

## Checkride Standards for N20068 Cessna 172/180

### **Before and During Taxi**

- Passenger Briefing
- Perform a brake check immediately after the airplane begins moving
- Use an airport diagram or taxi chart during taxi, if published, and maintain situational awareness
- Position the flight controls for the existing wind conditions

### **Before Takeoff Check**

- Complete the appropriate checklist

### **Normal Takeoff and Climb**

- Position the flight controls for the existing wind conditions
- Rotate and lift off at  $V_r$  65mph and accelerate to  $V_y$  85mph +10/-5 knots

### **Pilotage and Dead Reckoning**

- Maintain the appropriate altitude,  $\pm 200$  feet and heading,  $\pm 15^\circ$ .
- Demonstrate use of the magnetic direction indicator in navigation, to include turns to headings
- Verify position within three nautical miles of the flight-planned route
- Arrive at the enroute checkpoints within five minutes of the initial or revised estimated time of arrival (ETA) and provide a destination estimate

### **Navigation Systems**

- Determine the airplane's position using the navigation system
- Intercept and track a given course, radial, or bearing, as appropriate

### **Diversion**

- Select a suitable airport (or as specified by the examiner) for diversion
- Make a reasonable estimate of heading, groundspeed, arrival time, and fuel consumption to the divert airport

### **Lost Procedures**

- Use an appropriate method to determine position
- Maintain an appropriate heading and climb as necessary
- Identify prominent landmarks
- Use navigation systems/facilities and/or contact an ATC facility for assistance

### **Ground Reference Maneuvers**

- Clear the area
- Select a suitable ground reference area, line, or point as appropriate
- Rectangular course:** enter a left or right pattern, 600 to 1,000 feet above ground level (AGL) at an appropriate distance from the selected reference area,  $45^\circ$  to the downwind leg
- S-turns:** enter perpendicular to the selected reference line, 600 to 1,000 feet AGL at an appropriate distance from the selected reference area
- Turns around a point:** enter at an appropriate distance from the reference point, 600 to 1,000 feet AGL at an appropriate distance from the selected reference area
- Apply adequate wind-drift correction during straight and turning flight to maintain a constant ground track around a rectangular reference area, or to maintain a constant radius turn on each side of a selected reference line or point
- Divide attention between airplane control, traffic avoidance and the ground track while maintaining coordinated flight
- Maintain altitude  $\pm 100$  feet; maintain airspeed  $\pm 10$  knots

### **Maneuvering During Slow Flight**

- Clear the area
- Select an entry altitude that will allow the Task to be completed no lower than 1,500 feet AGL
- Establish and maintain an airspeed (45-55mph) at which any further increase in angle of attack, increase in load factor, or reduction in power, would result in a stall warning (e.g., airplane buffet, stall horn, etc.).
- Accomplish coordinated straight-and-level flight, turns, climbs, and descents with the airplane configured as specified by the evaluator without a stall warning (e.g., airplane buffet, stall horn, etc.).
- Maintain the specified altitude,  $\pm 100$  feet; specified heading,  $\pm 10^\circ$ ; airspeed,  $+10/-0$  knots; and specified angle of bank,  $\pm 10^\circ$

### **Spin Awareness**

- Factors and situations that could lead to inadvertent spin and loss of control
- Effect of environmental elements on airplane performance related to spins (e.g., turbulence, microbursts, and high-density altitude)

### **Power-Off Stalls**

- Clear the area.
- Select an entry altitude that will allow the Task to be completed no lower than 1,500 feet
- Configure the airplane in the approach or landing configuration (20 deg. Flaps) or as specified by the evaluator
- Maintain a specified heading  $\pm 10^\circ$  if in straight flight; maintain a specified angle of bank not to exceed  $20^\circ$ ,  $\pm 10^\circ$  if in turning flight, while inducing the stall
- Acknowledge cues of the impending stall and then recover promptly after a full stall occurs
- Execute a stall recovery, then  $V_y$  85mph
- Return to the altitude, heading, and airspeed specified by the evaluator

### **Power-On Stalls**

- Clear the area
- Select an entry altitude that will allow the Task to be completed no lower than 1,500 feet
- Establish the takeoff, departure, or cruise configuration, as specified by the evaluator
- Reduce power and speed to slow flight below 65mph. Add power to (2,000 rpm) while increasing pitch
- Continue increasing pitch to induce a stall
- Maintain a specified heading  $\pm 10^\circ$  if in straight flight; maintain a specified angle of bank not to exceed  $20^\circ$ ,  $\pm 10^\circ$  if in turning flight, while inducing the stall
- Acknowledge cues of the impending stall and then recover promptly after a full stall occurs
- Execute a stall recovery, then  $V_y$  85mph
- Return to the altitude, heading, and airspeed specified by the evaluator

### **Steep Turns**

- Clear the area
- Establish the manufacturer's recommended airspeed; or if one is not available, a safe airspeed not to exceed  $V_A(100\text{mph})$
- Roll into a coordinated  $360^\circ$  steep turn with approximately a  $45^\circ$  bank
- Maintain the entry altitude  $\pm 100$  feet, airspeed  $\pm 10$  knots, bank  $\pm 5^\circ$ , and roll out on the entry heading  $\pm 10^\circ$

### **Basic Instrument Maneuvers**

***Straight-and-Level Flight*** (ref 100mph @ 2,000rpm, no flaps)

***Constant Airspeed Climbs*** (ref +500 fpm, 100mph @ 2,300rpm, no flaps)

***Constant Airspeed Descents*** (ref -500fpm, 100mph @ 1,500rpm, no flaps)

***Turns to Headings***

- Maintain straight-and-level flight using proper instrument cross-check and interpretation, and coordinated control application.
- Maintain altitude  $\pm 200$  feet, heading  $\pm 10^\circ$ , and airspeed  $\pm 10$  knots.

### **Recovery from Unusual Flight Attitudes**

- Recognize unusual flight attitudes; perform the correct, coordinated, and smooth flight control application to resolve unusual pitch and bank attitudes while staying within the airplane's limitations and flight parameters

### **Emergency Approach and Landing**

- Establish and maintain the recommended best glide (Vg 75 mph, no flaps) airspeed,  $\pm 10$  knots
- Select a suitable landing area considering altitude, wind, terrain, obstructions, and available glide distance.
- Prepare for landing as specified by the evaluator.
- Complete the appropriate checklist.

### **Emergency Descent**

- Clear the area.
- Demonstrate orientation, division of attention and proper planning.
- Use bank angle between  $30^\circ$  and  $45^\circ$  to maintain positive load factors during the descent
- Maintain appropriate airspeed  $+0/-10$  knots, and level off at a specified altitude  $\pm 100$  feet.
- Complete the appropriate checklist.

### **Systems and Equipment Malfunctions**

- Partial or complete power loss related to the specific powerplant, including:
  - Engine roughness or overheat
  - Carburetor or induction icing
  - Loss of oil pressure
  - Fuel starvation
- System and equipment malfunctions specific to the airplane, including:
  - Electrical malfunction
  - Vacuum/pressure and associated flight instrument malfunctions
  - Pitot/static system malfunction
  - Electronic flight deck display malfunction
  - Flap malfunction
  - Inoperative trim
  - Smoke/fire/engine compartment fire
  - Inadvertent door or window opening
- The applicant demonstrates understanding of:
  - Emergency Locator Transmitter (ELT) operations, limitations, and testing requirements.
  - Fire extinguisher operations and limitations.

### **Traffic Patterns**

- Comply with recommended traffic pattern procedures
- Maintain traffic pattern altitude,  $\pm 100$  feet, and the appropriate airspeed,  $\pm 10$  knots

### **Normal Approach and Landing**

- Complete the appropriate checklist. **GuMpS**
- Maintain approach airspeed 70mph + 50% of gust,  $+10/-5$  knots
- Maintain crosswind correction and directional control throughout the approach and landing.
- Touch down at a proper pitch attitude, within 400 feet beyond or on the specified point, with no side drift, and with the airplane's longitudinal axis aligned with and over the runway center/landing path, or else go-around.
- Utilize runway incursion avoidance procedures

### **Go-Around/Rejected Landing**

- Apply takeoff power immediately and transition to climb pitch attitude for  $V_x(70\text{mph})$  or  $V_y(85\text{mph})$  as appropriate  $+10/-5$  knots
- Configure the airplane after a positive rate of climb has been verified or in accordance with airplane manufacturer's instructions (i.e. Reduce flaps after positive rate of climb and all obstructions cleared)
- Maneuver to the side of the runway/landing area when necessary to clear and avoid conflicting traffic.

### **Soft-Field Approach and Landing**

- Complete the appropriate checklist. **GuMpS**
- Maintain manufacturer's published approach airspeed 70mph + 50% of gust, +10/-5 knots
- Touch down at a proper pitch attitude with minimum sink rate, no side drift, and with the airplane's longitudinal axis aligned with the center of the runway, or else go-around
- Maintain elevator as recommended by manufacturer during rollout and exit the "soft" area at a speed that would preclude sinking into the surface.

### **Soft-Field Takeoff**

- Position the flight controls for the existing wind conditions.
- Establish and maintain a pitch attitude that will transfer the weight of the airplane from the wheels to the wings as rapidly as possible
- Lift off at the lowest possible airspeed and remain in ground effect while accelerating to  $V_x$ (70mph) or  $V_y$ (85mph) as appropriate +10/-5 knots
- Reduce flaps after positive rate of climb and all obstructions cleared

### **Forward Slip to a Landing**

- Complete the appropriate checklist. **GuMpS**
- Maintain approach *airspeed above 80mph while slipping*, then 70mph + 50% of gust, +10/-5 knots
- Maintain crosswind correction and directional control throughout the approach and landing.
- As necessary, correlate crosswind with direction of forward slip and transition to side slip before touchdown
- Touch down at a proper pitch attitude, within 400 feet beyond or on the specified point, with no side drift, and with the airplane's longitudinal axis aligned with and over the runway center/landing path, or else go-around.
- Utilize runway incursion avoidance procedures

### **Short-Field Approach and Landing**

- Complete the appropriate checklist. **GuMpS**
- Maintain manufacturer's published approach airspeed 70mph + 50% of gust, +10/-5 knots
- Maintain crosswind correction and directional control throughout the approach and landing.
- Touch down at a proper pitch attitude, within 200 feet beyond or on the specified point, with no side drift, and with the airplane's longitudinal axis aligned with and over the runway center/landing path, or else go-around.
- Utilize runway incursion avoidance procedures

### **Short-Field Takeoff and Maximum Performance Climb**

- Position the flight controls for the existing wind conditions
- Rotate and lift off at 65mph and accelerate to  $V_x$  (70mph) +10/-5 knots
- Maintains the recommended obstacle clearance airspeed or  $V_x$ (70mph) +10/-5 knots until the obstacle is cleared or until the airplane is 50 feet AGL
- After clearing the obstacle, establish pitch attitude for  $V_y$ (85mph)and accelerate to and maintain  $V_y$  +10/-5 knots during the climb.
- Reduce flaps after positive rate of climb and all obstructions cleared

**KNOW abbreviated EMERGENCY CHECKLIST**