

Annex I Oral questions

Mandatory Questions for all Disciplines

1. Describe the airspace class you are currently flying in?
2. Where would you find information about the airspace class?
3. What are the requirements and limitations of the airspace?
4. What is the altitude limit for the current site?
5. Explain the requirement of consent from the property owner prior to flying
6. What are the requirements for flying with 4km of an aerodrome?
7. What are local flying field rules? Noise Requirements?
8. What would you do if a person walked into the flying area?
9. What frequency control, including for FPV, is currently in place?
10. What are the requirements for an observer? What is their role?
11. Describe "Line of Sight" operation
12. What is required for flying in controlled airspace?
13. Describe the legal requirements for aircraft between 15-25kg? 25kg+?
14. Can you fly at night?
15. How would you respond to a manned aircraft entering the airspace you are operating in?

General Questions

16. What is the purpose of a transmitter range check before flying?
17. Describe the pre-flight checks that should be done on an airframe before flying
18. Why do we not fly behind the flight line or over the pits?
19. Describe the importance of the correct centre of gravity on an aircraft
20. Why is it good practice to balance propellers/blades/fans?
21. What do you look for when checking the condition of propellers/blades/fans?
22. Explain the precautions associated with charging batteries
23. Describe the power on/power off sequence of your model
24. How do you check the centre of gravity of a model whilst on the ground?

25. What is meant by dual rates on a transmitter and how does this affect the control surfaces?
26. What is meant by exponential function on a transmitter?
27. Describe the failsafe function of your radio/flight controller
28. What are the hazards associated with carbon fibre used in construction?
29. Describe Pitch / Roll / Yaw of an aircraft

Basic Pilot Specific Questions

30. Why models should be restrained whilst starting?
31. How should the receiver battery status be checked before flying?
32. Describe safe tools that can be used to start an IC engine
33. Why do we check the control surface integrity and direction before flying?
34. Why is it good practice to disconnect the motor pack on an electric model whilst in the pits?
35. Why is it good practice to test a receiver battery using a load tester?
36. Why it is good practice to cycle NiCad or NiMh receiver battery packs?
37. Describe flight line etiquette
38. What happens when a model stalls and the best way to attempt to correct a stall?
39. What is the best action to take when experiencing an engine failure on take-off?
40. What is the best action to take when an engine stops in mid-flight?
41. When starting an engine (IC or electric) where should you insist bystanders position themselves in relation to the model?
42. How do you find out if a receiver battery pack has reduced capacity?
43. What is aileron differential?
44. What is the effect of low airspeed on control surfaces?

Multicopter Specific Questions

45. Why is calibrating accelerometers and gyros important?
46. Why do we use lock nuts, or reverse threaded shafts, to secure blades?
47. How do controller gain settings affect the model?
48. Describe various flight modes

49. Describe the failsafe settings currently in use
50. How is flight pack voltage monitored?
51. What is HDOP and how can it affect GPS based flight?
52. Describe how your aircrafts configuration would respond to a motor/esc/propeller failure
53. What would cause your multirotor develop oscillations in a specific axis?
54. Why should you not take off and land in non-GPS modes?
55. Why should you not use exponential on the flight controller and your radio?
56. What is compass calibration and why is it important?

Glider Specific Questions

57. Describe some ways to get your glider down safely from a thermal when it is getting carried away?
58. What is wash in and wash out. What are the advantages and disadvantages of each?
59. What might happen if you over speed your glider and describe some ways you could avoid it if you are up high and getting carried away?
60. Where should a tow-hook be situated in reference to the centre of gravity? What are the problems with having it too far forward and too far back?
61. The elevator compensation required for flaps down is elevator up/down?
62. Why do you wind down the line after a winch launch?
63. What other dangers are associated with winches? (Line breaks, chutes through turn-arounds, locking pins)

Heli Specific Questions

64. How do you check tail compensation direction?
65. What ESC startup setting should be enabled and why?
66. How and why do you check CG?
67. How tight should main blades be?
68. Why is heli blade tracking important?
69. Explain the purpose of throttle hold and 2 occasions you use it
70. How do you check the state of flight packs and/or RX packs in flight and before/after?
71. Give 5 examples of pre-flight checks required before any flight?
72. What is the recommended distance to fly away from the pilot when throwing down?

Large Model Specific Questions

Note: All answers are defined in the relevant section of the Large Model Code of Practise (LMCOP).

74. State the purpose of the Large Model certification scheme

Answer: see section 2.3 of the LMCOP.

75. Define Category 1, 2 and 3 aircraft.

Answer: see section 3.2 sub para a/b/c of the LMCOP

76. Which Wings badge/s must be held when operating large models?

Answer: see section 4.4 of the LMCOP

77. Are redundant Receivers and batteries mandatory for all categories?

Answer: see section 5.4/5.5 of the LMCOP

78. Describe the two methods of choosing suitable servos for certified aircraft.

Answer: see section 5.7 sub para a/b of the LMCOP

79. Define the 3 sequential parts of the certification process and give brief description of each process.

Answer: see section 6.2/6.3/6.4 of the LMCOP

80. Where must test flights be performed, who may be present during the test flights and how many aircraft are allowed in the air during test flights.

Answer: see section 6.5 of the LMCOP

81. How long is a Category 1, 2 & 3 permit valid for and which Category aircraft require a flight log book be kept?

Answer: see section 6.9 (a) and 6.12 of the LMCOP

82. When must checks of a certified aircraft be carried out and to what level?

Answer: see section 4.2 and appendix 1 of the LMCOP.

83. Explain what validates a Permit.

Answer: see section 6.14 of the LMCOP.

FPV Specific Questions

84. What VTx frequencies and power levels are legal to use in New Zealand?

85. What are the requirements of FPV flying in New Zealand in regards to observers?

86. Can you mix and match right hand and left hand polarization antennas between VTx and VRx?

87. What tests should be performed before flying an FPV model each day?

88. Can you show me how to change your VTx to another frequency?

89. Briefly describe the difference between direction and non-directional antennas and how

they would be used

90. What does a diversity VRx provide?
91. If you are using RTH or similar technologies what important steps should be done each day you go flying?
92. What happens with most VTx's during power on or channel change and how might you deal with this?

High Speed Specific Questions

93. What is the extent of the flying area?
94. What is flutter, what causes it, and how is it avoided
95. What noise regulations exist at the flying area
96. What is the ceiling of the flying area?

97. Why is a throttle lock a good idea on a high performance electric model?

98. Why is an independent control & power system required?

99. What is 2.4Ghz carbon shielding and how is it avoided

100. What failsafe exist on the model, and why?

101. Why is a separate battery pack powering the Rx desired on the high-performance electric?