## **USAF Academy Flight Training Center**

Cessna 172 Aircraft Exam **Updated February 2024** 

## **Instructions**

Complete the following exam using the answer sheet provided. Do not assume information not specifically provided in the questions. You will need the Cessna 172 M/N and P model Information Manuals and the Supplemental Type Certificate for Cessna 172 M model. Questions 1 - 25 are open book. The closed book exam (emergency procedures) will be on a separate answer sheet.

|          | eneral  A C-172 M aircraft with standard fuel tanks can hold gallons of fuel. Total  |
|----------|--|
|          | <b>usable</b> fuel is gallons. Long-range tanks for this model can hold gallons  |
|          | with a total usable fuel of gallons.   |
|          | a. 43, 40 and 52, 50   |
|          | b. 42, 38 and 52, 48   |
|          | c. 42, 38 and 54, 50   |
|          | d. 42, 40 and 52, 54   |
| 2.       | C-172N and P models with standard fuel tanks can hold gallons of fuel. Total usable fuel is gallons. Long-range tanks for these models can hold gallons  |
|          | with a total usable fuel of gallons.   |
|          | a. 42, 40 and 54, 50   |
|          | b. 43, 40 and 52, 48   |
|          | c. 43, 40 and 54, 50   |
|          | d. 42, 44 and 54, 52   |
|          | r Question 3 and 4 reference the appropriate aircraft's metal binder Supplemental Type<br>ificate and updated weight and balance information. Our Aircraft are upgraded to 180hp   |
|          | Poperation 3 and 4 reference the appropriate aircraft's metal binder Supplemental Type ificate and updated weight and balance information. Our Aircraft are upgraded to 180hp engines, which changes the aircraft weight and balance from the POH.   |
| Cert     | ificate and updated weight and balance information. Our Aircraft are upgraded to 180hp<br>engines, which changes the aircraft weight and balance from the POH.   |
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| Cert     | ificate and updated weight and balance information. Our Aircraft are upgraded to 180hp engines, which changes the aircraft weight and balance from the POH.  The maximum certified takeoff and landing weight for the C-172 M/N/P in the normal category is lbs. In the utility category, it is lbs.   |
| Cert     | ificate and updated weight and balance information. Our Aircraft are upgraded to 180hp engines, which changes the aircraft weight and balance from the POH.  The maximum certified takeoff and landing weight for the C-172 M/N/P in the normal category is lbs. In the utility category, it is lbs.  a. 2550/2050   |
| Cert     | ificate and updated weight and balance information. Our Aircraft are upgraded to 180hp engines, which changes the aircraft weight and balance from the POH.  The maximum certified takeoff and landing weight for the C-172 M/N/P in the normal category is lbs. In the utility category, it is lbs.  a. 2550/2050 b. 2450/2050  |
| Certa 3. | ificate and updated weight and balance information. Our Aircraft are upgraded to 180hp engines, which changes the aircraft weight and balance from the POH.  The maximum certified takeoff and landing weight for the C-172 M/N/P in the normal category is lbs. In the utility category, it is lbs.  a. 2550/2050 b. 2450/2050 c. 2300/2000 d. 2550/2100  Due to the 180hp Supplemental Type Certificate upgrade, the maximum flap travel has   |
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| Certa 3. | ificate and updated weight and balance information. Our Aircraft are upgraded to 180hp engines, which changes the aircraft weight and balance from the POH.  The maximum certified takeoff and landing weight for the C-172 M/N/P in the normal category is lbs. In the utility category, it is lbs.  a. 2550 / 2050 b. 2450 / 2050 c. 2300 / 2000 d. 2550 / 2100  Due to the 180hp Supplemental Type Certificate upgrade, the maximum flap travel has been reduced from down to  a. 40 / 30 |
| Certa 3. | The maximum certified takeoff and landing weight for the C-172 M/N/P in the normal category is lbs. In the utility category, it is lbs.  a. 2550 / 2050 b. 2450 / 2050 c. 2300 / 2000 d. 2550 / 2100  Due to the 180hp Supplemental Type Certificate upgrade, the maximum flap travel has been reduced from down to  a. 40 / 30 b. 45 / 35   |
| Certa 3. | ificate and updated weight and balance information. Our Aircraft are upgraded to 180hp engines, which changes the aircraft weight and balance from the POH.  The maximum certified takeoff and landing weight for the C-172 M/N/P in the normal category is lbs. In the utility category, it is lbs.  a. 2550 / 2050 b. 2450 / 2050 c. 2300 / 2000 d. 2550 / 2100  Due to the 180hp Supplemental Type Certificate upgrade, the maximum flap travel has been reduced from down to  a. 40 / 30 |

| II.  | Li | mitations  |
|------|----|--|
|      | 5. | The maximum flap extended speed (Vfe) for the C-172 M & N is, while the P            |
|      |    | is   |
|      |    | a. 85 KIAS / 100 KIAS  |
|      |    | b. 85 KIAS / 110 KIAS  |
|      |    | c. 85 mph / 100 mph  |
|      |    | d. 90 KIAS / 105 mph   |
|      | 6. | The maximum flap extended speed (Vfe) with flaps 10°-30° for the C-172P is kts.      |
|      |    | a. 110 KIAS  |
|      |    | b. 85 KIAS   |
|      |    | c. 95 KIAS   |
|      |    | d. 85 KCAS   |
|      | 7. | Never Exceed Speed (Vne) in the C-172 N is, and in the C-172P is kts.                |
|      |    | a. 128 KIAS / 158 KIAS   |
|      |    | b. 160 KIAS / 158 KIAS   |
|      |    | c. 160 KIAS / 127 KIAS   |
|      |    | d. 155 KIAS / 125 KIAS   |
|      | 8. | Maximum Structural Cruising Speed (Vno) in the C-172M&N is, while in the C-          |
|      |    | 172P it is   |
|      |    | a. 128 KIAS / 127 KIAS   |
|      |    | b. 140 KIAS / 127 KIAS   |
|      |    | c. 160 KIAS / 127 KIAS   |
|      |    | d. 155 KIAS / 125 KIAS   |
|      | 9. | The demonstrated crosswind limit in C-172 aircraft is kts.                           |
|      |    | a. 10  |
|      |    | b. 15  |
|      |    | c. 18  |
|      |    | d. 20  |
| III. | No | ormal Procedures   |
|      | 10 | . 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

| 11.   | The m          | nixture in the C-172M/N/P should be leaned prior to takeoff from fields above feet elevation.                              |
|-------|----------------|--|
| -     | 9              | 7500   |
|       |                | 6500   |
|       |                |  |
|       |                | 3000   |
|       | d.             | 2500   |
|       | full po        | ked landing (go-around) climb, reduce the flap setting to immediately after ower is applied. $0^{\circ}$                   |
|       |                |  |
|       |                | 20°  |
|       |                | 30°  |
|       | d.             | 10°  |
| 13 1  | Flan s         | settings greater than are not approved for takeoff.  |
| 13. 1 |                | 10°  |
|       |                |  |
|       |                | 20°  |
|       |                | 30°  |
|       | d.             | 40°  |
| 14.   | a.<br>b.<br>c. | stall warning horn sounds kts above the stall in all configurations. $5-10$ $0-5$ $5-7$ $8$                                |
| 15. ] | f you          | enter a spin, the following recovery should be used:   |
|       | 1)             | Throttle – IDLE, Ailerons – NEUTRAL  |
|       |                | Apply and <b>hold</b> full rudder opposite to the direction of rotation  |
|       |                | Just <b>after</b> the rudder reaches the stop, move the control wheel <b>briskly</b> forward far enough to brake the stall |
|       | 4)             | Hold these control inputs until rotation stops   |
|       |                | As rotation stops, neutralize rudder, and make a smooth recovery from the  |
|       | 3)             | resulting dive.  |
|       | a.             | True   |
|       |                | False  |
|       | 0.             | T disc   |
| 16.   | The            | best glide speed in the C-172M, N, or P is knots.  |
|       | a.             | 70   |
|       | b.             | 65   |
|       | c.             | 68   |
|       |                | 60   |
|       |                |  |

| IV.        | 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 a 2400lb C-172 P would take minutes, with gallons of fuel used, and distance of NM traveled.   |
|            | Note: Don't add fuel for taxi  |
|            | a. 10 / 1.5 / 11   |
|            | b. 9.5 / 1.5 / 13  |
|            | c. 8.0 / 1.8 / 12  |
|            | d. 7.5 / 2.5 / 14  |
| <b>T</b> 7 | A  |
| V.         | Airplane Systems   |
|            | 19. The engine in the C-172P has spark plug(s) in each cylinder and engine driven magneto(s).  |
|            | a. 1, 1  |
|            | b. 1, 2  |
|            | c. 2, 2  |
|            | d. 2, 1  |
|            | 20. Fuel flows by from the two wing tanks to a four-position selector valve in the C-172M/N/P.   |
|            | a. Gravity   |
|            | b. an electric pump  |
|            | c. a hydraulic pump  |
|            | d. an aneroid mixture valve  |
|            | <ul><li>21. 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.</li><li>a. True</li></ul> |
|            | b. False   |
|            | 22. The C-172P model with:   |
|            | Standard fuel tanks can hold U.S. gallons of fuel,   |
|            | Extended range fuel tanks hold  U.S. gallons.  |
|            | Total standard unusable fuel is U.S. gallons,  |
|            | Total extended unusable fuel is U.S. gallons.  |
|            | a. 53, 43, 4, 3  |
|            | b. 43, 54, 3, 4  |
|            | c. 54, 44, 2, 3  |
|            | d. 43, 50, 4, 3  |
|            | · · · · · · · · · · · · · · · · · · ·  |

| 23. There are points from which to drain fuel for the C-172P. |
|---|
| a. 5  |
| b. 8  |
| c. 3  |
| d. 15   |
|   |
|   |
| 24. The fuel shutoff valve is located in the C-172P.          |
| a. on the floor between the pilots seats                      |
| b. above and to the right of the fuel selector control        |
| c. below the primer   |
| d. under the pilot's/left seat                                |
| •   |
|   |
| 25. What is the oil capacity of the C-172P models?            |
| a. 8  |
| b. 10   |
| c. 6  |
| d. 7  |
|   |
|   |