UAS Operator

Study Guide

Assessment:
2429 UAS Operator

Aligned with the
Federal Aviation Administration's
FAA 14 CFR Part 107

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Overview

This study guide is designed to help students prepare for the UAS Operator assessment. It not only includes information about the assessment, but also the skills standards upon which the assessment is based, resources that can be used to prepare for the assessment and test taking strategies. This assessment measures a student's ability to apply knowledge of the skills necessary for UAS Operation.

Each of the four sections in this guide provides useful information for students preparing for the UAS Operator assessment.

- CareerTech and Competency-Based Education: A Winning Combination
- UAS Operator Assessment
    - ► Assessment Information
    - ► Standards and Test Content
    - ► Sample Questions
    - ► Abbreviations, Symbols, and Acronyms
- Strategies for Test Taking Success
- Notes

This assessment was developed by the CareerTech Testing Center in alignment with the Federal Aviation Administration's FAA 14 CFR Part 107.

The UAS Operator assessment measures a student's ability to apply the knowledge and skills necessary for success in the drone sector.

CareerTech and Competency-Based Education:
A Winning Combination

Competency-based education uses learning outcomes that emphasize both the application and creation of knowledge and the mastery of skills critical for success. In a competency-based education system, students advance upon mastery of competencies, which are measurable, transferable outcomes that empower students.

Career and technology education uses industry professionals and certification standards to identify the knowledge and skills needed to master an occupation. This input provides the foundation for development of curriculum, assessments and other instructional materials needed to prepare students for wealth-generating occupations and produce comprehensively trained, highly skilled employees demanded by the work force.

Tools for Success

CareerTech education relies on three basic instructional components to deliver competency-based instruction: skills standards, curriculum materials, and competency assessments.

Skills standards provide the foundation for competency-based instruction and outline the knowledge and skills that must be mastered in order to perform related jobs within an industry. Skills standards are aligned with national skills standards and/or industry certification requirements; therefore, a student trained to the skills standards is equally employable in local, state and national job markets.

Curriculum materials and textbooks contain information and activities that teach students the knowledge and skills outlined in the skills standards. In addition to complementing classroom instruction, curriculum resources include supplemental activities that enhance learning by providing opportunities to apply knowledge and demonstrate skills.

Certification Assessments test the student over material outlined in the skills standards and taught using the curriculum materials and textbooks. When used with classroom performance evaluations, certification assessments provide a means of measuring occupational readiness.

Each of these components satisfies a unique purpose in competency-based education and reinforces the knowledge and skills students need to gain employment and succeed on the job.

Measuring Success

Evaluation is an important component of competency-based education. Pre-training assessments measure the student's existing knowledge prior to receiving instruction and ensure the student's training builds upon this knowledge base. Formative assessments administered throughout the training process provide a means of continuously monitoring the student's progress towards mastery.

Certification assessments provide a means of evaluating the student's mastery of knowledge and skills. Coaching reports communicate assessment scores to students and provide a breakdown of assessment results by standard area. The coaching report also shows how well the student has mastered skills needed to perform major job functions and identifies areas of job responsibility that may require additional instruction and/or training.

UAS Operator Assessment Information

What is the UAS Operator assessment?

The UAS Operator assessment is an end-of-program assessment for students in UAS Operator programs. The assessment provides an indication of student mastery of knowledge and concepts necessary for success in careers in this area.

How was the assessment developed?

This assessment was developed by the CareerTech Testing Center. The assessment and standards align with the Federal Aviation Administration's FAA 14 CFR Part 107. Items were developed and reviewed by a committee of subject matter experts.

The committee assigned frequency and criticality ratings to each skill, which determines the significance of each task for test development:

Frequency: represents how often the task is performed on the job. Frequency rating scales vary for different occupations. The rating scale used in this publication is presented below:

1 = less than once a week   2 = at least once a week   3 = once or more a day

Criticality: denotes the level of consequence associated with performing a task incorrectly. The rating scale used in this publication is presented below:

1 = slight   2 = moderate   3 = extreme

What does the assessment cover?

Specifically, the test includes multiple-choice test items over the following areas:

UAS Operator (55 questions)

General Aviation

Duty A:	Identify Inspirations of Flight	2%
Duty B:	Identify Innovators of Flight	2%
Duty C:	Identify Types of Flight Propulsion	2%
Duty D:	Understand Physics of Aviation	4%
Duty E:	Define General Aviation Terms	4%
Duty F:	Discover Career Outcomes	4%

Operations

Duty G:	Identify Drone Components	4%
Duty H:	Identify Common Drone Applications	4%
Duty I:	Complete a TRUST (The Recreational UAS Safety Test) certification: (www.trustfaa.com)	4%
Duty J:	Demonstrate knowledge of common aviation websites and applications	4%
Duty K:	Identify components of a ground control system	6%

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Duty L:	Demonstrate Knowledge of FAA Regulations	21%
Duty M:	Demonstrate Knowledge of Airspace Classification and Operating Requirements	6%
Duty N:	Demonstrate Knowledge of Weather and Effects on Performance	6%
Duty O:	Demonstrate Knowledge in Loading and Performance	4%
Duty P:	Demonstrate Knowledge in sUAS Operations	23%

What are the benefits of using this assessment?

Students receive a certificate for each assessment that he/she passes. This certificate may be included in his/her portfolio and used to communicate the student's mastery of the subject matter to potential employers.

When should the assessment be taken?

The CareerTech Testing Center recommends that students take this assessment as soon as possible after receiving all standards-related instruction, rather than waiting until the end of the school year.

Is the assessment timed?

No. However, most students finish the assessment within one hour.

What resources can students use on these assessments?

Students are allowed to use calculators and scratch paper on CTTC assessments; however, these items must be provided by the testing proctor and returned to the proctor before the student's exam is submitted for scoring. Calculator apps on cell phones and other devices may not be used on these assessments.

What accommodations can be made for students with Individualized Education Plans (IEPs)?

Accommodations are allowed for students with an Individualized Education Plan. Examples of allowable accommodations include:

- Extended time — This assessment is not timed; therefore, students may take as much time as needed to finish. The assessment must be completed in one testing session.

- Readers — A reader may be used to read the assessment to a student who has been identified as needing this accommodation.

- Enlarged text — Students needing this accommodation can activate this feature by clicking the AA icon in the upper right corner of the screen.

What can students expect on Test Day?

All CTTC assessments are web-based and delivered exclusively by a proctor in the school's assessment center. The proctor **cannot** be an instructor or anyone who was involved with the student during instruction.

Assessments are delivered in a question-by-question format. When a question is presented, the student can select a response or leave the question unanswered and advance to the next question. Students may also flag questions to revisit before the test is scored. All questions must be answered before the test can be submitted for scoring.

After the assessment is scored, the student will receive a score report that shows the student's score on the assessment and how the student performed in each standard area.

Can students retake the test?

Students may retake the test unless their school or state testing policies prohibit retesting. Students who retest must wait at least three days between attempts.

UAS OPERATOR SKILLS STANDARDS
Frequency and Critically Ratings

Frequency: represents how often the task is performed on the job. Frequency rating scales vary for different occupations. The rating scale used in this publication is presented below:

    1 = less than once a week
    2 = at least once a week
    3 = once or more a day

Criticality: denotes the level of consequence associated with performing a task incorrectly. The rating scale used in this publication is presented below:

    1 = slight
    2 = moderate
    3 = extreme

DUTY A: Identify Inspirations of Flight (1 question)

CODE	TASK	F/C
A.01	Identify man's initial inspirations for flight: • Nature: Insects and birds • Myths • Religion	1/1

DUTY B: Identify Innovators of Flight (1 question)

CODE	TASK	F/C
B.01	Identify primary innovators of flight: • Leonardo da Vinci • Joseph and Jacques Montgolfier • George Cayley • Otto Lilienthal • Orville Wright and Wilbur Wright • The National Aeronautics and Space Administration (NASA)	1/1

DUTY C: Identify Types of Flight Propulsion (1 question)

CODE	TASK	F/C
C.01	Identify primary types of propulsion: • Compressed air • Turbine • Jet • EV (electric vehicles)	1/1

DUTY D: Understand Physics of Aviation (2 questions)

CODE	TASK	F/C
D.01	Develop an understanding of fluid dynamics	1/1
D.02	Identify and understand the four forces of flight: • Drag • Lift • Thrust • Weight	1/3

DUTY E: Define General Aviation Terms (2 questions)

CODE	TASK	F/C
E.01	Define the following aviation terms: • Air foil • Angle of attack • Drag • G-force • Knots • Lift • Pitch • Roll • Stall • Torque • Vertical lift • Yaw	3/3

DUTY F: Discover Career Outcomes (2 questions)

CODE	TASK	F/C
F.01	Discover possible employment opportunities within the UAS industry: • 3D modeling • Agriculture • Construction/Mining/Aggregates • Education • Energy (i.e. pipeline/wind turbines) • GIS mapping • Insurance • Journalism • Marketing/Advertising • Military • Photography and filmaking • Public Safety (i.e. emergency services)	2/3

	• Real estate • Telecommunications • Utilities (i.e. power line inspections) • Wildlife conservation	

OPERATIONS

DUTY G: Identify Drone Components (2 questions)

CODE	TASK	F/C

G.01	Identify drone components:
	    • Antenna
	    • Battery, electronics, and power distribution cables
	    • Boom
	    • Camera
	    • Electronic speed controller (ESC)
	    • First person video
	    • Flight control/board
	    • GPS module
	    • Landing gear
	    • Motor mounts
	    • Motors
	    • Propellers
	    • Quadcopter frame
	    • Radio Transmitter/Receiver
		3/3

DUTY H: Identify Common Drone Applications (2 questions)

CODE	TASK	F/C

H.01	Identify applications for drone use:
	    • Aerial photo/video
	    • Autonomous flying
	    • Exploration
	    • Inspections
	    • Mapping/modeling
	    • Multispectral monitoring
		2/3

DUTY I: Complete a TRUST Certification (1 question)

CODE	TASK	F/C
I.01	Demonstrate knowledge of and complete a TRUST (The Recreational UAS Safety Test) certification: (www.trustfaa.com) • Who should take the test? • Cost • Length of test • Content a. Requirements - What it means to fly recreationally, types of airspace, restrictions, and authorizations. b. Preparation - Pre-flight activities, weather, obstacles, distractions, and flight path. c. Safety - Community Based Organizations, visual line of sight, first person view (FPV), and obstacle avoidance. d. Limitations - Knowing your UAS, connection/signal strength, automated features, and practice flights	1/3

DUTY J: Demonstrate Knowledge of Common Aviation Websites and Applications (2 questions)

CODE	TASK	F/C
J.01	Demonstrate knowledge and purpose for each of the following websites and/or applications: • 1-800-WX-BRIEF • AirMap • Aloft • FAADroneZone • FlightAware • LAANC • SkyVector	2/3

DUTY K: Identify Components of a Ground Control System (4 questions)

CODE	TASK	F/C
K.01	Identify elements of a Graphical User Interface (GUI): • Camera payload feeds • Flight parameters • Instrument overlays • Map screens	2/3

CODE	TASK	F/C
K.02	Identify components of a control system (hardware): • Joysticks for aircraft and/or payload • Keyboard • Mouse • Throttle controllers	2/3

FAA 14 CFR Part 107

DUTY L: Demonstrate Knowledge of FAA Regulations (12 questions)

CODE	TASK	F/C
L.01	Demonstrate knowledge of general regulatory requirements: • Demonstrate understanding of small, unmanned aircraft operations • Demonstrate knowledge of acronyms, abbreviations, and definitions used in 14 CFR part 107 • Understand the ramifications of falsification, reproduction, or alteration of a certificate, rating, authorization, record, or report • Prepare and generate accident reports • Inspect, test and demonstrate compliance • Demonstrate knowledge of multiple category sUAS • Retain flight records for compliance • Know requirements for previously manufactured sUAS *References 14 CFR parts 89 and 107, subpart A; AC 107-2; FAA-H-8083-25; FAA-G-8082-22-8083-25; FAA-G-8082-22*	2/3
L.02	Demonstrate knowledge of operating rules, registration rules, and other associated operating requirements: • Demonstrate understanding of registration requirements for sUAS • Know requirements for the sUAS to be in a condition for safe operation • Identify medical condition(s) that would interfere with safe operation of an sUAS • Identify responsibilities and authority of the remote PIC a. Know rules for allowing a person other than the remote PIC to manipulate the flight controls • Know regulatory deviation and reporting requirements for in-flight emergencies • Identify hazardous operations: a. Careless or reckless b. Dropping an object • Describe rules for operating from a moving aircraft or moving land- or water-borne vehicle	3/3

| | | • Know the provisions on prohibition of alcohol and drug use
• Know the rules for daylight operations
• Identify requirements for visual line of sight (VLOS) aircraft operations
• Know requirements when a visual observer is used
• Know prohibitions regarding the operation of multiple sUAS
• Know prohibitions regarding the transportation of hazardous materials
• Understand the importance of staying safely away from other aircraft and right-of-way rules
• Detect and avoid other aircraft and other potential hazard considerations of the remote PIC
• Understand operations over human beings
• Receive prior authorization for operation in certain airspace
• Understand the rules concerning drones operating in the vicinity of airports
• Understand rules concerning drones operating in prohibited or restricted areas
• Know flight restrictions when operating in the proximity of certain areas designated by notice to airmen (NOTAM)
• Understand rules for preflight familiarization, inspection, and actions for aircraft operations
• Know operating limitations for sUAS
    a. Maximum groundspeed
    b. Altitude limitations
    c. Minimum visibility
    d. Cloud clearance requirements
• Know the requirements for a Remote Pilot Certificate with an sUAS rating
• Understand automated operations
• Demonstrate knowledge of rules for civil twilight operations
• Understand rules for night operations
• Identify rules for the transportation of property
• Understand the rule prohibiting use of ATC transponder equipment
• Understand the rule prohibiting use of ADS-B Out

References 14 CFR parts 47, 48, 89, and 107, subpart B; AC 107-2; FAA-H-8083-25; FAA-G-8082-22 | |
| L.03 | Demonstrate knowledge of the requirements associated with remote pilot certification with an sUAS rating.
• Demonstrate an understanding of offenses involving alcohol or drugs
• Demonstrate knowledge of consequences for refusing to submit to a drug or alcohol test or to furnish test results | 3/3 |

		• Demonstrate knowledge of eligibility requirements for a Remote Pilot Certificate with an sUAS rating • Demonstrate aeronautical knowledge recency *References 14 CFR part 107, subpart C; AC 107-2; FAA-H-8083-25; FAA-G-8082-22*	
L.04	Demonstrate knowledge of the FAA waiver policy and requirements *References 14 CFR part 107, subpart D; AC 107-2; FAA-H-8083-25; FAA-G-8082-22*	2/3

L.05	Demonstrate knowledge of the operating rules of 14 CFR parts 89 and 107, and the associated operating requirements when operating over people.
	    • Demonstrate understanding of remote pilot responsibilities when operating over people
	    • Understand rules for operations over people at night
	    • Understand categories of operations, including:
	        a. Category 1
	        b. Category 2
	        c. Category 3
	        d. Category 4
	    • Demonstrate knowledge of rules when selecting an operational area
	    • Demonstrate knowledge of minimum distances from a person during operations
	    • Understand rules for operations over moving vehicles
	    • Understand rules for modifications to an sUAS
	    • Demonstrate knowledge of closed and restricted access sites
	    • Demonstrate knowledge of Remote Pilot operating instructions
	    • Understand required components and Category declaration
	    • Know rules for optional components
	    • Demonstrate knowledge of rules involving applicant produced, designed, or modified sUAS for operations over people
	    • Know rules for completing a Declaration of Compliance (DoC)
	    • Understand requirements for maintenance of an sUAS that is eligible for operations over people
	    • Prepare a Means of Compliance (MoC) form
	    • Understand the threshold for impact kinetic energy
	    • Understand that sUAS contain no exposed rotating parts that would cause lacerations
	
	References 14 CFR parts 89 and 107; AC 107-2; FAA-H-8083-25; FAA-G-8082-22
		3/3

| L.06 | Demonstrate knowledge associated with operating rules of 14 CFR part 89 and their associated operating requirements:
 • Demonstrate understanding of standard remote identification
 • Demonstrate understanding of alternative remote identification
 • Demonstrate knowledge of operations for aeronautical research
 • Demonstrate knowledge of the operating requirements for ADS-B Out
 • Understand rules for confirmation of identification
 • Identify minimum message elements broadcast for remote identification
 • Understand requirements for product labeling

References 14 CFR part 89; AC 107-2; FAA-H-8083-25; FAA-G-8082-22 | 2/2 |

DUTY M: Demonstrate Knowledge of Airspace Classification and Operating Requirements (4 questions)

CODE	TASK	F/C

M.01	Demonstrate knowledge in airspace classification.
	
	 • Demonstrates an understanding of general airspace:
	  a. Class B controlled airspace
	  b. Class C controlled airspace
	  c. Class D controlled airspace
	  d. Class E controlled airspace
	  e. Class G uncontrolled airspace
	 • Demonstrate an understanding of special-use airspace, such as prohibited, restricted, warning areas, military operation areas, alert areas, and controlled firing areas
	 • Demonstrate an understanding of other airspace areas, such as Airport Advisory Services, Military Training Routes (MTRs), Temporary Flight Restrictions (TFRs), Parachute Jump Operations, Terminal Radar Service Areas (TRSAs), National Security Areas (NSA) and Visual Flight Rules (VFR) routes
	 • Demonstrate an understanding of Air Traffic Control (ATC) and the NAS
	
	References 14 CFR part 71; AC 107-2; AIM; FAA-H-8083-25; FAA-G-8082-22
		3/3

M.02	Demonstrate knowledge of airspace operational requirements. • Demonstrate an understanding of basic weather minimums • Examine ATC authorizations and related operating limitations • Understand rules for operations near airports	3/3

	• Demonstrate an understanding of potential flight hazards
	  a. Common aircraft accident causal factors
	  b. Avoid flight beneath unmanned balloons
	  c. Emergency airborne inspection of other aircraft
	  d. Precipitation static
	  e. Light amplification by stimulated emission of radiation (laser) operations and reporting illumination of aircraft
	  f. Avoiding flight in the vicinity of thermal plumes such as smoke stacks and cooling towers
	  g. Flying in the wire environment
	• Review and understand the NOTAM system, including how to obtain an established NOTAM through Flight Service
	• Gain knowledge of operator equipment used for night flight
	• Demonstrate knowledge of ground structures and ground structure lighting
	• Identify hazards on the ground that do not have lighting
	• Demonstrate an understanding of manned aircraft lighting
	• Know sUAS lighting requirements
	
	References 14 CFR part 71; AC 107-2; AIM; FAA-H-8083-25; FAA-G-8082-22; SAFO 10015	

DUTY N: Demonstrate Knowledge of Weather and Effects on Performance (4 questions)

CODE	TASK	F/C
N.01	Demonstrate knowledge in sources of weather information. • Demonstrate understanding of Internet weather briefing and sources of weather available for flight planning purposes • Gain an understanding of aviation routine weather reports (METAR) • Evaluate and understand terminal aerodrome forecasts (TAF) • Understand weather charts • Review and understand automated surface observing systems (ASOS) and automated weather observing systems (AWOS) *References AC 107-2; AIM; FAA-H-8083-25; FAA-G-8082-22*	3/3

N.02	Demonstrate knowledge of the effects of weather on performance.
	• Demonstrate understanding of weather factors and their effects on performance:
	  a. Density altitude
	  b. Wind and currents
	  c. Atmospheric stability, pressure, and temperature
		3/3

	d. Air masses and fronts e. Thunderstorms and microbursts f. Tornadoes g. Icing h. Hail i. Fog j. Ceiling and visibility k. Lightning *References AC 107-2; AIM; FAA-H-8083-25; FAA-G-8082-22*	

DUTY O: Demonstrate Knowledge in Loading and Performance (2 questions)

CODE	TASK	F/C

O.01	Demonstrate knowledge in the loading and performance of an sUAS.
	
	• Demonstrate understanding of general loading and performance, including:
	    a. Effects of loading changes
	    b. Balance, stability, and center of gravity
	• Understand the importance and use of performance data to calculate the effect on the aircraft's performance of an sUAS
	
	References AC 107-2; FAA-H-8083-25; FAA-G-8082-22
		3/3

DUTY P: Demonstrate Knowledge in sUAS Operations (13 questions)

CODE	TASK	F/C
P.01	Demonstrate knowledgeable in radio communication procedures. • Demonstrates understanding of airport operations with and without an operating control tower • Understand descriptions and uses of a Common Traffic Advisory Frequency (CTAF) to monitor manned aircraft communications • Recommended traffic advisory procedures used by manned aircraft pilots such as self-announcing of position and intentions • Demonstrate an understanding of the aeronautical advisory communication station (UNICOM) and associated communication procedures used by manned aircraft pilots • Demonstrate understanding of the Automatic Terminal Information Service (ATIS) • Understand aircraft call signs and registration numbers	3/3

		• Know the phonetic alphabet • Understand phraseology: altitudes, directions, speed, and time *References AC 107-2; AIM; FAA-H-8083-25; FAA-G-8082-22*	

P.02	Demonstrate knowledge in airport operations.
	
	    • Demonstrate an understanding of types of airports such as towered, uncontrolled towered, heliport, and seaplane bases
	    • Understand ATC towers and how they ensure the remote pilot can monitor and interpret ATC communications to improve situational awareness
	    • Understand runway markings and signage
	    • Demonstrate understanding of traffic patterns used by manned aircraft pilots
	    • Understand Security Identification Display Areas (SIDA)
	    • Identify sources for airport data:
	        a. Aeronautical charts
	        b. Chart Supplements
	    • Understand importance of avoiding bird and wildlife hazards and reporting collisions between aircraft and wildlife
	    • Understand importance of airport and seaplane base lighting
	
	References AC 107-2, 150/5200-32; AIM; FAA-H-8083-25; FAA-G-8082-22
		3/3

P.03	Demonstrate knowledge in sUAS emergency procedures.
	
	    • Demonstrate understanding of emergency planning and communication
	    • Identify and understand characteristics and potential hazards of lithium batteries
	        a. Safe transportation such as proper inspection and handling
	        b. Safe charging
	        c. Safe usage
	        d. Risks of fires involving lithium batteries
	    • Demonstrate knowledge of procedures for loss of aircraft control link and fly-aways
	    • Demonstrate knowledge of procedures for loss of Global Positioning System (GPS) signal during flight and potential consequences
	    • Understand frequency spectrums and associated limitations
	    • Know procedures for operations over people
	    • Know procedures for operations at night
	
	References AC 107-2; FAA-H-8083-25; FAA-G-8082-22; SAFOs 09013, 10017, 15010
		3/3

P.04	Demonstrate knowledge in aeronautical decision-making	3/3

	• Demonstrate an understanding of Aeronautical decision-making (ADM) using:
	       a. Effective team communication
	       b. Task management
	   • Crew Resource Management (CRM)
	   • Situational awareness
	   • Hazardous attitudes
	   • Hazard identification and risk assessment
	
	References AC 107-2; FAA-H-8083-2, FAA-H-8083-25; FAA-G-8082-22	

P.05	Demonstrate knowledge in the physiological factors affecting remote pilot performance	2/3

	• Demonstrate understanding of physiological considerations and their effects on safety such as dehydration and heatstroke
	   • Understand physiological effects of drug and alcohol use on remote pilots
	   • Understand physiological effects of prescription and over-the-counter medication
	   • Understand physiological effects of hyperventilation
	   • Understand the effects of stress and fatigue on remote pilots
	   • Identify factors affecting vision
	   • Understand the importance of fitness for flight
	   • Know the physiological aspects of night operation
	   • Know the effects of night illusions on remote pilot performance
	
	References AC 107-2; FAA-H-8083-2, FAA-H-8083-25; FAA-G-8082-22	

P.06	Demonstrate knowledge in sUAS maintenance and inspection procedures	2/3

	• Demonstrate understanding of basic maintenance
	   • Demonstrate understanding of preflight inspection
	   • Know techniques to mitigate mechanical failures of all elements used in sUAS operations such as the battery and any device(s) used to operate the sUAS
	   • Demonstrate appropriate record keeping
	   • Identify persons that may perform maintenance on an sUAS
	   • Demonstrate knowledge of preflight inspection for night operations
	   • Identify importance of manufacturer's Declaration of Compliance for Category 2 and 3 operations
	
	References AC 107-2; FAA-H-8083-25; FAA-G-8082-22	

Sample Questions

_____ 1. Which "innovator of flight" identified and defined the four forces of flight?

      a. George Cayley
      b. Leonardo da Vinci
      c. Orville Wright

_____ 2. The four forces of flight are drag, lift, thrust and:

      a. compression.
      b. knots.
      c. weight.

_____ 3. Which component allows the drone to determine its geographic location?

      a. flight board
      b. GPS module
      c. radio transmitter

_____ 4. Which aviation website operates the world's largest flight tracking and data platform?

      a. AirMap
      b. FlightAware
      c. LANCE

_____ 5. The groundspeed of a sUAS may not exceed:

      a. 30 mph.
      b. 50 mph.
      c. 100 mph.

Sample Questions — Key

_____   1. Which "innovator of flight" identified and defined the four forces of flight?

          a.   George Cayley   Correct
          b.   Leonardo da Vinci   Wrong, but plausible
          c.   Orville Wright   Wrong, but plausible

_____   2. The four forces of flight are drag, lift, thrust and:

          a.   compression.   Wrong, but plausible
          b.   knots.   Wrong, but plausible
          c.   weight.   Correct

_____   3. Which component allows the drone to determine its geographic location?

          a.   flight board   Wrong, but plausible
          b.   GPS module   Correct
          c.   radio transmitter   Wrong, but plausible

_____   4. Which aviation website operates the world's largest flight tracking and data platform?

          a.   AirMap   Wrong, but plausible
          b.   FlightAware   Correct
          c.   LANCE   Wrong, but plausible

_____   5. The groundspeed of a sUAS may not exceed:

          a.   30 mph.   Wrong, but plausible
          b.   50 mph.   Wrong, but plausible
          c.   100 mph.   Correct

Abbreviations, Symbols and Acronyms

When abbreviations, symbols or acronyms are more commonly used in written and verbal communications within the drone industry than the words they represent, they will also be used on the written examination required for competency. The following is a list of abbreviations, symbols and acronyms used on the UAS Operator examination.

3D	Three Dimensional
ADM	Aeronautical Decision Making
ADS-B	Automatic Dependent Surveillance-Broadcast
ASOS	Automated Surface Observing Systems
ATC	Air Traffic Control
ATIS	Automatic Terminal Information Service
AWOS	Automated Weather Observing Systems
CFR	Code of Federal Regulations
CRM	Crew Resource Management
CTAF	Common Traffic Advisory Frequency
DoC	Declaration of Compliance
ESC	Electronic Speed Controller
EV	Electric Vehicles
FAA	Federal Aviation Administration
G-force	Gravitational force
i.e.	that is
FAA	Federal Aviation Administration
FPV	First Person View
GIS	Geographic Information System
GPS	Global Positioning System
GUI	Graphical User Interface
LAANC	Low Altitude Authorization and Notification Capability
METAR	Meteorological Terminal Air Report
MoC	Means of Compliance
MTR	Military Training Routes
NAS	National Airspace System
NASA	National Aeronautics and Space Administration
NOTAM	Notice to Airmen
NSA	National Security Areas
PIC	Pilot-in-Command
SIDA	Security Identification Display Areas
sUAS	small Unmanned Aircraft System
TAF	Terminal Aerodrome Forecasts
TFR	Temporary Flight Restrictions
TRSAs	Terminal Radar Service Areas
TRUST	The Recreational UAS Safety Test
UAS	Unmanned Aircraft System
UNICOM	Universal Communications
VFR	Visual Flight Rules
VLOS	Visual Line of Sight

Test Taking Strategies

This section of the study guide contains valuable information for testing success and provides a common-sense approach for preparing for and performing well on any test.

General Testing Advice

1. Get a good night's rest the night before the test — eight hours of sleep is recommended.
2. Avoid junk food and "eat right" several days before the test.
3. Do not drink a lot or eat a large meal prior to testing.
4. Be confident in your knowledge and skills!
5. Relax and try to ignore distractions during the test.
6. Focus on the task at hand — taking the test and doing your best!
7. Listen carefully to the instructions provided by the exam proctor. If the instructions are not clear, ask for clarification.

Testing Tips

1. Read the entire question before attempting to answer it.
2. Try to answer the question before reading the choices. Then, read the choices to determine if one matches, or is similar, to your answer.
3. Do not change your answer unless you misread the question or are certain that your first answer is incorrect.
4. Answer questions you know first, so you can spend additional time on the more difficult questions.
5. Check to make sure you have answered every question before you submit the assessment for scoring — unanswered questions are marked incorrect.

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