

## Questionnaire

1. Vs1

Continuous speed at which the airplane is still controllable with flaps and landing gear retracted.

2. FADEC stands for

Full authority digital engine control

3. What is the wing span of DA 42

44 ft

4. Wing dihedral angle

5 deg

5. Leading edge sweep

1 deg

6. Angle of incidence

-1.1 deg

7. Red radial indicates

a) Minimum control speed

b) Vne

c) **BOTH**

8. Rpm limitations

2500 (Max 20 seconds)

9. L/R oil pressure annunciator is displayed on PFD's red arc meaning

a) Below 1 bar

b) Above 6.5 bar

c) **BOTH**

10. Oil temperature

a) **-30 to +140 deg Cel**

b) -32 to +140 deg cel

c) -40 to +75 deg cel

11. Propeller pitch angle at feathered position

81 deg (+-) 1 deg

12. Maximum zero fuel mass

1650 kgs

13. C.G limitation

2.35 m , 2.49 m aft of datum plane

14. Extended G load at Va

3.8 G

15. which of the following leads to L/R oil pressure warnings

a) Exceeding the maximum powerplant load factors

b) Exceeding maximum structural load factors

c) **Both**

16. Operating altitude of DA 42

- a) 16000 ft
- b) 17500 ft
- c) 17000 ft
- d) **BOTH**

17. Total useable fuel in each tank

- a) **25 USG**
- b) 26 USG
- c) 28 USG

18. In case of AHRS failure, what will be the display on PFD

- a) Red X over AHRS
- b) Removal of sky and ground presentation.
- c) Yellow "AHRS failure" shown on PFD, replace with a yellow "HDG" and compass rose digits will be removed.
- d) **All of the above**

19. To avoid propeller over speeds shortly after unfeathering and restarting, we should maintain airspeed

- a) Below 80 knots
- b) Below 110 knots
- c) **Below 120 knots**

20. In case of single engine failure in flight, at airspeeds below V<sub>mc</sub>

a) Increase thrust to regain directional control

**b) Establish 3 deg to 5 deg bank ; approx. half ball towards good engine**

c) Both of them

21. Landing approach speed

**a) 82 knots**

- b) 76 knots
- c) 85 knots

22. Tyre pressure for nose wheel / Main wheels

- a) **87 psi and 68 psi**
- b) 68 psi and 87 psi
- c) 95 psi and 70 psi

23. Starter motor should not be operated for more than

- a) 20 seconds
- b) **10 seconds**
- c) 15 seconds
- d) 30 seconds

24. Full form of AHRS

- a) **Attitude and heading reference system**
- b) Altitude and heading reference system
- c) Altitude and horizontal reference system
- d) None of the above

25. If oil pressure is not within green range what should be the action

a) Nothing, it is normal and continue the flight

b) Wait for 3 seconds, check weather its in range

**c) As in (b) increase power and wait for 20 seconds**

26. Registering time of oil pressure

a) **5-20 seconds**

b) 10-20 seconds

c) 10-30 seconds

d) None of the above

27. If L/R ECU A/B FAIL do not illuminate and extinguish during the test sequence

a) There is malfunction in ECU

b) It is normal and there is no malfunction in ECU, carryout the flight

**c) As in (a) terminate the flight**

28. The redundancy of ECU is only given when

a) Only set to ECU A

b) **Only set to AUTO**

c) Both A and B

d) Only set to ECU B

29. If oil temperature reaches yellow range during climb

**a) Flight should be continued with airspeed increased by 10 knots and power reduce by 10 %**

b) Flight should be continued with airspeed decreased by 10 knots and power increased by 10 %

c) Flight should be continued with airspeed increased by 20 knots and power reduced by 20 %

30. Recommended cruise power setting

a) **70 %**

b) 80%

c) 90 %

d) 60 %

31. "CHECK GEAR" caution message is displayed when

a) Flaps are in LDG position

b) One Power lever is less than approx. 20%

c) Both Power lever is less than approx. 10%

d) **Both (a) and (b)**

32. What is the change in landing distance on a downhill slope ?

a) 2% slope – 10% decrease

b) **2% slope - 10% increase**

c) 1% slope – 10% decrease

d) 1% slope – 10% increase

33. Propeller speed reducing gear ratio is :-

a) **1:1.69**

b) 1:1.79

c) 1:2

d) 1:0.5

34. Each wing has how many aluminum chambers

- a) one
- b) two
- c) **three**
- d) four

35. A red '55' on black background indicates :-

a) temperature is more than 55 deg Cel, and the structural temperature limit is exceeded

36. Extended -ve g-loads can cause

- a) propeller control problems
- b) engine surging
- c) **All of the above**

37. The battery backup for AHRS and Flood lights is of

- a) 30 min
- b) 60 min
- c) 90 min
- d) 120 min

38. ECU battery back up  
30 min

39. What is the maximum/minimum speed limitations for Auto pilot

185kts-\_\_\_\_\_

40. In case of single engine failure,

a) **Do not use auto-pilot**

- b) Can use auto-pilot
- c) Auto-pilot maintains directional control
- d) Both (b) and (c) are correct

41. RPM drop while conducting ECU test in DA-42 is :-

- a) 900 RPM
- b) 500 RPM
- c) 150 RPM

**d) None of the above, as it has air compressing cycle**

42. Height lost while feathering in flight is  
500 ft

43. Engine warm up time is  
2 min @ 1400 RPM

44. Maximum elevator pull back angle, when power lever is approx.. or less than 20% with LDG flap setting is

- a) **13 deg**
- b) 13.5 deg
- c) 15 deg
- d) 15.5 deg

45. Maximum take-off weight of Da-42 is

- a) 1785**
- b) 1700

c) 1685

d) 1950

46. The recorder records audio of last

2.5 min

47. The displayed RPM is

a) Engine RPM

b) **Propeller RPM**

c) Governor RPM

d) Camshaft RPM

48. For how long should ECU TEST button be pressed to reset the caution message

a) More than 2 seconds

49. Restarting altitude in DA-42

8000 ft

50. There is an annunciation on PFD, red warning, "L/R OIL TEMP HIGH" (RED RANGE) indicates

a) Below -30 deg celcius

b) Above 140 deg celcius

c) **Both a and b**