

STEAM DRONE KNOWLEDGE CHALLENGE

RULES & GUIDELINES

will likely vary somewhat as per local host

The **Drone STEAM Challenge Series** announces its call for entries for the *Drone Knowledge Challenge*.

- 1: Eligibility: The competition is open to individuals or groups of professionals, amateurs, residents, students, and visitors, as per specific guidelines and constraints of contest host (*e.g., students only*)
- 2: Fees: See the submission guidelines provided for each individual contest.
- 3: Purpose: To evaluate drone pilot and flight team members' flexible knowledge and understanding of FAA regulations, airport operations, weather forecasting, weather impacts, physics of flight, ethical & moral aspects of drone flying, and drone maintenance & repair in the spirit of excellent preparation for employment in multiple career fields related to the safe and efficient use of drone technology in the National Airspace System and to recognize outstanding performance by participants in real-world, scenario-based situations.
- 4: Format: Pilots will complete a multiple-choice-style exam of **40-60 questions in a 45-minute** timed, closed-book, closed-note test scenario.

The test may be given electronically and administered through the pilot's personal cell phone or in paper-pencil format, dependent on the local host. One point is awarded for each correct answer. *There is no distinction between items left unanswered or items answered incorrectly, so there is no penalty for guessing.*
- 5: Test-takers are allowed to bring blank paper and pencils. No calculators or books or study materials are allowed.
- 6: Test-takers may be asked to use their cell phone for purposes of completing the test delivered electronically. **Using a cell phone for any other purpose than accessing the test is not allowed, and room monitors will automatically disqualify anyone using a cell phone for any other purpose.** *Cell phones should be set to silent and no-vibration during the test.*
- 7: Test-takers will be provided with print outs of any charts or FAA supplements needed to complete the exam. *We kindly ask that test-takers do not make any marks on these printed materials so that they may be used again in the future.*
8. It is highly unusual, but if a score tiebreaker for first-place needs to be broken, it will be based on the first pilot to submit their exam for scoring.

9: What's the best way to prepare? This test will look very much like the licensing tests given to FAA-certified drone pilots, and if one can excel at our knowledge tests, then one would definitely be ready to take the FAA commercial drone pilot license test once achieving the age of 16 years.

So, study everything related to *FAA Part 107 Remote Pilot Small Unmanned Aircraft Systems*. Many of the knowledge test challenge questions are based on these.

The first place to start is probably the FAA Part 107 Remote Pilot Small Unmanned Aircraft System study guide, online at:

https://www.faa.gov/regulations_policies/handbooks_manuals/aviation/media/remote_pilot_study_guide.pdf

Additionally, if you sign up for an *FAASafety* account (free), there is an online course available to prepare for the FAA exams at:

<https://www.faasafety.gov/gslac/ALC/CourseLanding.aspx?cID=451>

After that, one might find countless great *YouTube* tutorials. One of our favorites, of many, many available, is: https://www.youtube.com/watch?v=6_ucCKFJUCU, nearly two jam-packed hours from Tony & Chelsea Northup. They even have a free study guide to go along with it at: https://www.youtube.com/watch?v=6_ucCKFJUCU

And, there are many, many FAA Part 107 Remote Pilot Small Unmanned Aircraft System practice tests available online, many of which are free.

Good hunting!

1. What are characteristics of a moist, unstable air mass?

- A. Turbulence and showery precipitation.
- B. Poor visibility and smooth air.
- C. Haze and smoke.

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2. According to 14 CFR part 107, how may a remote pilot operate an unmanned aircraft in Class C airspace?

- A. The remote pilot must have prior authorization from the Air Traffic Control (ATC) facility having jurisdiction over that airspace.
- B. The remote pilot must monitor the Air Traffic Control (ATC) frequency from launch to recovery.
- C. The remote pilot must contact the Air Traffic Control (ATC) facility after launching the unmanned aircraft.

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3. According to 14 CFR part 107 the remote pilot in command (PIC) of a small unmanned aircraft planning to operate within Class C airspace

- A. must use a visual observer.
- B. is required to file a flight plan.
- C. is required to receive ATC authorization.

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4. What effect does high density altitude have on the efficiency of a UA propeller?

- A. Propeller efficiency is increased.
- B. Propeller efficiency is decreased.
- C. Density altitude does not affect propeller efficiency.

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