AManeuver 17 Slow Flight

What airspeed will you normally use when practicing slow flight?
Slow flight can be broadly defined as flight at any airspeed less than the normal cruise speed. However, in training, you'll normally use 1.2 times the stalling speed in a specific configuration, or 1.2VS1.
Maneuver 17 Slow Flight

The weight of your airplane can affect its stall speed.
Weight, center of gravity location, airplane configuration, and bank angle are just some of the things that affect stall speed.
Maneuver 17 Slow Flight

When performing turns during slow flight, what bank angle should you use?
When turning during slow flight, you should use a shallow bank angle. The steeper the bank angle, the greater the load factor placed on the wings, which could lead to a stall.
Maneuver 17 Slow Flight

Torque is one of the left-turning tendencies you'll notice when practicing slow flight.
Torque and asymmetrical thrust are both more noticeable during slow flight because of the nose-high attitude and high power setting.
Maneuver 17 Slow Flight

During slow flight, what action should you take to initiate a climb?
To climb during slow flight, you must add power and increase pitch to maintain airspeed. Increasing pitch without adding power will lead to a stall. Adding power and decreasing pitch will cause your airspeed to increase.
Maneuver 17 Slow Flight

To stay coordinated during slow flight, you will need to use more left rudder than in cruise flight.
Since you're at a high angle of attack and a slow airspeed, the nose will want to pull to the left. You'll have to apply more right rudder to counteract the left-turning tendencies.
Maneuver 18 Power-Off Stalls

One of the reasons you practice stalls is to learn how to perform a safe stall recovery without losing too much altitude.

You practice stalls to learn how to avoid getting into a stall situation, and to learn how to recognize and safely recover from an inadvertent stall without losing too much altitude.
Maneuver 18 Power-Off Stalls

Most training airplanes are designed so that what part of the wing stalls first?
Most training airplanes are designed so that the stall occurs at the wing root first, and then progresses to the wingtip. When you notice the first signs of a stall, you will still have some control effectiveness since the ailerons are located near the wingtips.
Maneuver 18 Power-Off Stalls

Your airplane will always stall at the same airspeed.

A stall can occur at any airspeed, attitude, or power setting, but an airfoil will always stall at the same angle of attack.
Maneuver 18 Power-Off Stalls

Unless it recommends otherwise in your airplane's POH, you should recover by what minimum altitude when practicing stalls?

The PTS requires that you select an entry altitude that allows you to recover no lower than 1,500 feet AGL, or the recommended altitude, whichever is higher.
Maneuver 18 Power-Off Stalls

Keeping the airplane coordinated is only important during a turning power-off stall.

Whether you're flying a constant heading or turning during the stall, it's extremely important to keep your airplane coordinated. If you allow it to slip or skid, one wing may stall before the other. When this happens, if you don't immediately correct it, you may enter a spin.
Maneuver 18 Power-Off Stalls

When recovering from a power-off stall, what airspeed should you be at before fully retracting the flaps?

The PTS states that you should accelerate to VY before the final flap retraction.
Maneuver 18 Power-Off Stalls

Select the true statement regarding stall recovery.

Reducing the angle of attack by lowering the nose is the first step in recovering from a stall. As soon as you recognize the stall, release the back pressure on the yoke, add full power, and set the carb heat to COLD.
Maneuver 18 Power-Off Stalls

Indications of a stall may include a high sink rate, buffeting, and nose-down pitching.

You should hear the stall warning horn, if your airplane has one, 5 to 10 knots before the actual stall and the controls may feel mushy. Keep holding the nose at this pitch attitude until the stall occurs. Indications of a stall may include a high sink rate, buffeting, and nose-down pitching.
Maneuver 19 Power-On Stalls

When you set up a power-on stall, what actions should you take after reducing the power to slow to liftoff speed?
To maintain altitude as the airplane slows down, you'll need to increase the airplane's pitch attitude. Since doing this increases the left-turning tendencies, you should add right rudder to keep the airplane coordinated.
Maneuver 19 Power-On Stalls

An inadvertent power-on turning stall is most likely to occur when?
A power-on turning stall is most likely to happen while turning to leave the pattern during departure. If you become distracted by the many tasks that must be accomplished while leaving an airport, you may put yourself at risk of a stall as you turn to depart.
Maneuver 19 Power-On Stalls

During a power-on stall recovery, you should retract the takeoff flaps at the first indication of the stall.

You may want to practice power-on stalls with the flaps lowered to the appropriate takeoff setting in your airplane's POH. During the stall recovery, retract the flaps only after you've established a positive rate of climb.
Maneuver 19 Power-On Stalls

Select the true statement regarding power-on stalls.

By following the before takeoff checklist and completing a weight and balance calculation prior to every flight, you can make sure your airplane is properly configured for takeoff, and reduce the risk of an inadvertent power-on stall.
Maneuver 19 Power-On Stalls

What actions should you take to recover from a power-on stall?
To recover from a power-on stall, release the back pressure and let the nose fall just below the horizon. This decreases the angle of attack and gets air flowing smoothly across the wings. Once you've recovered, gently pull back on the yoke to stop the descent.
Maneuver 19 Power-On Stalls

You are setting up a power-on stall. When you add takeoff power after slowing to liftoff speed, you will need to increase left rudder pressure to keep

the airplane coordinated.
With a nose-up attitude, slow airspeed, and high power setting, you'll normally need a lot of right rudder to counteract the left-turning tendencies and keep the airplane coordinated.
Maneuver 20 Demonstrated Stalls

An elevator trim stall normally occurs during a poorly executed turn from base to final.
The elevator trim stall demonstrates what can happen if you add full power during a go-around, but you don't maintain positive control of the airplane. The crossed-control stall is more likely to happen during a poorly executed turn from base to final.
Maneuver 20 Demonstrated Stalls

Typically, what action can cause a secondary stall?
If you pull the nose up too quickly during a stall or spin recovery, you could enter a secondary stall.
Maneuver 20 Demonstrated Stalls

During a turn to final, you overshoot the extended runway centerline. To correct, you apply rudder pressure in the direction of the turn, and use opposite aileron to keep your bank angle from getting too steep. What kind of stall are you in danger of entering?
When you overshoot your turn from base to final, you may try to correct by using the rudder to get back to the runway, and opposite aileron deflection to maintain your bank angle. This puts you at risk of entering a crossed-control stall.
Maneuver 20 Demonstrated Stalls

An airplane must stall before it can spin.
A spin is an aggravated stall that results in the airplane descending in a corkscrew path. An airplane must stall before it can spin. Normally, an inadvertent spin is caused by exceeding the critical angle of attack in an uncoordinated maneuver.
Maneuver 20 Demonstrated Stalls

Select the true statement regarding the accelerated maneuver stall.

Stalls that occur at higher-than-normal airspeeds due to additional loads placed on the airplane are called accelerated maneuver stalls. These stalls can happen in steep turns, pullups from dives, or other abrupt changes in flight attitude.
Maneuver 20 Demonstrated Stalls

A rectangular wing typically stalls at the wingtips first.
The rectangular wing tends to stall at the wing root first. This gives you

adequate warning of the stall while you still have aileron control.
Maneuver 21 Steep Turns

If you are losing altitude while performing a steep turn, what actions should you take to stop the descent?

To stop your descent during a steep turn, reduce the bank angle slightly before applying back pressure on the yoke. If you don't reduce the bank angle first, increasing the back pressure may only serve to tighten the turn, and the airplane will continue to descend.
Maneuver 21 Steep Turns

What should you do when rolling out of a steep turn in order to maintain your altitude and airspeed?
As you roll out of a steep turn, slowly reduce the pitch attitude as your bank angle decreases. If you don't release some back pressure on the yoke, you'll begin climbing during the roll back to wings level. In addition, you can reduce the power a little to help you maintain altitude and airspeed as you return to straight-and-level flight.
Maneuver 21 Steep Turns

Overbanking tendency is caused by extra lift produced by the inside wing. Since the outside wing has too travel a farther distance during the turn, it's moving faster than the inside wing and developing more lift as a result. This is causes overbanking tendency.
Maneuver 21 Steep Turns

At what altitude should you perform steep turns?
The PTS requires that you select an altitude that will allow you to perform the steep turn no lower than 1,500 feet AGL.
Maneuver 21 Steep Turns

To maintain altitude in a steep turn, you should focus primarily on the instruments.

Once you're established in the steep turn, you should choose a reference point in front of you on the airplane that you can line up with the horizon. Hold the point in the same position throughout the turn to keep from climbing or descending.
Maneuver 21 Steep Turns

You should perform steep turns at what bank angle?

The PTS requires that you maintain a 45 bank angle, +/5 while performing a steep turn.