Exam simulation

EASA Drone Quiz A2 - Meteorology

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STUDENT NAME:	DATE AND TIME:

01. May a remote pilot drop articles or carry dangerous goods under the Open A2 subcategory?

a) Yes, but only if the drone weighs less than 2 kg

b) No, carrying dangerous goods and dropping articles are strictly prohibited in the entire Open category

c) Yes, provided the articles are dropped in an unpopulated area

d) Only if a specific warning sound is played during the drop

02. What is the purpose of the 'Ground Risk Buffer'?

a) To protect the drone's landing gear from hard surfaces

b) To ensure there is a safe, clear area on the ground around the operational volume where uninvolved persons are excluded, protecting them in case the drone falls or drifts

c) To establish a Wi-Fi connection with the drone

d) To measure the softness of the grass for landing

03. What two conditions are strictly required for structural icing to form on a drone in flight?

a) Clear skies and a temperature of exactly 0 °C

b) Visible moisture (clouds, fog, rain) and temperatures at or below freezing (0 °C / 32 °F)

c) High winds and low humidity

d) A high-pressure system and direct sunlight

04. What does the altimeter setting 'QNE' refer to in aviation?

a) The local atmospheric pressure at the airfield

b) The pressure reduced to mean sea level

c) The standard pressure setting of 1013.25 hPa, used to fly at standardized Flight Levels (FL) regardless of local weather

d) The altitude of the drone above the ground

05. 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

06. In aviation meteorology, 'Wind Shear' is defined as:

a) A gradual change in wind direction over several days

b) A sudden, drastic change in wind speed and/or direction over a very short vertical or horizontal distance

c) The friction caused by wind hitting the drone's propellers

d) A constant, steady breeze from the ocean

07. An 'Absolutely Stable' atmosphere is characterized by:

a) A temperature lapse rate that is less than the moist adiabatic lapse rate, meaning any displaced air parcel will tend to return to its original position (resists upward motion)

b) Continuous, severe thunderstorms

c) Winds exceeding 50 knots

d) A complete absence of clouds forever

08. What is the primary function of the drone's IMU (Inertial Measurement Unit)?

a) It connects the remote controller to the GPS satellites

b) It measures specific force, angular rate, and magnetic fields to keep the flight controller informed of the drone's attitude and acceleration

c) It regulates the voltage flowing from the battery to the motors

d) It records the video feed from the camera

09. In a METAR, what does the code 'CB' appended to a cloud group (e.g., SCT030CB) indicate?

a) Clear Blue sky

b) Cirrocumulus Bands

c) Cloud Base

d) Cumulonimbus clouds, warning the pilot of potential thunderstorms, severe turbulence, and lightning

10. What is the primary danger of fixing a broken propeller with superglue?

a) The glue will dissolve the plastic shell of the drone

b) It will make the drone completely waterproof

c) The structural integrity of the prop is permanently compromised; it will be unbalanced and is highly likely to shatter under the extreme centrifugal forces of flight

d) It changes the frequency of the ESCs

11. The troposphere is the lowest layer of the Earth's atmosphere. What is its main characteristic regarding weather?

a) It contains no water vapor

b) It is where almost all of the Earth's weather phenomena (clouds, rain, storms) take place

c) The temperature consistently increases as you climb higher in it

d) It is where the ozone layer is located

12. When briefing a Visual Observer (VO) before an operation, the remote pilot must ensure the VO understands:

a) How to repair the drone's circuit board

b) How to edit the video footage

c) The flight plan, the emergency procedures, their specific scanning sector, and the communication protocols to be used

d) How to override the flight controller's firmware

13. What is 'Altimeter Setting'?

a) The value to which the barometric altimeter is calibrated to indicate a specific altitude (e.g., QNH for altitude above sea level)

b) The color of the altimeter dial

c) The GPS coordinates of the drone

d) The physical placement of the sensor inside the drone

14. To obtain the A2 Certificate of Remote Pilot Competency, an individual must:

a) Only read the manufacturer's user manual

b) Pass a practical exam supervised by an EASA inspector

c) Hold an A1/A3 certificate, complete practical self-training, and pass an additional theoretical exam covering meteorology, flight performance, and specific mitigations

d) Pay a generic registration fee without any required exams

15. What type of icing forms when small supercooled water droplets freeze almost instantly upon striking the leading edges of a drone, trapping air and appearing opaque and rough?

a) Clear Ice (Glaze)

b) Rime Ice

c) Hoar Frost

d) Hail

16. How does ice accumulation directly affect a drone's propellers?

a) It improves the propeller's aerodynamic efficiency by smoothing scratches

b) It keeps the motors cool, allowing for faster flight

c) It has no effect unless the ice is more than 5cm thick

d) It alters the airfoil shape, drastically reducing lift and increasing drag, while uneven ice shedding causes severe, potentially destructive vibrations

17. When should a remote pilot prioritize a new compass (magnetometer) calibration even if the flight controller software does not explicitly request it?

a) When moving the operation to a significantly different geographical location (e.g., more than 50-100 km from the last site)

b) Every time the battery is replaced during a single mission

c) Only when flying indoors

d) After every firmware update of the camera gimbal

18. In a METAR report, what does the descriptor 'SH' mean?

a) Snow and Hail

b) Shallow Fog

c) Showers (e.g., SHRA means Rain Showers)

d) Severe Hazard

19. What is 'Buys Ballot's Law' regarding wind and pressure?

a) Wind speed doubles for every 1000 feet of altitude

b) Wind always blows directly from South to North

c) In the Northern Hemisphere, if you stand with your back to the wind, the area of lower pressure will be to your left

d) Hot air is heavier than cold air

20. Why is it important to format your SD card regularly before important flights?

a) It increases the drone's top speed

b) It prevents the battery from overheating

c) It physically cleans the camera lens

d) To ensure there is sufficient storage space for flight data and video, and to prevent file corruption errors during the mission

21. In meteorology, the term 'Advection' refers to:

a) The vertical movement of air due to heat

b) The freezing of water inside a cloud

c) The horizontal transport of air or atmospheric properties (like moisture or temperature) by the wind

d) The scattering of light by dust particles

22. In aviation meteorology, what does 'SIGMET' stand for?

a) Signal Meteorological Tool

b) Significant Moisture Evaluation Testing

c) Significant Meteorological Information; an advisory concerning potentially hazardous weather phenomena like severe turbulence, icing, or volcanic ash

d) Standard Instrument Ground Meteorological Evaluation

23. Why is 'Virga' considered a visual warning sign for pilots?

a) It means the drone's camera lens is dirty

b) It indicates precipitation that is evaporating before it hits the ground, which cools the air rapidly and can create sudden, violent downdrafts (microbursts)

c) It shows that the airspace is currently closed

d) It means a solar flare is currently disrupting GPS

24. According to the International Standard Atmosphere (ISA), what is the standard atmospheric pressure at mean sea level?

a) 1000.00 hPa

b) 1025.13 hPa

c) 1013.25 hPa

d) 995.50 hPa

25. 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

26. Which of the following indicates an UNSTABLE air mass?

a) Continuous, steady rain and stratus clouds

b) Poor visibility due to trapped smoke and haze

c) Towering cumuliform clouds, showery precipitation, good visibility, and turbulent air

d) A strong temperature inversion near the ground

27. What is a 'Jet Stream'?

a) The exhaust trail left by a jet engine

b) A warm ocean current flowing from the tropics

c) A narrow band of very strong, high-altitude winds (often exceeding 100 knots) flowing generally from west to east near the tropopause

d) A sudden burst of wind near a mountain valley

28. If an altimeter is set to 'QFE', what will it read when the aircraft is sitting on the runway?

a) Zero; QFE provides height above that specific airfield or ground level

b) The elevation of the airport above mean sea level

c) 1013 feet

d) The density altitude

29. What instrument is used to measure Relative Humidity?

a) Anemometer

b) Hygrometer

c) Altimeter

d) Tachometer

30. 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

31. For long-term storage, a LiPo battery should be:

a) Kept at a storage voltage of approximately 40-60% capacity in a fireproof container

b) Fully charged to 100%

c) Fully discharged to 0%

d) Left plugged into the drone

32. What is the cloud coverage (in oktas) for an 'OVC' (Overcast) sky?

a) 1 to 2 oktas

b) 3 to 4 oktas

c) 5 to 7 oktas

d) 8 oktas (the sky is completely covered)

33. In an aviation weather report, what does the cloud coverage term 'FEW' indicate?

a) 1 to 2 oktas (eighths) of the sky is covered by clouds

b) 3 to 4 oktas of the sky is covered

c) 5 to 7 oktas of the sky is covered

d) The sky is completely clear

34. How do you calculate the exact MTOM of your UAS before a complex operation?

a) By checking the drone's top speed

b) By physically weighing the drone along with its battery, propellers, and any attached payload immediately prior to take-off

c) By asking the visual observer to guess its weight

d) By reading the empty weight from the manual and ignoring the battery

35. In Human Factors, what is the best way to handle 'Peer Pressure' when bystanders urge you to fly closer or perform dangerous maneuvers?

a) Assert your authority as the Remote Pilot in Command, decline the requests firmly, and strictly adhere to safety regulations and operational limits

b) Comply with their requests briefly to keep them happy

c) Give the controller to the bystanders so they take liability

d) Fly faster so the maneuvers are completed quickly

36. Beyond disposal, why is it strictly forbidden to attempt to 'deflate' or puncture a LiPo battery that shows obvious signs of swelling (puffing)?

a) Exposing the internal lithium to oxygen and moisture causes a violent thermal reaction with a risk of immediate fire and explosion

b) It would only void the manufacturer's warranty without safety risks

c) The gas inside is necessary to maintain the voltage calibration of the cells

d) The drone would no longer be able to recognize the battery as original

37. 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

38. In space weather monitoring, a Kp-index of 1 to 3 indicates:

a) Calm geomagnetic conditions; GPS/GNSS reception should be highly reliable

b) A severe solar storm; do not fly

c) Heavy rain is imminent

d) The drone's compass requires immediate calibration

39. Which of these is an 'Operational Mitigation' to reduce ground risk?

a) Installing propeller guards

b) Scheduling the flight early in the morning on a Sunday to ensure the area is free of uninvolved people

c) Using a drone with an octocopter frame instead of a quadcopter

d) Applying a CE class mark to the drone

40. In aviation forecasts, the 'Freezing Level' refers to:

a) The time of day when water freezes

b) The lowest altitude in the free atmosphere at which the air temperature reaches 0 °C, above which icing risks significantly increase

c) The ground temperature during winter

d) The altitude where oxygen turns into a liquid

41. What is the key difference between an 'automatic' flight and an 'autonomous' flight under EASA definitions?

a) Automatic flights are illegal, while autonomous flights are permitted

b) There is no difference; the terms are completely interchangeable

c) In an automatic flight, the pilot can intervene at any time; in an autonomous flight, the drone operates without the possibility of pilot intervention

d) Autonomous flights require a C1 drone, while automatic flights require a C2 drone

42. How is 'Upslope Fog' formed?

a) By the sun heating a wet runway

b) By thunderstorms evaporating before hitting the ground

c) By high winds at altitudes above 20,000 ft

d) When moist, stable air is forced up a sloping landmass (like a mountain) by the wind, cooling adiabatically until it reaches its dew point

43. Evaluating the 'operational volume' involves:

a) Defining the flight geography and contingency volume to ensure the drone remains within safe boundaries

b) Checking the loudness of the drone's motors

c) Measuring the size of the drone's carrying case

d) Adjusting the microphone volume on the remote

44. If your drone is equipped with an Emergency Flight Termination System (FTS), what happens when you trigger it?

a) The drone will safely auto-land

b) The drone will fly back to the manufacturer

c) The power to the motors is immediately cut off to stop the drone from flying away, causing it to fall to the ground (often used in conjunction with a parachute in the Specific category)

d) The battery begins to recharge using wind power

45. Is it permitted to fly a drone from a moving vehicle in the EASA Open category?

a) No, it is strictly prohibited

b) Yes, but only if the vehicle is moving slower than 30 km/h

c) Yes, if the pilot is in the passenger seat

d) Only if flying over water in a moving boat

46. 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

47. Which of these features is mandated by EASA for C1, C2, and C3 class drones?

a) A maximum weight of 250 grams

b) The ability to fly autonomously without a pilot

c) A Geo-awareness system and a Direct Remote Identification (Remote ID) system

d) A built-in parachute recovery system

48. Why must you physically inspect the drone's propellers before every flight?

a) To identify micro-cracks, chips, or deformations that could cause catastrophic mid-air failure and vibrations

b) To ensure they are completely dry for better aerodynamics

c) To check if the manufacturer's logo is still visible

d) To manually reset the motor RPM sensors

49. In a METAR report, the abbreviation 'GR' indicates the presence of:

a) Ground Fog

b) Hail (from the French 'Grêle')

c) Gusting Rain

d) Gravel storms

50. What is 'Induced Drag'?

a) A byproduct of generating lift, created by the vortices at the tips of the wings or propeller blades

b) The drag caused by the shape of the drone's fuselage

c) The friction of the air over the surface of the drone

d) The drag caused by the pilot's movements on the control sticks

51. If a METAR reports the sky condition as 'BKN' (Broken), what is the cloud coverage?

a) 1 to 2 oktas (eighths)

b) 5 to 7 oktas (eighths); this constitutes a 'ceiling' in aviation

c) 8 oktas (fully overcast)

d) Only high-altitude cirrus clouds

52. If a multirotor drone experiences a total failure of one motor (on a standard 4-motor quadcopter), what is the inevitable result?

a) The drone will hover perfectly on three motors

b) The drone will glide smoothly to the ground like an airplane

c) The drone will increase altitude to compensate

d) The drone will lose aerodynamic balance, likely flipping and crashing, as a quadcopter lacks the redundancy to fly on three motors

53. During a clear, calm night in a mountainous area, how does the local wind typically behave?

a) Cold, dense air flows down the mountain slopes into the valleys (katabatic or mountain breeze)

b) Warm air rushes up the slopes from the valleys (anabatic breeze)

c) The wind blows perfectly horizontal to the peaks

d) There is a complete vacuum of air

54. Which of these is a correct definition of 'Payload'?

a) The money paid by a client for a drone survey

b) The internal software of the drone

c) The maximum capacity of the battery

d) Any object, equipment, or instrument (like a camera, sensor, or parcel) carried by the drone that is not strictly necessary for the flight itself

55. A UAS 'Fly-away' is classified as an emergency because:

a) The pilot has lost all command and control, and the drone is travelling uncontrollably outside the operational volume, posing an immediate risk to people and other aircraft

b) It means the drone has successfully returned to home

c) It indicates the battery is fully charged

d) The SD card has stopped recording

56. In the context of EASA regulations, what does the term 'UAS' stand for?

a) Universal Aviation System

b) Undercover Aerial Surveillance

c) Unmanned Aircraft System, encompassing the drone itself, the remote controller, and any datalinks

d) Unlimited Altitude Software

57. What is the fundamental cause of global atmospheric circulation and wind?

a) The gravitational pull of the ocean tides

b) The rotation of the moon around the Earth

c) Uneven heating of the Earth's surface by the sun, leading to pressure differences

d) Magnetic anomalies at the North and South poles

58. In Human Factors, what is 'Complacency'?

a) A severe form of motion sickness

b) A feeling of overconfidence and lowered alertness that often develops after repeatedly performing routine tasks without incident

c) The inability to understand complex airspace charts

d) A strict adherence to the pre-flight checklist

59. In a METAR report, what does the abbreviation 'TS' stand for?

a) Tropical Storm

b) Thick Smog

c) Thunderstorm

d) Top Speed

60. While flying in VLOS, if your drone is suddenly and violently pushed upwards without any pilot input, what is the most likely meteorological cause?

a) The drone has been caught in a strong convective thermal updraft or the updraft of a developing cumulus cloud

b) The drone has entered a vacuum

c) The GPS signal is causing the drone to climb

d) The battery voltage has suddenly doubled

61. If your drone loses its connection to the remote controller (Control Link Loss), what is the most appropriate failsafe behavior for an Open category operation?

a) The drone automatically initiates a Return to Home (RTH) procedure or lands safely on the spot, depending on the environment

b) The drone increases altitude to 500m to search for a signal

c) The drone continues flying in its last known direction until the battery dies

d) The motors immediately disarm, causing the drone to fall to the ground

62. 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

63. In a TAF, what does 'PROB30' mean?

a) The wind speed will definitely be 30 knots

b) Visibility will be 30 meters

c) There is a 30% probability of the forecasted weather phenomena occurring

d) The temperature will drop by 30 degrees

64. Under EASA Open category rules, what is the policy on flying over assemblies of people?

a) It is allowed if the drone weighs less than 4 kg

b) It is allowed if the pilot holds an A2 certificate

c) It is permitted only during public festivals and events

d) It is strictly prohibited for all drones in the Open category

65. What is 'QNH' in altimetry?

a) The atmospheric pressure measured at the exact altitude of the drone

b) The local atmospheric pressure reduced to mean sea level; setting this on an altimeter makes it read altitude above sea level (AMSL)

c) The standard pressure of 1013.25 hPa

d) The altitude above ground level (AGL)

66. Why is 'tunnel vision' a dangerous human factor during an emergency?

a) High stress causes the pilot to fixate on a single problem (like a warning light), completely losing overall situational awareness of the drone's position and surroundings

b) It causes the pilot to physically go blind for a few seconds

c) It makes the video transmission screen go dark

d) It forces the drone to fly in a straight line

67. According to the EASA rules, how often must a UAS Operator registration be renewed?

a) Never; it is valid for life

b) Every 6 months

c) Periodically, usually every 1 to 5 years depending on the specific National Aviation Authority's policies

d) Only when buying a new drone

68. In meteorology, 'Convection' refers to:

a) The horizontal movement of air across the surface

b) The freezing of water vapor onto an aircraft

c) The deflection of wind by the Earth's rotation

d) The vertical transport of heat in the atmosphere, often causing warm, less dense air to rise and form thermals or cumulus clouds

69. If you see the code 'OVC005' in a METAR, how high is the cloud ceiling?

a) 500 feet Above Ground Level (AGL)

b) 50 feet Above Ground Level (AGL)

c) 5,000 feet Mean Sea Level (MSL)

d) 5 miles high

70. A remote pilot is conducting a mapping mission, moving from a high-pressure area to a low-pressure area. If they do not recalibrate the barometric sensor, what risk do they face regarding the displayed altitude?

a) The altimeter will indicate a lower altitude than actual, leading the drone to fly too high into controlled airspace

b) The drone will lose its GPS signal due to the change in atmospheric density

c) The battery will drain faster because of the reduced pressure

d) The altimeter will display a value higher than the actual altitude, potentially leading the pilot to descend dangerously into ground obstacles

Exam simulation

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Response Scheme

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

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

Exam simulation

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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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