

Cessna 172 Exam

References: Cessna 172R, S, and N Pilot's Operating Handbooks (POHs) with applicable STC supplements and RAFA Standard Operating Procedures (SOP). Four points each question.

CESSNA 172R/S

Use the Cessna 172R (180 hp) or Cessna 172S POH for questions 1 to 12.

1. A failure of the engine driven fuel pump will be evidenced by a sudden reduction in the fuel flow indication, immediately followed will by: (Cessna 172R/S POH, SECTION 3, EMERGENCY PROCEDURES)
 - a. An increase in RPM
 - b. An increase in fuel pressure
 - c. A loss of engine power
 - d. Normal engine operation

2. What is the maximum horsepower rating for the Cessna 172R/S and at what engine rpm? (Cessna 172R/S POH, SECTION 1, GENERAL and SECTION 2, LIMITATIONS)
 - a. 110 hp / 2550 rpm
 - b. 160 hp / 2700 rpm
 - c. 200 hp / 2500 rpm
 - d. 180 hp / 2700 rpm

3. What is the total endurance (no reserve) under the following conditions: 2550 gross wt, 4000 ft press alt, std temp, 61% BHP, and 34-gallon usable fuel? (Cessna 172R/S POH, SECTION 5, PERFORMANCE, CRUISE PERFORMANCE)
 - a. 4 hours
 - b. 3 hours
 - c. 2.3 hours
 - d. 6 hours

4. When starting a hot engine, what procedure in the "Starting Engine" checklist should you omit? (See Cessna 172R/S POH, SECTION 4, NORMAL PROCEDURES)
 - a. Mixture to Idle cut off
 - b. Priming procedure
 - c. Throttle Open 1/4 inch
 - d. Ignition switch to Start

5. Soft or rough field takeoffs are performed with a flap setting of: (Cessna 172R/S POH, SECTION 4, NORMAL PROCEDURES)
 - a. Whatever feels right
 - b. 20°
 - c. 0°
 - d. 10°

6. What is the Utility Category maximum takeoff weight? (Cessna 172R/S POH, SECTION 2, LIMITATIONS)
 - a. 2550 lbs
 - b. 2150 lbs
 - c. 2200 lbs
 - d. 2558 lbs

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7. Short field takeoff procedure at 2550 pounds is based on lifting-off at 51 KIAS. What is the correct airspeed at 50 feet? (Cessna 172R/S POH, SECTION 5, PERFORMANCE, SHORT FIELD TAKEOFF DISTANCE AT 2550 POUNDS)

- | | |
|------------|------------|
| a. 54 KIAS | c. 62 KIAS |
| b. 50 KIAS | d. 56 KIAS |

8. What are the V_Y and V_X airspeeds at sea level? (Cessna 172R/S POH, SECTION 5, PERFORMANCE)

- | | |
|-----------------|------------------|
| a. 74 / 62 KIAS | c. 100 / 65 KIAS |
| b. 76 / 59 KIAS | d. 67 / 55 KIAS |

9. "**Bold Faced**" items in several of the emergency checklists identify initial action items to be memorized. The first action a pilot must take during an engine fire in flight is: (Cessna 172R/S POH, SECTION 3, EMERGENCY PROCEDURES)

- | | |
|----------------------------|------------------------------|
| a. Mixture -- IDLE CUT OFF | c. Declare an Emergency |
| b. Master Switch -- OFF | d. Forced Landing -- EXECUTE |

10. If both fuel tanks are filled to bottom of the filler neck, what will be the total reduced fuel load? (Cessna 172R/S POH, SECTION 2, LIMITATIONS and SECTION 7, AIRPLANE & SYSTEM DESCRIPTION)

- | | |
|---------------|---------------|
| a. 65 gallons | c. 53 gallons |
| b. 35 gallons | d. 40 gallons |

11. Velocity stall 0 (V_{s0}) is the stall speed in the "dirty" landing configuration and 0° bank. What speed is V_{s0} and how is it indicated on the airspeed indicator? (Cessna 172R/S POH, SECTION 5, PERFORMANCE)

- | | |
|------------------------------------|------------------------------------|
| a. 40 KIAS and bottom of white arc | c. 48 KIAS and bottom of green arc |
| b. 40 KIAS and bottom of green arc | d. 55 KIAS and bottom of white arc |

12. The 28-volt, 60-amp electrical system consists of a split primary bus, each connected to an avionics bus via: (Cessna 172R/S POH, SECTION 7)

- | | |
|------------------------------------|-------------------------------------|
| a. A magneto | c. Dual avionics master switches |
| b. A single avionics master switch | d. An avionics relay/thing-a-ma-gig |

Cessna 172N (160 HP)

Use the Cessna 172N POH for questions 13 to 21.

13. What is the total takeoff distance required to clear a 50-foot obstacle at maximum gross weight, flaps up, paved level dry runway, proper leaning, pressure altitude of 4000 ft, temperature 30°C, and an 18-knot headwind? (Cessna 172N POH, SECTION 5, PERFORMANCE, TAKEOFF DISTANCE MAXIMUM WEIGHT 2300 LBS)

- | | |
|------------|------------|
| a. 1868 ft | c. 2335 ft |
| b. 2102 ft | d. 1300 ft |

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14. The final approach airspeeds for a Normal Landing both with flaps up and flaps down are: (Cessna 172N POH, SECTION 4, NORMAL PROCEDURES)
- a. 60-70 KIAS / 55-65 KIAS
 - b. 55-65 KIAS / 60-70 KIAS
 - c. 50-60 KIAS / 65-70 KIAS
 - d. 65-75 KIAS / 60-70 KIAS
15. FAR Part 91.205 dictates the minimum equipment and instruments required for flight by all aircraft. Cessna adds to these minimum equipment requirements with a comprehensive equipment list. Is a properly functioning ammeter required for flight? (Cessna 172N POH, SECTION 6, WEIGHT & BALANCE/EQUIPMENT LIST)
- a. No; however, you can only fly VFR
 - b. Yes; however, you can still fly if the ammeter is placarded INOPERATIVE
 - c. No; the ammeter is not required
 - d. Yes; you cannot fly with an inoperable ammeter
16. The indicated stall speeds at 0° bank, max gross weight, and forward CG with full flaps and with zero flaps are: (Cessna 172N POH, SECTION 5, PERFORMANCE)
- a. 44 KIAS / 33 KIAS
 - b. 55 KIAS / 35 KIAS
 - c. 41 KIAS / 47 KIAS
 - d. 40 KIAS / 30 KIAS
17. The independent hydraulic reservoirs/master cylinders for the brakes are located: (Cessna 172N POH, SECTION 7, AIRPLANE & SYSTEMS DESCRIPTIONS)
- a. on the forward firewall
 - b. in the tail section
 - c. adjacent to the aircraft's battery
 - d. behind the pilot rudder/brake pedals
18. What are maneuvering speed (V_A) at 2300 pounds and 1600 pounds, respectively? (Cessna 172N POH, SECTION 2, LIMITATIONS)
- a. 97 & 80 KIAS
 - b. 96 & 80 KIAS
 - c. 65 KIAS with aft CG
 - d. 97 KIAS for both weights
19. What is the best glide speed with flaps up? (Cessna 172N POH, SECTION 3, EMERGENCY PROCEDURES)
- a. 74 KIAS
 - b. 60 KIAS
 - c. 68 KIAS
 - d. 65 KIAS

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20. Determine the weight and balance given the following information: (Cessna 172N POH, SECTION 6, WEIGHT & BALANCE/EQUIPMENT LIST)

<u>Item</u>	<u>Weight</u>	<u>Arm</u>	<u>Moment</u>
Basic Aircraft	1474	_____	59791.76
Fuel (40 gal)	_____	47.9	_____
Pilot & passenger	410	37.0	_____
Rear passenger	205	73.0	_____
Total Weight	_____	Total Moment	_____

CG _____

- | | |
|---------------------------------------|---|
| a. Within weight limits, within CG | c. Over weight limits, within CG |
| b. Over weight limits, outside fwd CG | d. Within weight limits, outside fwd CG |

21. In the event of a go-around or balked landing, the first action for the pilot to take is to: (Cessna 172N POH, SECTION 4, NORMAL PROCEDURES)

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|-----------------------------|---------------------------------|
| a. Retract flaps to 20° deg | c. Push throttle Full Open |
| b. Announce a "go-around" | d. Push carburetor heat knob In |

Common to more than one model for questions 22 to 25.

22. When fueling an airplane, the grounding wire will be connected to: (SOP, SECTION 4, FLIGHT OPERATIONS)

- | | |
|---------------------------|------------------------------------|
| a. The fuel cap | c. Any exhaust pipe |
| b. Main landing gear tire | d. One of the wing tie-down points |

23. When taxiing under power on the ramp, the nose wheel should: (SOP, SECTION 4, FLIGHT OPERATIONS)

- a. remain on the yellow taxi line for all taxiing and through shutdown.
- b. remain on the yellow taxi line for all taxiing until turning to align with parking spot.
- c. remain near the yellow taxi line since the taxi line just is a suggestion.
- d. go wherever the pilot thinks best since the yellow taxi line is not relevant.

24. How does operation on a dry grass runway affect the landing distance? (Cessna 172N/R/S POH, SECTION 5, PERFORMANCE)

- | | |
|-------------------------------------|---|
| a. There is no change at all | c. Distances decrease slightly |
| b. Distances increase significantly | d. Distances decrease if using MIL-H-5606 brake fluid |

25. In the event of a cabin fire, the emergency procedure first mandates Master Switch - OFF. The next step is to: (Cessna 172N/R/S POH, SECTION 3, EMERGENCY PROCEDURES)

- | | |
|------------------------------|-----------------------------------|
| a. Windows and vents -- OPEN | c. Vents/Cabin Air/Heat -- CLOSED |
| b. Fuel shutoff valve --OFF | d. Call ATC |