. What is that function?
    A. It prevents the disconnector from prematurely disconnecting during surge.
    B. It allows a shell onto the cartridge carrier during ejection.
    C. It prevents a shell from re-entering the magazine tube during surge.
    D. It prevents more than two shells being inserted into the magazine tube.
    E. It prevents the carrier from rising during recoil surge.

2. Model 1100 and 11-87 shotguns are gas operated. The gas system consists of the magazine tube, a number of components in specific order, and gas ports in the barrel ring. What are the components of the gas system in the correct order from the rearmost part (receiver direction) to the barrel ring?
    A. The action (inertia) sleeve, action bars, piston, piston seal, and barrel seal.
    B. The action bars, piston seal, action (inertia) sleeve, piston, and barrel seal.
    C. The action bars, action (inertia) sleeve, barrel seal, piston, and piston seal.
    D. The action bars, action (inertia) sleeve, piston seal, piston, and barrel seal.
    E. The action (inertia) sleeve, action bars, piston seal, piston, and barrel seal.

3. One safety built into the Model 1100 and 11-87 shotguns is in the bolt. What is that safety feature?
    A. The firing pin will not protrude until the carrier is pushed down by the bolt.
    B. The firing pin will not protrude until the locking block is up and locked.
    C. The firing pin safety lever is dis-engaged when the action bars lock forward.
    D. The locking block is made from S-7 steel to prevent wear and breakage.
    E. The firing pin will not protrude until the bolt cam pivots out of engagement.

4. The bolt striking two humps on the carrier (right side) are what makes the carrier return to the down position, although old models had only one hump.
    A. True
    B. False

5. What is one problem on the Model 1100, that can cause a failure of the carrier to lift a shell?
    A. The carrier release is above flush, robbing energy from the shell hitting the latch.
    B. The carrier release is below flush and will not release the carrier when the shell exits.
    C. The carrier dog is not properly lubricated, causing the carrier to stick in the down position.

D. The carrier latch is inserted backward, causing the carrier to lock instead of lifting.
E. Out of round (bad) ammunition can cause the carrier latch to release too late.

Stoeger Coach Guns

1. How are the hammers of a Stoeger Coach Gun cocked?
    A. The cocking levers (forearm lock) in the forend iron are forced to move downward when the barrels are opened. This will cause the cocking levers to push the cocking rods (hammer cocking pins) in the frame rearward, which will in turn rotate the hammers into their full cock position.
    B. The cocking levers (forearm lock) in the forend iron are forced to move downward when the barrels are opened. This will cause the cocking levers to pull the cocking rods (hammer cocking pins) forward in the frame. The cocking rods, being attached to the bottoms of the hammers, will pull the bottom of the hammers onto a cam that will cause the tops of the hammers to be caught by the sears.
    C. The cocking levers (forearm lock) in the forend iron are forced to move upward when the barrels are opened. This will cause the cocking levers to pull the cocking rods (hammer cocking pins) forward in the frame, which will in turn rotate the hammers into their full cock position.

2. What does the safety on a Stoeger Coach Gun block?
    A. The hammers
    B. The sears
    C. The sear connectors
    D. The hammers and trigger
    E. The trigger

3. After the first barrel is fired on a Stoeger Coach Gun, what direction does the transfer block rotate?
    A. Forward
    B. Rearward
    C. Left
    D. Right
    E. It does not rotate, inertia tips it left or right.

4. The main difference between the single trigger and double trigger Stoeger Coach guns is that the double trigger version does not utilize a separate parts called the right sear and the left sear because the hammers are tripped by direct engagement with the double triggers. In other words, the double triggers themselves are the sears in the fire control system.
    A. True
    B. False

5. What part of a Stoeger Coach Gun causes the extractor to move back from the barrels to pull the empty cases or live cartridges from the chamber?
    A. The forend iron
    B. The extractor lever
    C. The extractor activator
    D. The trunnion

Winchester Model 12

1. The Model 12 shotgun uses what type of locking design and location?
    A. An action bar locking block that locks the bolt during firing.
    B. A tipping bolt that locks into the barrel extension.
    C. A cam rising locking block that locks into the receiver.
    D. A cam rising bolt that locks into the barrel extension.
    E. A tipping bolt that locks into the receiver.

2. The action slide lock (release) on the model 12 has more than one function. What is one of the safety functions of the action slide lock?
    A. It blocks the trigger to prevent accidental firing when the slide is unlocked.
    B. It catches the hammer to prevent firing when the slide is unlocked.
    C. It locks the bolt into the receiver.
    D. It blocks the sear to prevent firing when the slide is unlocked.
    E. It lowers the firing pin blocking safety that prevents firing when unlocked.

3. A customer brings you an old Model 12 shotgun he bought a couple of years previously. The customer complains that the shotgun has been working fine and has been ejecting spent shells. However, last week he was shooting and had a dud shell (didn't fire). He tried to pump the shell out of the chamber but the shotgun wouldn't open. He was very frustrated and slammed the shotgun on the butt while holding the forend and managed to get it open. What is wrong with the shotgun?
    A. The dud shot shell caused a jam.
    B. The angle of the action bar to the action slide lock is positive.
    C. Nothing is wrong, it is operating as designed.
    D. The angle of the action bar to the action slide lock is negative.
    E. The hammer is catching the action slide lock.

4. To remove the Model 12 magazine locking pin,
    A. Unscrew the locking retainer in the end of the pin and remove the pin.
    B. Push in the locking pin spring loaded retainer, then remove the pin.
    C. Unscrew the magazine cap, which holds the locking pin, then remove the pin.
    D. Remove the one of the cross pins located at both ends, then remove the pin.
    E. Push in the magazine retainer, freeing the locking pin for removal.

5. A customer brings in a Model 12 that has a magazine tube that is jumping the threads, causing the shell rims to get caught and not feed. You know that is a problem with the Model 12 design and it normally would require a new magazine

tube. However, the you cannot locate a new magazine tube for under $100.00 and the customer cannot afford that much money. What does Bob Dunlap suggest as a way to repair the problem?

A. Replace the magazine tube and tell the customer to make payments.
B. Return the shotgun to the customer and tell him you won't repair it.
C. TIG weld the end of the tube and recut the threads.
D. Epoxy the tube into the receiver, it can be removed later with heat.
E. TIG weld the tube to the receiver and permanently solve the problem.

Winchester 97 Pump Shotguns

1. The takedown versions of the Winchester Model 1897 shotgun utilizes a receiver extension, which is part of the barrel sub assembly. This receiver extension design is also used on the non-takedown version of the Model 97, as it is offers the means to be able to easily "headspace" the weapon.
   A. True
   B. False

2. The locking block on a Winchester 97 shotgun is also
   A. The cartridge carrier.
   B. The firing pin block.
   C. The finger lever.
   D. The bolt guide.
   E. The trigger release.

3. What deactivates/turns off the cartridge stops on a Winchester 97, allowing a cartridge to be fed onto the carrier, when the action is cycled?
   A. The cartridge guide
   B. The breech bolt
   C. The carrier
   D. The action slide bar (action bar)
   E. The cartridge interrupter.

4. When in working position, what does the steel spring that fits around the magazine tube of a Winchester 97 do? Choose the best two answers from below.
   1. It acts as a shock absorber for the wooden action slide handle so that the forend wood does not crack from the continual banging it receives when the action is cycled every time the gun is loaded, and fired.
   2. It is part of the safety system that requires recoil or the shooter to push the forend (action slide) forward enough to unlock the action slide so that the gun can be pumped rearward.
   3. It puts tension on the action slide sleeve screw cap so that it doesn't unscrew from the constant recoil caused by firing the gun.
   4. It is the 97's recoil braking system to insure smooth manual cycling of the weapon. The spring fills the void between the magazine tube and the

action slide sleeve so that it doesn't rattle around when the action is cycled.

5. It is a part of the hesitation lock system to protect the shooter from hang fires.
    A. 1 and 3
    B. 1 and 4
    C. 2 and 3
    D. 2 and 5
    E. 4 and 5

5. When disassembling a Model 1897, after the barrel and receiver have been separated from one another, and the buttstock has been removed, what must be done before removing the trigger and trigger guard?
    A. You must remove the bolt locking latch, which fits in the trigger guard.
    B. You must remove the receiver end cap that hold the rear of the trigger guard.
    C. You must unscrew the two screws holding the trigger guard into the receiver.
    D. You must remove the carrier and the carrier pin stop screw.
    E. You must take the sear spring out of the receiver.

Winchester Model 1860, 1866, 1873, & 1876 Rifles

1. How many joints does the Winchester Model 1873's toggle lock system utilize?
    A. Two
    B. Three
    C. Four
    D. Eight
    E. None

2. What part of a Winchester 1873 forces the carrier lever to move up and down?
    A. The finger lever
    B. The left and right link assemblies
    C. The carrier block
    D. All of the above
    E. None of the above

3. What prevents a Winchester 1873 rifle from firing if the finger lever is not closed and in its upward most position?
    A. A tab on the finger lever itself will block the trigger.
    B. The safety catch will block the trigger.
    C. A push rod connected to the right link assembly blocks the trigger.
    D. Nothing blocks the trigger, the rifle will fire when the finger lever is opened.
    E. The locking block safety lever.

4. Which part ejects the empty case or live round on a Winchester 1873?
    A. The ejector
    B. The carrier lever
    C. The carrier block
    D. The finger lever
    E. The cartridge stop.

5. When the action of a Winchester 1873 is cycled, the pins on the left and right sides of the finger lever pull the toggle lock downward and then push the toggle lock back up again, as the pins ride through the slots/cams of the left and right link assemblies.
    A. True
    B. False

Winchester Models 1892 & 1886

1. On a Winchester Model 1892, the loading gate (spring cover) is what prevents the cartridges in the magazine from coming out of the magazine when the gun is cycled.
    a. True
    b. False

2. What part forces the carrier of a Model 1892 up when the action is cycled?
    a. The finger lever
    b. The stirrup
    c. The carrier hook
    d. The spring cover
    e. The locking block latch.

3. When the action of a Winchester Model 1892 is closed and locked up, what holds the breech bolt in place?
    a. The finger lever
    b. The friction stud
    c. The left and right locking bolts (or blocks)
    d. The action lock
    e. A combination of the action bar and the action bar lock

4. What retracts the firing pin of a Winchester Model 1892 when the action is opened?
    a. The cartridge stop.
    b. The finger lever.
    c. The hammer stirrup.
    d. The locking bolt.

e. The locking block latch.

5. What holds the hammer of a Winchester Model 1892 rearward in its full cock position?
    a. The trigger
    b. The mainspring actuator
    c. The hammer stirrup
    d. The hammer stud and spring.
    e. None of the above

Winchester 1894 Rifle

1. When cycling the lever action of a Winchester 1894 rifle, the finger lever pivots from the link. The link pivots from the link pin in the front of the receiver. The finger lever is pinned into the receiver by the finger lever pin that is covered by the finger lever pin stop screw on the left side of the receiver.
    a. True
    b. False

2. Why can't the breech bolt move rearward until the finger lever is pulled downward on a Winchester 94?
    a. The rear portion of the carrier is blocking the rear of the breech bolt. The carrier is attached to the finger lever, so the carrier will not be pivoted out of the way of the breech bolt's rearward travel until the finger lever is pulled down.
    b. Because the locking bolt is attached to the link and the link will not move down until the finger lever is pulled down.
    c. The finger lever pin stop prevents the bolt from moving rearward until the finger lever cams that pin out of engagement, allowing the bolt to move rearward.
    d. The front of the finger lever controls the locking block. The breech bolt cannot move rearward until the front of the finger lever lowers the locking block.
    e. The small safety button that is pushed up by the finger lever controls a lever that locks into the locking block. When the finger lever releases the safety button, it releases the locking block to move down by motion of the finger lever.

3. What causes the front of the carrier to rise on a Model 94 rifle?
    a. When the locking bolt moves down as the lever action is cycled, the locking bolt pushes the rear of the carrier down and the front of the carrier pivots up.
    b. The rear of the carrier is attached to the link, so when the finger lever is pulled down, the rear of the link also moves down. Since the rear of the

carrier is attached to the link, the rear of the carrier will move down and the front of the carrier will move up.

c. When the lever action is cycled, the breech bolt travels rearward until the ejector housing that is attached to the breech bolt hits the rear of the carrier and pushes it down, forcing the carrier to pivot over-center of the carrier spring, causing the carrier to pop up in the front.

d. When the finger lever is pulled down, a cam on the finger lever bumps into the rear of the carrier, forcing the rear of the carrier down and the front of the carrier up.

4. What acts as the cartridge stop on a Winchester 94, preventing a cartridge from going fully onto the carrier?
    a. The front of the finger lever.
    b. The carrier stop.
    c. The front of the link.
    d. The front of the loading gate.
    e. The cartridge interrupter lever.

5. There is a safety feature on a Model 94 rifle; a small button that works with the finger lever. What does that safety feature do?
    a. Pushes down on the trigger release, unlocking the trigger to fire the gun.
    b. Pushes the locking block lever to lock the bolt.
    c. Blocks the trigger, preventing the trigger from firing the gun.
    d. Blocks the sear, preventing the hammer from falling.
    e. Pushes the firing pin safety block, allowing the firing pin to move forward.

Springfield 1903 / 1903A3 Rifles

The following questions apply to the 1903 and 1903A3 rifles

1. As a rule, and the rule is rarely broken, the extractor on a military rifle, including the 1903 Springfield, cannot be shaped to snap over the rim of a cartridge.
    A. True
    B. False

2. The lever on the left side of the receiver of the 1903 Springfield, just behind the ejector, does what?
    A. Allows the bolt to be pulled back to pick up cartridges from the magazine.
    B. Locks the bolt to prevent removal during transport.
    C. Allows the bolt to be removed from the receiver.
    D. Temporarily converts the rifle to single shot mode.
    E. A, C, and D are all functions of the left side lever.

3. When barreling a 1903 Springfield, or setting back an existing barrel, the breech

end of the barrel (chamber area) must be cone shaped and the bolt to breech fit should be

A. .000” to .010” (zero to ten thousandths of an inch)
B. .010” to .020” (ten to twenty thousandths of an inch)
C. .000” to .002” (zero to two thousandths of an inch)
D. .002 to .005” (two to five thousandths of an inch)
E. .007” to .015” (seven to fifteen thousandths of an inch)

4. The extractor on the 1903 Springfield bolt should have approximately A. .0015” spring out (fifteen ten-thousands of an inch) B. .015” spring out (fifteen thousandths of an inch) C. .150” spring out (one hundred-fifty thousandths of an inch) D. .035” spring out (thirty-five thousandths of an inch) E. .055” spring out (fifty-five thousandths of an inch)

AKS / MAK90 / AK47 Semi-Auto Rifles

1. The AKS/AK47 safety lever must be “SAFE” position (lever up) to remove the bolt assembly from the receiver.
   A. True
   B. False

2. The AKS/AK47 locking system is
   A. A roller-lock delayed blowback system
   B. A link-lock rotating bolt system
   C. A straight blow-back bolt system
   D. A combination roller-cam bolt system
   E. A cam-lock rotating bolt system

3. To modify and improve feeding of an AKS/AK47 rifle, use a rotary tool (such as a Dremel or Foredom) and alter the ramp / locking lug area as follows:
   A. Cut the ramp down approximately .010” (ten thousandths) and chamfer the lower right locking area.
   B. Cut the ramp down approximately .150” (one hundred fifty thousandths) but do not cut the locking areas.
   C. Cut the ramp forward approximately .050” (fifty thousandths) and chamfer the lower left locking area.
   D. Cut the ramp down approximately .100” (one hundred thousandths) but do not cut the locking areas.
   E. Do not cut the ramp or locking areas, the only alteration the instructor allows is polishing the ramp.

4. The AKS/AK47 recoil spring retainer is
   A. A double helix shape for spring retention.
   B. Made from hardened tool steel for longevity.
   C. Mild steel and easily made if necessary.
   D. Bakelite and cup shaped for better retention.

E. A roll pin that retains both sides of the spring.

5. On an AKS/AK47 rifle, after removing the trigger assembly, to remove the safety lever you must
   A. Remove the safety lever retaining pin and lift up on an internal lever.
   B. Unscrew the exterior safety lever from the internal trigger stop block.
   C. Rotate the safety to align the internal lever with the slot in the receiver.
   D. Remove the rear loop of the trigger/hammer retainer that retains the safety lever and pull it from the receiver.
   E. Rotate the lever to “full auto” position and lift out the safety lever.

AR15/M16/M4A1 Law Enforcement Armorer’s Course

1. On a semi-automatic AR15 rifle, what catches the hammer after the gun has been fired and your finger is still holding the trigger rearward?
   A. The sear
   B. The trigger
   C. The disconnector
   D. The front of the charging handle
   E. The safety sear

2. When the safety selector on an AR15 is in the “On Safe” position, it blocks the hammer so that the gun cannot be fired when the trigger is pulled.
   A. True
   B. False

3. On a selective fire rifle (semi and fully automatic), such as the M16, the trigger system contains one or more parts that a AR15 (semi-automatic only) does not have. What is one important part?
   A. The safety sear
   B. The interrupter pad
   C. The hammer trip lever
   D. The auto sear
   E. All of the parts in the trigger system of those two type of guns are exactly the same.

4. Why is there a hook on the top rear of a full auto M16 hammer?
   A. To catch the auto sear.
   B. There is no hook on an M16 hammer.
   C. To catch the safety sear.
   D. To catch the disconnector
   E. The hook is what the M16’s safety selector blocks when in the “On” safe position.

5. What part of a M16 pushes the rear extension tang of the disconnector down so that the disconnector will not engage the hammer for the length of time that the trigger is pulled and held rearward during full-auto fire?
    A. The trigger bow
    B. The safety selector
    C. The auto sear
    D. The safety sear
    E. The camming surface located on the bottom of the hammer.

6. Although the bolt carriers from the AR15 and M16 are functionally interchangeable,
    A. The semi-auto bolt carrier will allow full-auto fire in a M16.
    B. The semi-auto bolt carrier will allow full-auto fire in a M4 but not M16.
    C. The full-auto bolt carrier will allow full-auto fire in a semi-auto AR15
    D. The full-auto M16 bolt carrier will not function in a M4 carbine.
    E. The semi-auto bolt carrier will not allow full-auto firing in a M16.

7. Colt manufactured a unique bolt carrier that was ramped on its underside. Which type of firing pin **must** be used with this “ramped version” bolt carrier?
    A. A large flange firing pin.
    B. A double flange firing pin.
    C. A small flange firing pin.
    D. A heavy flange firing pin.
    E. A firing pin with no flange.

8. When working with AR15 types of weapons, there are some significant differences between feed ramp cuts in rifle style and M4 style barrel extensions, as well as the rifle style and M4 style upper receivers. Which one of the scenarios described below would cause feeding and reliability issues?
    A. A M4 style barrel extension in an AR15 rifle style upper receiver.
    B. An AR15 rifle style barrel extension in a M4 style upper receiver.
    C. An AR15 rifle style barrel extension in an AR15 rifle style upper receiver.
    D. A M4 style barrel extension in a M4 style upper receiver.
    E. An M16 barrel in an AR15 rifle style upper receiver.

9. When checking the headspace on an AR15, the weapon is considered to be safe for operation if the bolt easily closes and locks up when using a field gauge.
    A. True
    B. False

10. When using headspace gauges on an AR15/M4, you should always remove the extractor before checking the headspace.
    A. True

B. False

Enfield Rifles

1. A customer brings you an Enfield rifle and complains that the bolt opens freely but requires force to close the bolt.
    A. The bolt head is likely misaligned with the receiver rails.
    B. Enfield rifles are cock-on-closing, this is a normal condition.
    C. The sear is out of alignment, catching the cocking piece too soon.
    D. The cocking piece is likely damaged, making the bolt stiffer to close.
    E. Check for damaged ammunition that does not chamber properly.

2. Enfield No. 4 rifle bolt heads:
    A. Are numbered with manufacturing dates.
    B. Are numbered for arsenal or manufacturer.
    C. Are numbered to determine caliber (for lend-lease to allied troops).
    D. Are numbered to match the rifle serial number.
    E. Are numbered for headspace adjustment.

3. Removing the firing pin from an Enfield bolt requires a tool with lugs to match the recesses in the firing pin.
    A.True
    B. False

4. When re-installing the Enfield firing pin, the rear of the firing pin must be aligned in the cocking piece
    A. For proper firing pin protrusion.
    B. For the retaining screw that locks the end of the firing pin.
    C. To align the grooves in the firing pin with the grooves inside the bolt.
    D. To align the firing pin with the firing pin hole in the bolt.
    E. To align the firing pin and for proper firing pin protrusion.

5. When checking the Enfield bolt locking lugs for wear
    A. Depth grooves were machined into the lugs as wear indicators and require measurement.
    B. Any shiny area on the rear of the lugs indicates excessive wear.
    C. Missing depth grooves on either lug indicates an unsafe condition.
    D. Flattened machine marks or grooves in the lugs indicates excessive wear.
    E. The Enfield bolts were heat treated to a hardness that eliminates concern of excessive wear.

M1 Garand Rifle

1. When the M1 Garand rifle has fired its last shot, the follower is as high as it can be, which will in turn cause follower rod to rotate the operating rod catch. At this point in time during the firing sequence, what two functions does the operating rod catch perform?
    1. The front of the operating rod catch will rotate up and catch and hold the operating rod and bolt assembly rearward.

2. The rear of the operating rod catch will rotate downward to catch and hold the operating rod and bolt assembly rearward.
3. The rear of the operating rod catch will rotate down and turn the clip latch (magazine catch) off to release the clip.
4. The front of the operating rod catch will rotate up and turn the clip latch (magazine catch) off to release the clip.

Choose the answer that is most correct from the following:

A. 1 and 3
B. 2 and 4
C. 1 and 2
D. 2 and 3
E. 3 and 4

2. When the clip latch (magazine catch) releases its engagement with the clip, what part of the Garand rifle will cause the clip to be tossed out of the receiver?
   A. The finger located on the rear of the operating rod catch.
   B. The extractor plunger
   C. Clip ejector (safety spring)
   D. The accelerator
   E. The clip latch

3. The gas piston that cycles the action of an M1 Garand rifle is located in a tube above the barrel.
   A. True
   B. False

4. What rotates the Garand bolt during opening and when the bolt returns forward into battery?
   A. The follower arm
   B. The follower rod
   C. The camming surface located on the operating rod.
   D. The camming surface located on the milled recess found on the right inside of the receiver, which is just to the rear of the mouth of the chamber.
   E. Answers a and b

5. The trigger system on a Garand rifle incorporates
   A. A primary and a secondary sear.
   B. A sear and a disconnector.
   C. A primary sear, secondary sear, and disconnector.
   D. A sear and hammer interrupter.
   E. A primary sear, secondary sear, and selector switch.

6. When the manual safety of an M1 Garand is set to the “safety on” position, the safety blocks the trigger and pushes the hammer forward enough so that it will not engage the sear.
    A. True
    B. False

7. If a Garand’s bolt is not all of the way forward and locked up, why can’t the rifle be fired?
    A. The bolt will not trip the sear lever, which will not allow the sear to release the hammer.
    B. The firing pin tail will not line up with the notch in the receiver, not allowing the firing pin to move forward and strike a cartridge.
    C. Because the bolt will not be rotated enough and the hammer will hit the rear of the bolt.
    D. The operating rod will not push the disconnector pin down to release the sear block.
    E. Both b and c.

M1A Rifles

1. Although the M1 Garand and M1A trigger group components look very similar, there are no components that are interchangeable.
    A. True
    B. False

2. The M1A safety blocks which two components?
    A. The primary and secondary sears only
    B. The primary sear and the firing pin
    C. The hammer and the firing pin
    D. The primary sear and the trigger
    E. The primary sear and the hammer

3. The camming surface at the rear of the M1A bolt serves what purpose?
    A. Moves the firing pin out of engagement.
    B. Moves the firing pin block out of engagement with the firing pin.
    C. Prevents the hammer from hitting the firing pin if the bolt is not locked position (in battery.
    D. Begins the initial cocking of the hammer
    E. Both A and D
    F. Both A and C

4. The M1A spindle valve allows gas to enter the gas cylinder from the barrel and
    A. Can be uses to check firing pin protrusion in the field.
    B. Has square ring grooves to prevent gas leakage.
    C. Is threaded and notched for incremental gas adjustment.
    D. Rotates to cut off gas from entering the gas cylinder.
    E. Rotates to increase gas pressure during extreme conditions.

5. On M1A National Match (NM) rifles, the operating rod support is longer…
    A. To provide additional support to the operating rod.
    B. Because barrels on NM rifles are longer than Mil-spec.
    C. To provide additional support to the NM free-floating forend.
    D. To provide harmonic balancing of match barrels.
    E. To provide an attachment point for the off-hand support piece.

M1/M2 Carbines

1. The sear of the M1 carbine is also the disconnector.
    A. True
    B. False

2. The M1/M2 carbine extractor is retained in the bolt by
    A. The ejector and spring.
    B. The extractor / ejector retaining pin.
    C. The firing pin.
    D. The extractor plunger and spring.
    E. A dovetail on the bolt body.

3. In the M1 or M2 carbine, short cycling and/or failure of the action to completely close can be caused by
    A. The gas port being too large or misaligned.
    B. The gas tube is not aligned with the operating rod.
    C. A gas piston that does not freely move.
    D. The spindle valve is turned to single shot.
    E. Gas leaking past the square grooves in the gas pipe.

4. The main cause(s) of M1/M2 carbine extractors breaking is/are:
    A. Metal fatigue of the extractor.
    B. Burrs, rust, or gouges in the chamber, causing extraction difficulty.
    C. Rust or pitting on the bolt face, causing feeding and chambering difficulty.
    D. All of the above
    E. Only A and B above are applicable

5. The M1/M2 carbine extractor snaps over the cartridge rim during feeding. To allow the rim of the cartridge to push the extractor to the side so it can snap over the rim, and help prevent damage to the extractor
    A. The extractor spring should be replaced if it exceeds 2 pounds tension.
    B. The extractor axis rod should be polished to allow the extractor to spring out easier.
    C. The ejector spring should be lightened to ease the cartridge onto the bolt face.
    D. The extractor should be replaced with a modern 304 stainless steel version.
    E. The front angled surface of the extractor can be increased and polished.

Marlin Lever Action Rifles 1894 & 336

1. How does the locking bolt (or block) move up and down in a Marlin 336 rifle?
    A. The breech bolt cams the locking bolt (or block) down and the carrier rocker pushes the locking bolt back up again when the lever action is cycled.
    B. The finger lever pulls the locking bolt down and it also pushed it back up again when the action is cycled.
    C. The locking bolt doesn't actually move up and down. The hook on the finger lever pivots the locking bolt to the rear and back again when the lever action is cycled.
    D. When the finger lever is cycled and the breech bolt moves rearward and forward again, the notch on the belly of the breech bolt rotates the locking bolt rearward and back again, not up and down like the question states.

2. The rear firing pin of a 336 rifle acts as a safety feature that prevents the rifle from firing until the front and rear firing pins line up, which only occurs when the bolt is closed and locked.
    A. True
    B. False

3. During the first part of the breech bolt's rearward travel, what retracts the firing pin so that it does not stick out of the breech face of a Marlin Model 336?
    A. The rear firing pin.
    B. The finger lever.
    C. The carrier rocker.
    D. The carrier.
    E. The retractor latch.

4. What acts as the Primary cartridge stop on a Marlin 336 rifle?
    A. The carrier
    B. The carrier rocker
    C. The loading gate (loading spring)
    D. The finger lever
    E. Both b and c.

5. What part of a Model 336 acts as the secondary cartridge stop?
    A. The carrier.
    B. The carrier rocker.
    C. The loading gate (loading spring).
    D. The finger lever.
    E. Both c and d.

Marlin 1897, 39 & 39A Lever Action .22 Rifles

1. In order to begin disassembly or to field strip the Marlin 97 or 39, you must:
    A. Unscrew the takedown screw (thumb screw).
    B. De-cock the hammer.
    C. Have the lever slightly open.
    D. Remove the bolt.
    E. All of the above
    F. A, B, and C above

2. What part do old Marlin 1897s and 39s have that newer models changed in the design?
    A. The hammer rod
    B. The sear connector
    C. The two-piece firing pin
    D. The carrier rocker
    E. The cartridge stop

3. The locking system of a Marlin 97 rifle is considered to be locked up when…
    A. The finger lever is in its upward most position; the front of the finger lever engages with the bottom of the Breech bolt.
    B. The finger lever is in its upward most position, camming the rear of the breech bolt up into the locking area of the receiver.
    C. When the finger lever's detent engages the recess milled for it inside of the receiver.
    D. When the finger lever raises the locking block into the recesses of the breech bolt and receiver, locking them together.
    E. Both b and c.

4. What detents the finger lever and holds it closed?
    A. The finger lever locked to the bolt
    B. The finger lever spring
    C. The finger lever detent plunger and spring.
    D. The rear tail of the cartridge cutoff.
    E. The carrier rocker

5. Which one of the statements below is correct about the Marlin 97?
    A. When the action is cycled, the finger lever overrides the spring-loaded carrier rocker until the carrier rocker pops back up. When the finger lever is returned to it closed/locked up position, the finger lever will hit the carrier rocker, which will in turn force the carrier up far enough for the breech bolt to feed a cartridge into the chamber.
    B. When the action is cycled, the finger lever will make direct contact with the carrier to hold the carrier down far enough for carrier rocker to

compress the finger lever spring, at which point the carrier rocker loses engagement with the carrier, allowing the carrier to rise far enough for the breech bolt to feed a cartridge into the chamber.

C. The locking lug located on the bottom of the breech bolt overrides the spring-loaded carrier rocker as the breech bolt moves rearward when the action is cycled. After the breech bolt is far enough back, the carrier rocker pops back up. When the finger lever returns the breech bolt forward to its closed and locked up position, the breech bolt's locking lug will hit the carrier rocker, which will cam the carrier up far enough for the breech bolt to feed a cartridge into the chamber.

D. The above statements are false. The 97 and 39 lever action rifles do not include carrier rockers in their designs. The early 92 rifles were the only Marlin lever action rifles to incorporate the carrier rocker as a design feature.

Marlin / Glenfield Semi-auto .22 Rifles

1. The new style Marlin / Glenfield feed throats
   A. Can be adapted to work with older rifles by modifying the feed throat sides.
   B. Cannot be adapted to work with older rifles using the original feed throat.
   C. Can be adapted to work with older rifles by modifying the receiver to accept the new feed throat.
   D. Will work with all older rifles without any modifications.

2. The Marlin / Glenfield trigger and hammer are attached to the trigger guard and not the receiver.
   A. True
   B. False

3. What causes the Marlin / Glenfield trigger bar to disconnect from the sear?
   A. A hump on the trigger bar.
   B. The hammer.
   C. The trigger bar link.
   D. The bolt.
   E. The transfer bar.

4. In a Marlin / Glenfield rifle, the polymer/nylon piece at the rear of the receiver is
   A. A block for proper spacing of the two action side plates.
   B. Held in place by two roll pins and is easily removed.
   C. Acts like a striker for the ejector, to aid in ejecting cartridges.
   D. Acts as a buffer for the rearward travel of the bolt.
   E. Acts as a dampener to reduce vibration and cyclic rate.

5. The Marlin / Glenfield cartridge carrier (lifter)
   A. Is the cartridge carrier (lifter) and is also the primary cartridge stop.
   B. Is the cartridge carrier (lifter) and is the secondary ejector.

C. Is the cartridge carrier (lifter) and the secondary cartridge stop.
D. Is the cartridge carrier (lifter) and no secondary purpose.
E. Is the cartridge carrier (lifter) and bolt lock when the rifle is empty.

Mauser 98 Rifles

1. The Mauser 98 rifles have what type of trigger system?
   A. Two stage
   B. Single set
   C. Single stage
   D. Binary
   E. Double set

2. There is a round notch on the rear of the Mauser 98 bolt body, near the large V notch. A function of the notch, in conjunction with the bolt sleeve lock, prevents the bolt sleeve from unscrewing when the bolt is open. What is the second function of the round notch?
   A. It works with the safety to lock the bolt in the closed position.
   B. It works with the end of the firing pin to align it prior to firing.
   C. It aligns the cocking piece with the sear.
   D. It serves as a length gauge for measuring firing pin protrusion.
   E. The notch only serves to lock the bolt sleeve.

3. The Mauser 98 firing pin was changed in approximately 1901. What was that change?
   A. Increase the tip diameter to .085”
   B. Incorporating a safety flange.
   C. Decrease the tip diameter to .050”
   D. Increase firing pin weight by 28 grams for improved primer ignition.
   E. Incorporating a safety notch.

4. All Mauser bolt action rifles, including all models from 1889 to 1898, have what type of bolt.
   A. Cock on closing
   B. Cock on opening
   C. Roller lock
   D. Removeable bolt head
   E. Partial cock on closing

5. On the Mauser model 98, the bolt stop and ejector are generally held in place on the receiver by
   A. A screw (with a long unthreaded shaft)
   B. A large screw with a small retaining screw
   C. A single pin
   D. A pin with two “C” clips
   E. A notch in the housing they slide into.

6. On the Mauser 1889 to 1892 models, the bolt stop and ejector are generally held in place on the receiver by

A. A screw (with a long unthreaded shaft)
B. A large screw with a small retaining screw
C. A single pin
D. A pin and single “C” clip.
E. A notch in the housing they slide into.

Mosin-Nagant Rifles

1. If a Mosin-Nagant rifle double feeds from the magazine, the most likely cause is what Bob Dunlap calls the “cartridge stop” (which is actually known as the cartridge interrupter and is part of the ejector).
    A. True
    B. False

2. The Mosin-Nagant rifle utilizes what type of bolt locking system?
    A. One locking lug on the front of the bolt and a large lug in front of the rear receiver ring.
    B. Two roller bearing locking lugs on the front of the bolt and a large lug in front of the rea receiver ring.
    C. Two locking lugs on the rear of the bolt that lock into the rear receiver ring plus the bolt handle acts as a third lug.
    D. Two locking lugs on the front of the bolt and a large lug in front of the rear receiver ring.
    E. Two locking lugs on the front of the bolt that lock into the front receiver ring.

3. On Mosin-Nagant rifles, the primary extraction camming surface(s) and camming action is:
    A. The bolt turning against the front receiver ring pushes the dovetailed extractor rearward.
    B. The interaction between the front of the cocking piece and the rear receiver ring.
    C. The interaction between the bolt handle camming surface and the rear receiver ring.
    D. The interaction between the front of the large bolt lug and the rear of the front barrel ring.
    E. The Mosin-Nagant rifle does not have a primary camming surface.

4. The Mosin-Nagant bolt guide has a groove that fits into the cocking piece, but the guide has a second function. The secondary function of the guide is
    A. A tool to measure firing pin protrusion.
    B. A tool to unscrew the firing pin from the bolt.
    C. A field expedient tool to measure headspace.
    D. A tool to make precision sight windage adjustments.
    E. A tool to disassemble the trigger and sear for cleaning.

Remington 700 Rifles

1. If the magazine/follower spring of a Remington Model 700 gets bent from its original shape, what might happen?
    A. When the bolt assembly hits the base of the cartridge case, the front of the cartridge may take a nosedive and the bullet can get stuck on front inside area of the magazine box.
    B. The base of the cartridge cases may be too low inside of the magazine box and the bolt face will try to move the cartridge forward in the rim cut of the cartridge, which will jam the gun up.
    C. The base of the cartridge cases may be too low inside of the magazine box to be picked up by the forward moving bolt assembly and the bolt will override the cartridge.
    D. All of the above.
    E. Only a and c above.

2. If you need to reshape or bend the magazine spring from a Model 700 bolt action rifle, you must make sure to bend it at the “V” to avoid breaking the spring.
    A. True
    B. False

3. What part of the firing pin assembly of a Remington 700 is caught and held back by the sear safety cam (sear) when the action is closed and locked up, with the safety off and the rifle is ready to fire?
    A. The firing pin cross pin.
    B. The trigger connector
    C. The cocking piece.
    D. The bolt plug
    E. The trigger stop screw

4. What holds the cocking piece of a Model 700 in place when bolt handle is rotated to cock the rifle?
    A. A groove in the rear of the bolt.
    B. The bolt locking plug.
    C. A groove in the rear of the receiver.
    D. The cocking cam.
    E. The cocking piece lock.

5. When disassembling a Model 700 bolt, a coin or disk can be used to
    A. Separate the mainspring from the firing pin/striker.
    B. Hold the cocking piece rearward.
    C. Help unscrew the bolt plug.
    D. Check firing pin spring tension for replacement.
    E. Help remove the spring retainer.

6. The Model 700's ejector…
    A. Is a spring loaded plunger.
    B. Is milled into the receiver.
    C. Is a pivoting piece activated by the bolt.
    D. Is a stamped steel piece riveted to the receiver.
    E. Is a spring loaded lever.

Remington 742/762 Rifles

1. What rotates the bolt assembly's multiple lugs out of their recesses of the barrel extension on a Remington 760 when the bolt unlocks and opens?
    A. The inertia block.
    B. a large cam pin and a small cam pin.
    C. The receiver stud.
    D. The camming surface of the firing pin.
    E. The action bar assembly.

2. After a Remington 760 and a 742 have been fired, what part of a 760 hits the action bar lock so that the gun can be pumped and what part from a 742 hits the disconnector to disconnect the 742?
    A. The sear tail.
    B. The bolt carrier.
    C. The hammer plunger.
    D. A stud on the hammer itself.
    E. The carrier interceptor latch.

3. After the semi-automatic 742 rifle has been fired, and the hammer has fallen forward, the disconnector rotates and lifts the connector away from the sear, thus disconnecting the trigger from the sear.
    A. True
    B. False

4. What does the safety block on a Model 760?
    A. The sear
    B. The trigger
    C. The hammer
    D. The sear actuator rod
    E. The sear and disconnector.

5. When the trigger of a 760 rifle is pulled rearward to fire the gun, what part makes contact with the sear to pivot the sear far enough rearward to lose its engagement with the hammer?
    A. The trigger.
    B. The action bar lock.
    C. The connector.
    D. The hammer plunger.
    E. The sear actuator rod.

Ruger Mini-14 / Mini-30 Rifles

1. On the Mini-14 bolt, the ejector is held in the bolt by use of a roll pin, very similar to the AR15/M16 ejector.
    A. True
    B. False

2. The Mini-14 gas “nozzle” (Ruger calls it the gas pipe) has square grooves machined into its circumference. The square grooves act as scrapers to remove carbon and crud from the operating rod hole. What is another important reason for the square grooves?
    A. Provide low pressure, short duration, gas regulation.
    B. Act as high pressure, short duration, gas disrupters.
    C. Act as gas dissipation ports to prevent over-gassing.
    D. Act as low pressure, long duration, gas disrupters.
    E. Provide high pressure, long duration, gas regulation.

3. The safety on a Mini-14 rifle engages the hammer and pulls it out of engagement with the primary sear. What other function does it provide?
    A. Engages and blocks the trigger.
    B. Aids in removal of the trigger guard.
    C. Prevents removal of the trigger guard.
    D. Engages and blocks the secondary sear.
    E. Disengages the firing pin lock.

4. Empty cartridge cases being left in the chamber when a Mini-14 is fired, is an indication of
    A. Insufficient gas (not enough) from the gas block.
    B. Excessively worn grooves in the gas nozzle.
    C. Subsonic ammunition was used by the shooter.
    D. The gas orifice insert is missing from the gas block.
    E. Excessive gas (too much) from the gas block.

5. On the Mini-14, a slave pin is generally required to install which component?
    A. The primary and secondary sear assembly.
    B. The hammer and safety plate assembly.
    C. The hammer spring into the trigger plate and trigger.

D. The magazine catch into the trigger plate.
E. The secondary sear spring into the trigger plate.

Ruger 10/22 Rifles

1. The later production Ruger 10/22 rifles had two ejectors.
   A. True
   B. False

2. What part directly pushes on the Ruger 10/22 disconnector to disconnect the sear?
   A. The trigger bar.
   B. The bolt.
   C. The disconnector latch.
   D. The hammer latch.
   E. The trigger bar latch.

3. The Ruger 10/22 factory recoil spring, recoil spring guide rod, and operating handle assembly is
   A. Sold as a unit but the recoil spring is not captive on the guide rod.
   B. Sold as a unit with the recoil spring captive on the guide rod.
   C. Are a factory only replacement part due to precision fitting of the operating handle.
   D. Held in the bolt and ride in oilite bronze bushings
   E. Two separate units, with the operating handle threaded into the bolt.

4. The Ruger 10/22 firing pin is
   A. Located in the bottom of the bolt (like the Marlin 60 series).
   B. Free floating and designed so it does not need a return spring.
   C. Retained by a pin and “C” clip
   D. Located on the left side of the bolt and retained by the receiver.
   E. Retained by a pin, by staking, and by the operating handle.

5. The Ruger 10/22 magazine:
   A. Is a rotary design that must never be disassembled.
   B. Is a rotary design that uses a gas piston system.
   C. Is a standard box magazine design using a Chrome-Silicone spring.
   D. Is a rotary design that is easy to disassemble and reassemble.
   E. Is a standard design that is easy to disassemble and reassemble.

6. The Ruger 10/22 extractor is held in the bolt by
   A. The extractor roll pin.
   B. The extractor retaining clip and spring.
   C. A slot that mates with the firing pin.
   D. The extractor plunger and spring.
   E. The firing pin retaining pin.

Savage Arms 10-116 Series Bolt Action Rifles

1. What is the purpose of the baffle design found on the twin locking lugs of a Savage 110 rifle?
    A. To reduce the sound/decibel level of the noise that the bolt produces when the bolt action is manually cycled, which is an advantage to the hunter.
    B. To seal off the lug raceways from gas leakage in the case of a rupture or head separation.
    C. These baffles reduce weight but most importantly, friction, enabling this rifle to be cycled smoothly.
    D. To reduce harmonic vibrations caused by the lightweight design of the receiver.
    E. Both b and c

2. Unlike many conventional bolt designs manufactured by forging or machining from solid bar stock, the Savage 110 series bolt is
    A. A unique multi-piece design.
    B. A separate bolt handle, silver brazed in place.
    C. A unique four lug bolt head design.
    D. A straight pull design popular in Europe.
    E. A 45-degree bolt lift design.

3. Why is there a ridge on the right side of the rear baffle of a Savage 110?
    A. The ridge is the by-product of the CNC machining process.
    B. The ridge acts as a self-cleaning device for the lug raceway.
    C. The ridge aids in decreasing torque required for bolt opening.
    D. The ridge aids in reduced friction and wear.
    E. The ridge is part of the anti-bind bolt guide design.

4. There is a hole on both the left and right sides of the front of the Savage 110's receiver. What are these holes used for?
    A. The holes are gas relief ports in case of a cartridge rupture or over-pressure problem.
    B. They allow water to flow out in case the rifle was temporarily submerged.
    C. They prevent compression pressure levels during rapid firing sequences due to very tight receiver/bolt tolerances.
    D. These holes are for use during the proprietary Savage heat treatment process.
    E. The holes act as timing and alignment marks during the barreling process. Barrel timing aids in accuracy.

5. On a Savage 110 rifle, the part called the sear functions as both the sear and the bolt stop.
    A. True

B. False

6. On a Savage 110's AccuTrigger, there is a steel blade called the AccuRelease lever that resides in the trigger shoe. What is the function of the AccuRelease lever?
   A. It reduces felt creep in the trigger by acting similar to a second stage.
   B. It is the third lever of the three-stage Savage trigger, similar to a Jewel trigger.
   C. It is a safety feature that will block the sear from accidental disengagement.
   D. It prevents trigger over travel by hitting the rear of the trigger guard.
   E. It operates as a set trigger, which is why the Savage trigger is highly regarded.

7. What does the safety of a Savage 110 rifle do?
   A. It blocks the sear.
   B. It blocks the trigger.
   C. It blocks the firing pin.
   D. It blocks the cocking piece.
   E. It blocks the transfer bar.

SKS Rifles

1. On the SKS rifle, what causes the bolt stop to rise and lock the bolt open after the last shot?
   A. The bolt does not lock open after the last shot.
   B. A rotating cam attached to the follower.
   C. A rail on the left rear side of the follower.
   D. A "nose" or extension on the left side of the follower.
   E. A "nose" or extension on the rear of the follower.

2. The ejector on the SKS rifle is
   A. A relatively large piece machined in the receiver.
   B. A large plunger type but is typically unreliable.
   C. A retracting "lever" that is activated by the bolt cycling rearward.
   D. A dovetailed ejector similar to the Mosin-Nagant
   E. A relatively large piece welded into the receiver.

3. The SKS extractor is large and designed to engage the cartridge rim harder when the bolt is forced rearward during firing.
   A. True
   B. False

4. The SKS rifle uses what method of disconnecting the trigger connector from the sear?

1. Two humps on the trigger that (1) push the connector down to disconnect the primary sear and (2) pushes the secondary sear into engagement.
2. Two humps on an auxiliary disconnector, pushed down by the hammer during cocking, that forces the trigger connector down out of engagement.
3. A hump on the disconnector lever that is hit by the hammer, forcing the trigger connector out of engagement with the sear.
4. A hump on the bolt that forces the trigger connector down when the bolt is fully rearward, disconnecting the trigger from the sear.

To answer, choose one of the following:

A. A only
B. C and D
C. B only
D. A and B
E. B and C

5. The gas block on the standard military SKS rifle
   A. Held to the barrel by a roll pin and easily removed.
   B. Is not normally removed, it is pressed onto the barrel.
   C. Is not removeable, it is machined integral to the barrel.
   D. Is not normally removed, it is brazed onto the barrel.
   E. Held to the barrel with two screws and easily removed.

Browning 1918 Automatic Rifles

The abbreviation B.A.R. will be used for the Browning Automatic Rifle, Model 1918.

1. What part of a B.A.R. acts as a safety feature that blocks the trigger from being pulled rearward?
   A. The trigger connector
   B. The safety bar switch
   C. The change lever
   D. The trigger release
   E. On this type of weapon, your trigger finger is the only safety.

2. When does primary extraction begin on a B.A.R.?
   A. There is no need for primary extraction on a B.A.R., so primary extraction does not occur in this weapon and was not designed to do so.
   B. After the rifle is fired, the slide moves back a short distance and the bolt lock is cammed out of its recess in the top of the receiver, just after that has occurred, the slide will continue its rearward travel and it is at that point that primary extraction begins, which is when the bolt lock cams against the bolt support.
   C. When the cartridge is fired, the bolt is driven back while the case is still under some pressure, so the cases are lubricated with a wax compound, which aids in primary extraction.

D. When the cartridge is fired, the bolt is driven back while the case is still under some pressure, so the chamber is partially fluted and acts as an air cushion to prevent case adhesion, which aids in primary extraction.
E. Primary extraction begins when the bolt lock is cammed out of its recess in the top of the receiver after the rifle has been fired.

3. What part retracts the firing pin from the bolt face after the B.A.R. has been fired?
   A. The bolt support
   B. The bolt lock
   C. The rear face of the base of the cartridge
   D. All of the above
   E. None of the above

4. On the semi-automatic Ohio Ordnance B.A.R., why are there two pins holding the trigger housing in place in the receiver?
   a. The second pin prevents the sear from going low enough to be fired in full auto in an Ohio Ordnance rifle.
   b. The second pin prevents an old fully automatic Browning trigger housing from being assembled into the Ohio Ordnance receiver.

5. After the first shot has been fired and the trigger continues to be held rearward, when the Browning 1918A2 rifle is set to fire in its slow rate of fire mode, what trips the sear (moves the sear out of its engagement with the sear notch in the slide) in order to fire the gun again?
   A. The trigger connector is hit by the stop lever, which moves the sear out of engagement with the slide
   B. The sear carrier is moved by the stop lever just enough to hit the sear release, which moves the sear out of engagement with the slide.
   C. The safety switch is tripped by the sear release, which in turn moves the sear out of engagement with the slide.
   D. The actuator hits the sear release, which in turn hits the sear cam and moves the sear out of engagement with the slide.

6. How many slave pins should be used to disassemble and reassembly an Ohio Ordnance B.A.R.'s trigger group?
   A. One
   B. Two
   C. Three
   D. Four
   E. Five

Browning 1919-A4 Machine Gun

1. On a 1919 machine gun, the ammunition belt and ammunition is fed in the path between the trunnion and the top cover. The belt holding pawl on the trunnion prevents the belt from moving backwards. The belt feed pawl and belt feed slide in the top cover move the belt forward. What moves the belt feel slide and pawl back and forth to move the belt?
    A. The belt slide being struck by the extractor as it moves on the bolt face.
    B. The belt slide lever being pivoted by the cam on the locking block.
    C. The belt slide lever being moved by the extractor spring loaded plunger.
    D. The belt slide lever moving in the path cut into the top of the bolt.
    E. The belt slide lever is moved by a lever on the trunnion.

2. The moving extractor actually only extracts cartridges from the ammunition belt and positions the cartridge into the T-slot in the bolt face. The extractor moves up and down in a specific and timed sequence. That sequence is determined by
    A. One large camming surface on the left side plate.
    B. A camming surface in the top plate and a spring loaded plunger in the extractor.
    C. Two camming surfaces on the right side plate and one surface in the top plate.
    D. One cam plate on the left side plate and one camming surface on the right side plate.
    E. Two cam plates on the left side plate and a camming surface in the top plate.

3. To headspace a 1919 machine gun, a “feeler gauge” type headspace gauge is used. Headspace is changed by turning the barrel in or out until proper headspace is achieved. When using the correct headspace gauge, you need the bolt locked to the barrel extension and measure between the barrel and bolt.
    A. The gauge must be almost a press fit when tapped with a plastic mallet.
    B. The gauge must be a tight fit but not forced.
    C. The fit should move freely without drag but not be loose or wobbly.
    D. The gauge should be a snug “finger tight” fit.
    E. The fit should be resistance free plus 2-3 additional notches on the barrel.

4. The ANM2 machine gun headspace gauge is different than the 1919 headspace gauge. The ANM2 has a Go / No-Go range of how many thousandths of an inch.
    A. .120” to .130”
    B. .126” to .130”
    C. .128” to .132”
    D. .130” to .134”
    E. .122” to .128”

FN FAL Rifles

1. The FAL rifle bolt drops down at the rear to lock. If a FAL develops headspace, how is it corrected?
    A. Replacing the bolt head, which are numbered.
    B. Replacing the locking shoulder, which are numbered.

C. Replacing the bolt body, which are numbered.
D. Replacing the barrel locking ring, which are numbered.
E. Adjusting the locking shoulder screw to increase or decrease headspace.

2. The FAL is a gas operated rifle. The gas block is on top of the barrel and the piston extends from the gas block to the receiver. The gas block is
   A. Adjustable by the gas adjustment sleeve, which is numbered.
   B. Set by the manufacturer and is non-adjustable.
   C. Adjustable by changing gas piston lengths, which are numbered.
   D. Adjustable by changing gas orifice inserts, which are numbered.
   E. Adjustable by gas let-off screw, which is numbered.

3. It is very easy to reassemble the buttstock on the FAL rifle without any special tool.
   A. True
   B. False

4. When reassembling the gas tube on the FAL rifle, the rear of the gas piston tube is threaded into the receiver with the handguard retaining nut. The front of the gas piston tube sequence is
   A. Align the flats in the gas block vertical, install the retaining pin, install the gas adjustment sleeve, and the retaining spring.
   B. Align the flats in the gas block, install the retaining spring, install the gas adjustment sleeve, and install the retaining pin.
   C. Align the flats in the gas block horizontal, install the retaining screw, install the gas adjustment sleeve, and the retaining spring.
   D. Align the flats in the gas block horizontal, install the retaining pin, install the gas adjustment sleeve, and the retaining spring.
   E. Align the flats in the gas block vertical, install the retaining screw, install the gas adjustment sleeve, and the retaining spring.

H-K G3 & CETME Rifles

1. The G3 and CETME rifles are a delayed blow-back roller lock design. The rifles open when the pressure in the case is still relatively high. Although originally a Swiss idea, what do the H-K G3 rifles do to prevent unlocking and extraction problems?
   A. Use grease on the cartridge cases to aid in extraction.
   B. Use flutes in the chamber to float the cartridge case.
   C. Use a gas reduction relief hole in the chamber.
   D. Use rebated rimmed cartridges to reduce drag at the case head.
   E. Use polygonal rifling to reduce gas pressure but increase accuracy.

2. Excessive headspace is not common on the G3 series rifles. How is headspace corrected on a G3 rifle?
   A. Either a shorter bolt head or larger diameter locking rollers.
   B. Either a longer bolt head or smaller diameter locking rollers.

C. Either a longer bolt head or larger diameter locking rollers.
D. TIG welding the locking recesses in the barrel extension.
E. Make new rollers from A36 steel and heat treat to 65 Rc.

3. The fire control system (hammer / sear) on the G3 is almost identical to what older US military rifle design?
   A. M1 Garand
   B. M1 Thompson
   C. M14 Rifle
   D. T1E3 Pedersen
   E. M1 Carbine

4. To reassemble the bolt head locking lever on the G3, what does Bob Dunlap suggest?
   A. A screwdriver and vise-grip pliers.
   B. A very long tapered pin and a screwdriver or vise.
   C. A vise, a starter punch, and a hammer.
   D. A H-K bolt carrier tool.
   E. Nothing more than a hammer and punch, it isn't difficult.

5. To reassemble the trigger and sear into the G3 fire control unit, Bob Dunlap suggests the use of a slave pin and a tool or pin to relieve tension on the complicated elbow spring and roller in front of the trigger.
   A. True
   B. False

H-K MP5 Submachine Gun Semi-auto, Full-auto, and Burst configurations.

1. An MP5 in a semi-auto, regardless of trigger pack configuration, the sear is spring loaded and moves forward and rearward in the trigger. When the trigger is pulled, the sear is pivoted down out of the hammer full cock notch, allowing the hammer to fall. When the hammer is re-cocked how does the sear re-catch the hammer?
   A. The sear moves forward, comes off of the upper trigger shelf, but is caught by the ledge in front of the upper shelf so it can re-catch the hammer.
   B. The disconnector lever pushes the sear forward, off of the upper trigger shelf, is caught by the ledge in front of the upper shelf so it can recatch the hammer.
   C. The trigger is actually cammed rearward, away from the sear, removing the sear from the upper shelf. It is caught by the ledge in front of the upper shelf.
   D. The semi-auto catch lever forces the sear away from the trigger and catches the hammer. When the trigger is released, the sear re-catches the hammer.
   E. The secondary sear catches a hook on the rear of the hammer and holds it until the trigger is released, which lets the primary sear re-engage the hammer.

2. The MP5 selector works in combination with the tail of the trigger to prevent movement in SAFE mode or to move and fire in any other mode. When the selector is in standard full-auto mode (selector turned to the full-auto position), what happens to the sear and trigger?
    A. The trigger tail moves lower, so the hammer cannot engage the sear, and the auto catch acts as the primary sear.
    B. The trigger tail moves higher, allowing the auto catch to move into engagement with the trigger and become the primary sear.
    C. The trigger tail moves higher and trips the catch lever. The catch lever allows the auto catch to become the primary sear and takes over.
    D. The trigger tail moves rearward, moving the sear rearward, away from engaging the hammer. The auto catch and lever take over.
    E. The trigger tail moves higher, thus moving the sear lower so it cannot catch the hammer. The auto catch and lever take over.

3. In the MP5 burst trigger pack, what prevents the counting wheel from rotating counterclockwise (back to its start point) during a three round burst?
    A. The shifter rod
    B. The eccentric bushing
    C. The trigger nose
    D. The stop latch
    E. The cam on the back side of the counting wheel

4. During disassembly and reassembly of the MP5, what component is necessary to prevent the bolt locking rollers from coming out of the bolt when the bolt is outside of the receiver?
    A. A pin on the extractor pushes on two bolt carrier pins to capture the rollers.
    B. A clamping sleeve (roll pin) goes through each roller to capture them.
    C. The roller locking clips in the bolt head capture the rollers.
    D. The locking piece is shaped to wrap around and capture the rollers.
    E. The locking roller holder has protrusions that capture the rollers.

5. MP5 locking rollers come in five sizes. The sizes are: standard, three sizes above (larger diameter) than standard, and one size lower (smaller diameter) than standard.
    A. True
    B. False

6. During an inspection of the MP5, the bolt gap must be measured. The bolt gap measurement is an indication of locking surface wear. Since rollers are the easiest part to replace, the measurement is used to determine if roller replacement is necessary. What is the standard bolt gap measurement (between the bolt head and carrier) when the bolt is locked?
    A. .005” to .015” (five to fifteen thousandths of an inch)
    B. .010” to .018” (ten to eighteen thousandths of an inch)
    C. .018” to .022” (eighteen to twenty-two thousandths of an inch)
    D. .018” to .028” (eighteen to twenty-eight thousandths of an inch)

E. .000” to .008” (zero to eight thousandths of an inch)

Sterling Submachine Guns

1. The Sterling submachine gun is a select fire delayed blowback weapon that fires the 9mm cartridge from an closed bolt.
    A. True
    B. False

2. What holds the boss of the barrel onto its subassembly in the front trunnion area of the barrel casing?
    A. A left and right detent with plungers and springs.
    B. A locking latch
    C. Two coiled spring type roll pins
    D. Two screws
    E. It is TIG welded on.

3. When firing a sterling submachine gun, at the moment of a cartridge primer’s ignition, there is a gap between the breech face and the bolt face, why?
    A. The gap is present in all firearms, it is normally called headspace.
    B. To allow advanced primer ignition, softening the impact of the bolt against the breech face.
    C. To allow the expanding gases a place to flow from the gun in the breech area before the bullet has left the barrel.
    D. NATO 9mm ammo has thicker rims than standard British ammunition, the space allows for use of NATO ammunition.
    E. The cyclic rate of the Sterling was initially too high, the gap acts like a dead-blow hammer during ignition and slows the cyclic rate.

4. What type of magazine design does the Sterling submachine gun utilize?
    A. Double column, single feed.
    B. single column, single feed.
    C. Double column, double feed.
    D. Single column, double feed.
    E. Single column standard magazine and rotary drum.

5. Why does the bolt of a Sterling submachine gun have spiraled ridges?
    1. To reduce harmonic vibration during full-auto firing.
    2. Less contact with the inside of the receiver to reduce friction.
    3. To quickly drain water from the weapon in case it was submerged, thus preventing dangerous over-pressure.
    4. To remove debris.
    5. To engage the mainspring retainer more securely

A. 1 and 4
B. 2 and 3
C. 2 and 4
D. 1, 4, and 5

Thompson Submachine Guns

1. A Thompson submachine gun's rocker (selector) should only be moved when the bolt is cocked and locked to the rear.
    A. True
    B. False

2. There is a tab/protrusion that is found in the upper part of the magazine raceway/track that interacts with a tab on the magazine. What do these parts of a Thompson submachine gun do?
    A. These parts were added later to insure proper magazine positioning.
    B. These parts were added to prevent magazine catch failure during full auto fire.
    C. These parts were added to the magazine catch for ease of magazine release.
    D. These are the parts that make the bolt hold open feature work.
    E. This is the inner workings of the loaded cartridge indicator.

3. What does the safety block on a Thompson submachine gun?
    A. The trigger
    B. The sear
    C. The bolt
    D. The frame latch
    E. The hammer

4. How many springs are used for the buffer/recoil system in a semi-auto version of the Thompson
    A. 1
    B. 2
    C. 3
    D. 4

5. What limits and retains the firing pin inside of the bolt of a semi-auto version of the Thompson?
    A. A large plug.
    B. Three roll pins.
    C. Two pins.

D. One screw.
E. Nothing limits or retains the firing pin.

UZI Submachine Guns

1. According to John Bush, which type of top cover is meant to be used with a semi-auto only UZI?
    A. Ratchet
    B. Non-ratchet

2. The select fire/full auto version of the UZI must use a separate barrel collar/feed ramp that accepts a barrel with a reduced diameter on its breech end (rear end).
    A. True
    B. False

3. What does the grip safety on an UZI block when it is not pushed forward?
    A. The trigger.
    B. The hammer.
    C. The sear.
    D. The trigger link.
    E. The trigger bar.

4. On a semi-auto trigger pack for an UZI, what does the plate/block that is found in the front inside of the trigger pack do?
    A. It prevents the semi-auto trigger pack from readily being converted for use as a full auto trigger pack.
    B. It allows interchange with full auto trigger packs (although BATF regulated).
    C. It allows for a three positon safety selector to be used in place of a two positon safety selector.
    D. The plate allows for attachment of different buttstocks.
    E. The plate is reinforcement for the thinner stamped receiver used in the semi-auto version.

General Maintenance Questions

The following questions may or may not be directly attributed to any one specific armorer course, although most answers are found in more than one course. These questions are general and related to the armorer courses as a whole. If a question relates to a specific course, the course will be noted in the question.

1. Instructor Bob Dunlap generally prefers non-petroleum based cleaning products because of the harmful effects of petroleum based products in his (and other

instructors) personal experience. What cleaning solution does Bob Dunlap prefer?

A. Method (citrus) cleaner
B. Simple Green (green) cleaner
C. Military CLP
D. Slip 2000 725 cleaner/degreaser
E. Dawn dish soap (original blue).

2. Instructor Mark Foster discusses cleaning striker fired pistol slides in the Sig P365 course and explained the current recommendation from Sig Sauer. Sig's recommendation is applicable to all striker fired handguns and is:

A. Immerse slides in an ultra-sonic cleaner and then in a heated oil bath.
B. Use only petroleum based cleaners and lubricants designed for firearms.
C. Do not use solvents or oils in the firing pin/striker channel.
D. Use military solvents like CLP because they clean and lubricate.
E. Use only non-petroleum based cleaners and lubricants designed for firearms.

3. When cleaning any firearm under warranty, it is best practice to follow the manufacturer's guidelines. When cleaning any firearm with water-based cleaning solutions, you should do the following:

A. Scrub extra hard because water-based cleaners do not work well as solvents and require a lot more work to get the gun clean.
B. Only used water-based cleaners for aluminum or brass parts. All steel parts will rust with water-based cleaners.
C. Clean as normal, however extra care should be taken to remove all moisture with heat (under 250 degrees) or compressed air.
D. Clean as normal. No extra precautions are necessary because a water-based cleaners are designed for firearms.
E. Clean with water based cleaners but only use petroleum based oils to remove any residual water from cleaning.

4. If you are working for a law enforcement agency, military organization, or as a business, you should

A. Keep records of all inspections and repairs.
B. Maintain a small inventory of parts that wear or require frequent replacement.
C. Refer regularly to videos and manuals for the firearms you service.
D. Use manufacturer recommended spring or part replacement schedules.
E. Use manufacture recommended or quality firearm cleaners and lubricants.
F. All of the above

5. If welding is required, it is best or even required that TIG (GTAW – Gas Tungsten Arc Welding) is used instead of MIG, standard stick-arc, or Oxy-Acetylene methods. This is due to fast arc and fine control capability of TIG (GTAW) welding on small parts, as well as keeping the heat affected zone to a minimum to avoid damaging critical parts or existing heat treatment.

A. True
B. False