Exam simulation

EASA Drone Quiz A2 - Meteorology

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STUDENT NAME:	DATE AND TIME:

01. Regarding firmware updates for your drone, what is the safest practice?

a) Apply updates, but always perform a safe test flight in an open area before conducting a critical mission
b) Never update the firmware unless the drone physically crashes
c) Update the firmware mid-flight via cellular connection
d) Firmware updates are illegal for C-class drones

02. In flight dynamics, what is 'Pitch'?

a) Rotation around the vertical axis (turning left or right)
b) Rotation around the longitudinal axis (banking left or right)
c) Rotation around the lateral axis (tilting the nose up or down)
d) The speed at which the drone gains altitude

03. For a multirotor to initiate a climb from a stable hover, the total thrust generated by the rotors must be:

a) Greater than the total weight of the drone
b) Exactly equal to the total weight of the drone
c) Less than the aerodynamic drag
d) Directed horizontally

04. If you are flying a C2 class drone in the A2 subcategory and an assembly of people suddenly forms within your flight area, what must you do?

a) Immediately interrupt the operation and safely fly the drone away from the assembly
b) Activate the low-speed mode and continue flying directly above them
c) Turn off the drone's motors to force an immediate landing in the crowd
d) Ignore the crowd if your drone weighs less than 4 kg

05. What is a 'Rotor Cloud'?

a) A turbulent, rolling cloud found at the lower levels of a mountain wave system, indicating extreme, hazardous turbulence
b) A cloud created by the spinning rotors of a heavy drone
c) A harmless, flat cloud found over the ocean
d) A cloud formed strictly by industrial pollution

06. What is the proper way to dispose of a severely swollen or damaged LiPo battery?

a) Throw it in a standard household trash bin

b) Puncture the outer casing to release the built-up gas before throwing it away

c) Submerge it in gasoline

d) Discharge it safely (if possible) and take it to a designated hazardous waste or battery recycling facility

07. If a pilot incorrectly sets the altimeter to a higher QNH than the actual local pressure, how will this affect the drone's perceived altitude?

a) The altimeter will indicate a higher altitude than the drone's actual height above sea level

b) The altimeter will show zero at all times

c) The drone will automatically switch to GPS altitude only

d) The altimeter will indicate a lower altitude than the actual height

08. If your drone is attacked by an aggressive bird (e.g., a seagull or eagle), what is the best defensive maneuver?

a) Fly aggressively towards the bird to scare it away

b) Climb rapidly (birds usually attack from above and are slower to ascend) and then safely navigate away and land

c) Turn off the motors immediately

d) Hover in place and make loud noises with the drone's ESCs

09. Gliders and certain drones can gain altitude without motor power by flying into 'Thermals'. What characterizes a thermal?

a) A horizontal gust of wind

b) A localized column of warm air rising due to convective solar heating of the ground

c) A sudden downdraft of cold air

d) An area of high atmospheric pressure

10. Which cloud prefix indicates a 'Middle Cloud' (base typically between 6,500 and 20,000 ft)?

a) Cirro-

b) Nimbo-

c) Alto- (e.g., Altostratus, Altocumulus)

d) Strato-

11. When flying near tall structures, what is the 'Wind Shadow' effect?

a) A localized area of relatively calm or turbulent air on the downwind (leeward) side of the obstacle; flying in and out of it can cause sudden, unpredictable changes in lift and drift

b) The shadow cast by the drone blocking the sun

c) A phenomenon where the wind completely stops the drone from moving

d) A thermal updraft created by a warm building

12. In meteorology and space weather planning, why is a high 'K-index' (Kp 5 or higher) a significant concern for the automated flight modes of a drone?

a) It indicates a high probability of heavy snowfall

b) It means the air density is too high for efficient propeller rotation

c) It signals a geomagnetic storm that can cause severe GPS positioning drift or sudden loss of satellite lock

d) It signifies that the wind speed at 120m is exactly 50 knots

13. How can a remote pilot recover a multirotor from a Vortex Ring State (VRS)?

a) By applying maximum vertical thrust immediately

b) By pitching forward or sideways to fly out of the turbulent column of downwash into clean air

c) By turning the motors off and back on again

d) By rotating the drone 360 degrees on its yaw axis

14. In a METAR report, what does the weather code 'SN' indicate?

a) Snow

b) Sandstorm

c) Squall line

d) Smoke

15. What happens if you fly from an area of high atmospheric pressure into an area of low pressure without updating your barometric altimeter?

a) The altimeter will read lower than your true altitude

b) The drone's motors will automatically shut down

c) The drone will experience a sudden loss of radio signal

d) The altimeter will read higher than your true altitude, meaning the drone is physically lower to the ground than the pilot thinks (High to Low, look out below)

16. While the maximum distance for flying in VLOS is not fixed by law, what does it primarily depend on in operational practice?

a) The size of the drone, meteorological visibility conditions, and the pilot's ability to distinguish the orientation of the aircraft

b) Exclusively on the maximum radio signal range declared by the manufacturer

c) It is always fixed at 500 meters for every type of drone

d) On the resolution of the camera mounted on the drone

17. If a METAR reports a temperature of 10 °C and a dew point of 10 °C (T/DP spread is zero), what should a remote pilot expect?

a) Clear, dry air with excellent visibility

b) A severe thunderstorm

c) The air is 100% saturated, meaning fog, low clouds, or precipitation are highly likely or already present

d) High-altitude clear air turbulence

18. What type of weather is typically associated with the passage of a fast-moving cold front?

a) Days of continuous, light drizzle

b) Clear, completely cloudless skies

c) Sudden development of towering cumulus or cumulonimbus clouds, heavy rain showers, squalls, and potential thunderstorms, followed by a drop in temperature

d) Widespread radiation fog

19. What is the primary characteristic of the EASA 'Specific' category?

a) It is exclusively for toy drones flown indoors

b) It allows any drone to carry passengers

c) It caters to operations that exceed the limitations of the Open category (e.g., BVLOS) and requires a specific risk assessment (SORA) or Standard Scenario authorization

d) It allows pilots to fly without any age or training requirements

20. During which stage of a thunderstorm is the iconic 'anvil' top most likely to form?

a) The Cumulus stage

b) The Mature stage, when the updraft hits the tropopause and spreads out horizontally

c) The Dissipating stage

d) Before the cloud even begins to form

21. If your Visual Observer (VO) suddenly stops responding to your verbal communications during a flight, what is the safest immediate action?

a) Continue the mission while looking at the telemetry screen

b) Assume the airspace is clear and speed up

c) Hover the drone, safely return it to the home point, and land until communication is re-established, as you have lost your secondary safety scan

d) Fly the drone directly towards the VO to get their attention

22. Flying a drone low over a densely packed city on a windy day is risky primarily due to:

a) Severe mechanical turbulence and funneling effects caused by the buildings disrupting the wind flow

b) The heat from the buildings melting the battery

c) Magnetic interference from streetlights

d) A total lack of wind between the buildings

23. What is the difference between an 'involved person' and an 'uninvolved person' in EASA regulations?

a) Involved persons are local police; uninvolved persons are regular citizens

b) Involved persons are briefed on the operation and safety risks; uninvolved persons are not participating and must be kept at a safe distance

c) There is no legal difference in the Open category

d) Uninvolved persons can be flown over if they are wearing hard hats

24. What is an SORA?

a) Standard Operating Recreational Area

b) System Override and Recovery Application

c) Specific Operations Risk Assessment; a methodology used to assess the risks of an operation in the Specific category

d) Safe Overflight of Restricted Airspace

25. In fixed-wing UAV aerodynamics, a 'stall' occurs when:

a) The motor runs out of battery power

b) The critical angle of attack is exceeded, causing a sudden loss of aerodynamic lift

c) The GPS signal is blocked by terrain

d) The propeller spins backwards

26. What is the primary danger of 'Wind Shear' to a drone during takeoff or landing?

a) It drains the battery by creating a vacuum

b) It causes the drone's compass to lose north

c) A sudden loss of airspeed and lift can cause the drone to stall and crash into the ground before the motors can spool up to compensate

d) It cuts the radio signal from the remote

27. Regarding thunderstorms, which statement about lightning is true and highly relevant to drone pilots?

a) Lightning can strike the ground miles away from the main cumulonimbus cloud (even outside the rain area), posing a lethal threat to the pilot and the drone

b) Lightning only strikes directly beneath the darkest part of the cloud

c) Drones are completely immune to lightning because they have no direct connection to the ground

d) Lightning only occurs when the temperature is above 20°C

28. If you set your altimeter to 'QNE' (1013.25 hPa), what are you measuring?

a) True Altitude (Height above mean sea level)

b) Absolute Altitude (Height above the ground)

c) Pressure Altitude (Flight Level), used primarily by aircraft cruising at higher altitudes to ensure safe vertical separation

d) Density Altitude

29. How does severe physical or mental fatigue affect a remote pilot?

a) It increases the pilot's field of vision

b) It has no measurable effect on controlling a highly automated drone

c) It improves fine motor skills on the controller sticks

d) It degrades decision-making, slows reaction times, and decreases overall situational awareness

30. An 'uninvolved person' in a drone operation is:

a) The remote pilot operating the controls

b) Anyone who is not participating in the drone operation and has not been briefed on the safety instructions

c) The designated visual observer

d) The client who hired the drone operator

31. Why is it important to calibrate the drone's compass in an open area, away from metal structures or vehicles?

a) Metal structures block the Wi-Fi signal required for calibration

b) The drone needs a clear view of the sun to calibrate

c) Large metallic objects or electromagnetic fields can distort the earth's local magnetic field, leading to an incorrect calibration and erratic flight behavior

d) It takes too long to calibrate near buildings

32. A balanced multirotor propeller is vital because an unbalanced one will:

a) Create high-frequency vibrations that degrade video quality, wear out motor bearings, and confuse the IMU

b) Cause the drone to fly much faster than its legal limit

c) Increase the capacity of the LiPo battery

d) Improve the drone's ability to fly in heavy rain

33. In which atmospheric layer is the protective ozone layer primarily located?

a) Troposphere

b) Mesosphere

c) Stratosphere

d) Exosphere

34. What is the danger of flying a drone in an area with a high 'Kp-index' (e.g., Kp 7 or 8)?

a) Severe geomagnetic storms can disrupt the ionosphere, causing significant GPS positioning errors, compass malfunctions, or total loss of satellite lock

b) The drone's battery will drain twice as fast

c) It means there is a high probability of a tornado

d) The remote controller will overheat

35. What does a green 'CE' mark on a drone indicate?

a) The drone was manufactured in China

b) The drone is completely waterproof

c) The drone is exempt from all aviation laws

d) The manufacturer declares the product complies with the essential health, safety, and environmental protection requirements of the European Economic Area

36. In the context of Human Factors, 'confirmation bias' during a pre-flight check refers to:

a) Relying on a co-pilot to confirm all checklist items

b) The tendency to see what you expect to see, potentially missing obvious faults (e.g., assuming a prop is secure because it usually is)

c) Confirming the drone's home point via GPS

d) The flight controller's internal validation process

37. What does the term 'Absolute Altitude' mean?

a) Altitude above mean sea level (MSL)

b) Altitude above the standard pressure datum (1013.25 hPa)

c) The actual vertical distance between the aircraft and the surface of the ground directly below it (Height Above Ground Level - AGL)

d) The highest altitude the drone is technically capable of reaching

38. What is the best meteorological definition of a 'Thermal'?

a) A localized area of freezing rain

b) A horizontal wind caused by mountain peaks

c) A rising column or mass of warm air caused by the localized, uneven heating of the Earth's surface by the sun

d) The heat generated by the drone's battery

39. How does the wind gradient affect a drone descending to land in windy conditions?

a) The drone will experience a sudden increase in wind speed near the ground

b) As the drone descends into slower air near the ground, its aerodynamic lift may suddenly decrease, requiring the pilot to apply more throttle to prevent a hard landing

c) The wind gradient will push the drone upwards

d) It causes the drone's compass to spin

40. Over-discharging a LiPo battery (e.g., dropping cell voltage below 3.0V) will likely result in:

a) An automatic increase in total battery capacity

b) A faster charging time for the next cycle

c) Irreversible chemical damage to the cells, causing puffing, loss of capacity, and potential fire hazards

d) The battery recalibrating its internal thermometer

41. When flying in high winds, the battery consumption will:

a) Decrease due to wind cooling

b) Remain exactly the same as in calm conditions

c) Stop entirely if the drone enters a glide

d) Increase significantly as the flight controller draws more power to the motors to maintain stability and position against the wind

42. What is the proper procedure for long-term storage of a Lithium Polymer (LiPo) battery?

a) Store it fully charged at 100% capacity

b) Store it at a storage voltage (around 40-60% capacity) in a cool, fireproof location

c) Discharge it completely to 0% to prevent swelling

d) Keep it constantly plugged into the charger

43. When scanning the sky to maintain VLOS, the best visual technique is to:

a) Stare fixedly at the drone without moving your eyes

b) Use a systematic scanning pattern (e.g., sector by sector) to detect other aircraft and obstacles, resting the eyes briefly on different points

c) Look strictly at the telemetry screen, relying on peripheral vision for the sky

d) Scan the sky rapidly without pausing

44. According to EASA, what is the legal difference between a 'UAS Operator' and a 'Remote Pilot'?

a) The operator flies the drone, while the pilot only monitors the camera

b) They are exactly the same thing and the terms can be used interchangeably

c) The UAS Operator is the individual or organization registered and responsible for the drone's maintenance and compliance; the Remote Pilot is the person physically controlling the drone during flight

d) The UAS Operator is always a commercial company, while the Remote Pilot is always a hobbyist

45. A 'katabatic wind' is best described as:

a) A warm wind blowing up a mountain slope during the day

b) A dense, cold wind flowing down a mountain slope or glacier into a valley, typically at night

c) A horizontal wind caused by the Coriolis effect

d) A sudden updraft inside a thunderstorm

46. Which meteorological tool uses radio waves to determine the location, intensity, and movement of precipitation?

a) Anemometer

b) Barometer

c) Weather Radar

d) Hygrometer

47. What does 'mAh' stand for on a drone's Lithium Polymer (LiPo) battery?

a) Maximum Aerodynamic Hover

b) Milliampere-hour, which indicates the battery's energy storage capacity

c) Motor Ampere Hertz, defining the motor rotation speed

d) Minimum Altitude Height

48. Are binoculars permitted to extend the visual line of sight (VLOS) during a drone flight?

a) Yes, provided they have a magnification of 10x or less

b) No, VLOS must be maintained unaided (except for corrective lenses/glasses)

c) Yes, but only for the Visual Observer

d) Only if flying in the Specific category

49. Which of the following describes an 'involved person'?

a) A person watching the drone from their balcony

b) A person who is aware of the drone operation's instructions and safety precautions, and has explicitly consented to participate

c) Any person walking through a public park where you are flying

d) A driver in a moving vehicle near the flight area

50. According to the A2 syllabus, what is a key element of 'Flight Planning'?

a) Packing enough food and water for the pilot

b) Charging the mobile phone to 100%

c) Evaluating the airspace, ground risk, weather conditions, checking NOTAMs, and defining the operational volume and emergency procedures before leaving home

d) Choosing the right music for the final video edit

51. When should you perform a firmware update on your drone?

a) While the drone is flying

b) While grounded, ensuring you test the drone in a safe area before any critical or complex missions

c) Only when the battery is below 10%

d) Never, firmware updates are illegal

52. What does a 'Wind Rose' on a meteorological map or airport chart display?

a) The exact location of flowers near the runway

b) A graphical representation showing the frequency and speed of winds blowing from different directions for a specific location

c) The temperature gradient of the area

d) The magnetic deviation of the Earth

53. Why is it dangerous to fly a drone behind a large, solid structure like a metal building?

a) The building will absorb the drone's battery charge

b) It blocks both the radio control link (VLOS and telemetry) and the GPS satellite signals, highly increasing the risk of signal loss and a crash

c) The drone will automatically initiate a landing procedure as soon as it sees a wall

d) It is not dangerous if the drone has obstacle avoidance sensors

54. In a METAR report, what does the weather abbreviation 'BR' stand for?

a) Broken clouds

b) Heavy Rain

c) Mist (from the French 'Brumes')

d) Blowing Sand

55. In a high-pressure system (Anticyclone), the air is generally experiencing 'Subsidence'. What does this mean for the weather?

a) The air is rising rapidly, creating severe thunderstorms

b) The air is moving horizontally at hurricane speeds

c) The air is slowly sinking and warming, which inhibits cloud formation and generally leads to clear, stable weather

d) The air is freezing, causing immediate hail

56. In aviation weather reports, how is a 'Ceiling' defined?

a) The maximum altitude a drone can physically reach

b) The height above the Earth's surface of the lowest layer of clouds reported as 'Broken' (BKN) or 'Overcast' (OVC)

c) Any cloud layer reported as 'Scattered' (SCT)

d) The top of a thunderstorm cloud

57. What is 'Virga', and why is it a hazard indicator for remote pilots?

a) Precipitation that falls from a cloud but evaporates before reaching the ground; it strongly indicates the presence of severe downdrafts and microbursts

b) A type of high-altitude ice crystal that blocks GPS signals

c) A layer of dense smog over industrial areas

d) The trail of condensation left by a high-flying jet

58. What is the primary danger of operating a drone near the 'Anvil' of a cumulonimbus cloud?

a) Severe turbulence, lightning, and large hail can be thrown out of the anvil and fall miles away from the main storm center

b) The anvil blocks GPS satellites

c) It makes the drone invisible to radar

d) The air is too thin to fly in

59. Why is a Katabatic wind often much stronger than an Anabatic wind?

a) Because the sun is hotter in the afternoon

b) Because katabatic winds (cold, dense air draining downslope) are assisted by gravity, making them accelerate and often become quite strong

c) Because they only happen near the equator

d) Because they are driven by the Coriolis effect

60. Which ambient temperature range is generally the most critical and dangerous for the rapid accumulation of 'Clear Ice' (Glaze) on an aircraft or drone?

a) -20 °C to -40 °C

b) 0 °C to -10 °C, especially when flying through clouds with large supercooled water droplets

c) +5 °C to +15 °C

d) Above +20 °C

61. What is the 'Tropopause'?

a) The layer of the atmosphere where meteors burn up

b) The boundary between the troposphere and the stratosphere, acting as a lid that traps most weather and moisture below it

c) The point where the Earth's magnetic field stops

d) The exact altitude where the air temperature reaches absolute zero

62. Why is the 'anvil' (topmost part) of a cumulonimbus cloud dangerous, even if you are miles away from the storm's center?

a) It blocks the sun, making it too dark to fly

b) It creates a vacuum that pulls the drone upwards

c) Strong upper-level winds can carry severe hail out of the anvil, causing it to fall miles ahead of the main storm and potentially destroying a drone in clear air

d) It emits a high-frequency noise that disrupts the radio controller

63. If you leave your drone outside on a cold morning and a thin layer of frost forms on the propellers, what must you do before flying?

a) Fly immediately so the spinning action shakes the frost off

b) Turn the motors on full throttle while holding the drone down

c) Ignore it; frost is too thin to affect a drone

d) Thoroughly clean and dry the propellers before flight; even a thin layer of frost disrupts the airfoil's smooth surface, drastically reducing lift and increasing drag

64. What is the primary danger of operating a multirotor drone in freezing rain?

a) The rain will wash off the drone's registration number

b) The motors will spin twice as fast

c) Supercooled droplets will freeze instantly upon contact with the propellers, rapidly destroying their aerodynamic shape, reducing lift, and likely causing a crash

d) There is no danger if the drone has an IP54 waterproof rating

65. What is the primary purpose of a 'V-n diagram' (Flight Envelope) for an aircraft?

a) It graphs the battery voltage drop over flight time

b) It shows the frequency spectrum of the video transmission

c) It depicts the safe operational limits mapping airspeed against structural load factor (G-forces)

d) It outlines the geographical boundaries of restricted airspace

66. According to the risk-based approach of EASA, drone operations are divided into which three main categories?

a) Toy, Hobby, Commercial

b) Light, Medium, Heavy

c) Open, Specific, Certified

d) A1, A2, A3

67. What is the primary difference between Controlled Airspace and Uncontrolled Airspace?

a) In controlled airspace, ATC provides separation services and authorization is usually required to enter; uncontrolled airspace does not have these strict ATC requirements

b) Uncontrolled airspace is exclusively for military use

c) Controlled airspace is only indoors

d) There is no difference for drone pilots; they can fly anywhere

68. During the 'Dissipating Stage' of a thunderstorm, what air movement dominates?

a) Strong updrafts

b) Horizontal winds only

c) Downdrafts, as the rain cools the air and cuts off the storm's supply of warm, moist updrafts

d) A perfect vacuum

69. Under the EU drone regulations, what distinguishes a 'Toy' drone from a standard UAS?

a) Toy drones are painted in bright colors

b) Toy drones comply with the Toy Safety Directive (intended for children under 14) and do not require the operator to register, regardless of whether they have a camera

c) Toy drones must weigh exactly 249 grams

d) There is no legal distinction; all drones are treated identically

70. Adding an asymmetrical payload to one side of the drone will:

a) Improve its cornering speed

b) Have no effect if the drone has GPS

c) Shift the Center of Gravity, forcing the motors on that side to work harder, reducing stability and battery life

d) Make the drone completely waterproof

Exam simulation

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Response Scheme

Compare your answers with the following diagram and mark your score!

01: **A**	02: **C**	03: **A**	04: **A**
05: **A**	06: **D**	07: **A**	08: **B**
09: **B**	10: **C**	11: **A**	12: **C**
13: **B**	14: **A**	15: **D**	16: **A**
17: **C**	18: **C**	19: **C**	20: **B**
21: **C**	22: **A**	23: **B**	24: **C**
25: **B**	26: **C**	27: **A**	28: **C**
29: **D**	30: **B**	31: **C**	32: **A**
33: **C**	34: **A**	35: **D**	36: **B**
37: **C**	38: **C**	39: **B**	40: **C**
41: **D**	42: **B**	43: **B**	44: **C**
45: **B**	46: **C**	47: **B**	48: **B**
49: **B**	50: **C**	51: **B**	52: **B**
53: **B**	54: **C**	55: **C**	56: **B**
57: **A**	58: **A**	59: **B**	60: **B**
61: **B**	62: **C**	63: **D**	64: **C**
65: **C**	66: **C**	67: **A**	68: **C**
69: **B**	70: **C**		

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Response form

Use this form to mark your answers

01:	02:	03:	04:
05:	06:	07:	08:
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