

USAF Academy
Flight Training Center
N736HM - Cessna 172XP Aircraft Exam
Updated Jan 2025

Instructions

Complete the following exam using the answer sheet provided. Do not assume information not specifically provided in the questions. You will need the POH from N736HM and its Supplemental Type Certificate. Questions 1 - 25 are open book. The closed book exam (emergency procedures) will be on a separate answer sheet.

I. General

1. N736HM has a total capacity with standard fuel tanks of _____ gallons of fuel. Total **usable** fuel, however, is _____ gallons.
 - a. 43, 40
 - b. 52, 49
 - c. 52, 48
 - d. 42, 40

2. The Normal Operating range of N736HM is between _____ - _____ KIAS.
 - a. 55, 129
 - b. 53, 115
 - c. 54, 129
 - d. 42, 140

*For Question 3 and 4 reference the appropriate aircraft's metal binder Supplemental Type Certificate and updated weight and balance information. N736HM is upgraded to a 210hp engine, which **DOES NOT** change the aircraft weight and balance from the POH.*

3. N736HM's STC installs a Horizon Instruments, Inc. Model P-100 Tachometer which will illuminate at different RPM indications: red _____, yellow _____, and green _____.
 - a. 2650 / 2600 / 2200
 - b. 2700 / 2600 / 2200
 - c. 2750 / 2600 / 2300
 - d. 2800 / 2600 / 2200

4. The expected fuel flow at 8000' with full throttle and 2800 RPM is _____ GPH.
 - a. 13
 - b. 11
 - c. 8
 - d. 17

II. Limitations

5. The maximum flap extended speed (Vfe) with flaps 10°-30° for N736HM is ____ kts.
 - a. 110 KIAS
 - b. 85 KIAS
 - c. 95 KIAS
 - d. 85 KCAS

6. Never Exceed Speed (Vne) in N736HM is _____ KIAS.
 - a. 128 KIAS
 - b. 163 KIAS
 - c. 160 KIAS
 - d. 155 KIAS

7. Maximum Structural Cruising Speed (Vno) in N736HM is _____.
 - a. 129 KIAS
 - b. 140 KIAS
 - c. 110 KIAS
 - d. 115 KIAS

8. When switching from a dry tank, turn pump _____ momentarily.
 - a. ON LOW
 - b. ON HIGH
 - c. OFF LOW
 - d. OFF HIGH

III. Emergency Procedures

9. The best glide speed in N736HM is _____ KIAS (flaps up) or _____ KIAS (flaps down).
 - a. 70, 64
 - b. 70, 65
 - c. 65, 60
 - d. 65, 65

10. If you enter a spin, the following recovery should be used:
 - 1) Throttle – IDLE, Ailerons – NEUTRAL
 - 2) Apply and **hold** full rudder opposite to the direction of rotation
 - 3) Just **after** the rudder reaches the stop, move the control wheel **briskly** forward far enough to break the stall
 - 4) **Hold** these control inputs until rotation stops
 - 5) As rotation stops, neutralize rudder, and make a smooth recovery from the resulting dive.
 - a. True
 - b. False

IV. Normal Operations

11. After starting the engine, the oil gage should show pressure within _____ seconds in the summer and within _____ seconds in very cold weather.
 - a. 30 / 45
 - b. 30 / 60
 - c. 30 / 30
 - d. 60 / 90

12. The mixture in N736HM should be leaned prior to takeoff from fields above _____ feet elevation. You lean the motor just like leaning any other C-172 by using RPM drop (T/F).
 - a. 6500, True
 - b. 6500, False
 - c. 5000, False
 - d. 2500, True

13. In balked landing (go-around) climb, reduce the flap setting to _____ immediately after full power is applied.
 - a. 0°
 - b. 20°
 - c. 30°
 - d. 10°

14. Using 10° wing flaps reduces the ground run and total distance over an obstacle by approximately _____.
 - a. 5%
 - b. 8%
 - c. 10%
 - d. 4%

15. Normal climbs in N736HM should be performed at 85-95 KIAS with flaps up and maximum power for the best combination of engine cooling, rate of climb and forward visibility. The mixture should be _____.
 - a. leaned for max RPM.
 - b. monitored due to the engine being fuel injected.
 - c. leaned in accordance with the fuel flow placard.
 - d. ignored.

16. The stall warning horn sounds _____ kts above the stall in all configurations.
 - a. 5 – 10
 - b. 0 – 5
 - c. 5 – 7
 - d. 8

V. Performance

17. The true airspeed (TAS) in Colorado is always _____ than the indicated airspeed (IAS).
- a. lower
 - b. higher
 - c. no different
18. To climb from the academy airfield to 9,500 feet MSL in N736HM at a weight of 2550lbs would take _____ minutes, with _____ gallons of fuel used, and distance of _____ NM traveled. **Note:** *Don't forget to add fuel for engine start, taxi and takeoff!*
- a. 10 / 1.5 / 11
 - b. 7 / 2.8 / 11
 - c. 7 / 1.4 / 11
 - d. 7.5 / 2.8 / 11

VI. Airplane Systems

19. The engine in the C-172P has a total of _____ spark plug(s) and _____ engine driven magneto(s).
- a. 8, 1
 - b. 8, 2
 - c. 12, 2
 - d. 12, 1
20. Fuel flows by _____ from the two wing tanks to a three-position selector valve.
- a. gravity
 - b. an electric pump
 - c. a hydraulic pump
 - d. an aneroid mixture valve
21. An empty fuel tank is indicated by a red line and the letter E. When an indicator shows an empty tank, approximately _____ gallons remain as unusable fuel.
- a. 3
 - b. 1.5
 - c. 5
 - d. plenty
22. If the auxiliary fuel pump switch is accidentally placed in the HIGH or LOW position with the master switch on, mixture rich, and the engine stopped, the intake manifolds will be flooded.
- a. True
 - b. False

23. The C172 braking system has a single-disc, hydraulically actuated brake on each main landing gear wheel. Each brake is connected by a hydraulic line to a master cylinder attached to each of the pilot's rudder pedals.
- True
 - False
24. The fuel shutoff valve is located _____ in the C-172P.
- on the floor between the pilots' seats
 - above and to the right of the fuel selector control
 - below the primer
 - under the pilot's/left seat
25. What is the oil capacity of the C-172P models?
- 9
 - 8
 - 7
 - 6 minimum!