

**WINFC BEECHCRAFT D-45 (T-34) KNOWLEDGE EXAM**

1. The \_\_\_\_\_ \_\_\_\_\_ for take-off, climb and maximum continuous power are the same for this engine.
2. When reducing power, always reduce \_\_\_\_\_ first, then reduce \_\_\_\_\_ to avoid creating excessively high pressure in the cylinders. When increasing power, an inverse procedure is followed.
3. Maintain the \_\_\_\_\_ \_\_\_\_\_ in the full rich position during all flight operations.
4. The use of \_\_\_\_\_ \_\_\_\_\_ will supply an alternate source of air for the induction system when the air inlet filter at the front of the engine is clogged by ice. Alternate air heat will not alleviate the ice accumulated on the filter.
5. Movement of the \_\_\_\_\_ \_\_\_\_\_ past the detent with power on is prohibited in order to avoid the development of excessively high internal cylinder pressure.
6. The fuel injector system does/does not incorporate an automatic mixture control and an auto-lean position within the system.
7. Automatic control of engine cooling is provided by \_\_\_\_\_ \_\_\_\_\_.
8. \_\_\_\_\_ twisting forces acting on the propeller tend to turn the propeller blades toward low pitch, and oil pressure moves the blades toward high pitch (feather).
9. During cold weather warm up, the \_\_\_\_\_ \_\_\_\_\_ control should be pulled out and rotated clockwise to lock out.
10. The engine will continue to operate normal with an engine driven \_\_\_\_\_ \_\_\_\_\_ failure only if the boost pump is operating.
11. The fuel boost pump will not operate with the fuel shutoff valve handle in the \_\_\_\_\_ \_\_\_\_\_.
12. If the fuel quantity gage indicates a split of \_\_\_\_\_ gallons between tanks, land as soon as practical.
13. The generator automatically cuts in at \_\_\_\_\_ RPM and reaches full rated output at \_\_\_\_\_ RPM.
14. No emergency system is provided for operation of the flaps in the event of \_\_\_\_\_ \_\_\_\_\_.
15. The landing gear emergency \_\_\_\_\_ switches are not weight-on-wheels safe.
16. The landing gear emergency \_\_\_\_\_ system is designed and stressed only for emergency extension and must never be used to \_\_\_\_\_ \_\_\_\_\_.

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17. Ensure \_\_\_\_\_ drain valve is properly seated (down) prior to flight to avoid erroneous airspeed indications.
18. Avoid any prolonged operation of the pitot \_\_\_\_\_ when the aircraft is on the ground since the absence of a cooling airstream may cause the unit to overheat.
19. Due to the lack of air cooling, landing \_\_\_\_\_ should not be continuously operated on the ground.
20. All 50 gallons of fuel from the two fuel cells are \_\_\_\_\_.
21. The engine is not to be operated at speeds below \_\_\_\_\_ RPM, with power on, to preclude developing excessive internal engine stresses.
22. In severe turbulence, IAS in the range from \_\_\_\_\_ to \_\_\_\_\_ knots is recommended.
23. Never exceed \_\_\_\_\_ seconds of negative “g” flight as entire oil quantity is re-circulated every \_\_\_\_\_ seconds and oil is not returned to the tank in this flight attitude.
24. Starting a warm engine in a strong tailwind could cause a \_\_\_\_\_.
25. Do not exceed \_\_\_\_\_ RPM until the oil temperature has reached \_\_\_\_\_°C. Do not allow oil pressure to exceed 80 PSI as oil will be “blown out” the breather line.
26. If the ignition switch is accidentally turned off during the magneto checks, close the throttle and move the mixture to idle cutoff, then perform a normal start. Turning the ignition switch back on could result in a backfire and a \_\_\_\_\_.
27. If the ignition system checks out of limits, set the throttle to \_\_\_\_\_ RPM, lean the mixture to \_\_\_\_\_ RPM below best power and wait \_\_\_\_\_ seconds before attempting a second ignition check.
28. More than \_\_\_\_\_ ignition burn out attempts is indicative of something other than fouled plugs and the aircraft should be downed.
29. Normal climb is done at \_\_\_\_\_ knots, \_\_\_\_\_ RPM and \_\_\_\_\_ throttle.
30. Normal cruise is \_\_\_\_\_ knots, \_\_\_\_\_ RPM and \_\_\_\_\_ to \_\_\_\_\_ inches MAP.
31. Normal descents are made at \_\_\_\_\_ knots with power off or \_\_\_\_\_ knots using \_\_\_\_\_ inches MAP. During prolonged power-off descents, the engine should be cleared at least every \_\_\_\_\_ feet. Monitor CHT.
32. Gross weight wings level stall speed with power off and a wind-milling propeller is \_\_\_\_\_ KIAS clean and \_\_\_\_\_ KIAS gear and flaps down.
33. Accidental spin recovery is accomplished by \_\_\_\_\_ flight controls, then recovering from a nose low unusual attitude.

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34. When fire occurs on start, keep the engine turning in an attempt to \_\_\_\_\_ or \_\_\_\_\_ the engine.
35. If an engine fire occurs after starting, place the mixture control to \_\_\_\_\_, fuel control to \_\_\_\_\_, throttle to \_\_\_\_\_, ignition \_\_\_\_\_ and battery to \_\_\_\_\_.
36. When condition of the landing surface is in doubt during an emergency landing, it is recommended that the landing gear be in the \_\_\_\_\_ position.
37. Power off glide ratio is \_\_\_\_\_:\_\_\_\_\_ with the prop in low pitch and \_\_\_\_\_:\_\_\_\_\_ with prop in high pitch. Best glide speed is \_\_\_\_\_ KIAS clean and \_\_\_\_\_ KIAS gear down/flaps up.
38. Failure of either the propeller governing system, the propeller control linkage or a loss of oil pressure will result in the propeller going to \_\_\_\_\_.
39. \_\_\_\_\_ the nose (pitch \_\_\_\_\_) to put a load on the prop during a prop failure.
40. If an unsafe gear indication existed and the gear have been successfully lowered, \_\_\_\_\_ attempt to raise the gear.
41. T or F? A gear-up landing is preferred to a landing with one main gear retracted.
42. Under extremely cold conditions, it is possible to get better vaporization of fuel by using \_\_\_\_\_. This results in smoother engine operation during warm-up, and eliminates any possible fuel control \_\_\_\_\_ during run up.
43. At high altitudes and extremely cold OAT use alternate air as needed, and cycle the \_\_\_\_\_ periodically to keep \_\_\_\_\_ in the \_\_\_\_\_ system.
44. Design structural limit load factor + \_\_\_\_\_ to - \_\_\_\_\_. (See FAA AFM)
45. FAA procedures for emergency engine secure or engine fire are, fuel selector valve \_\_\_\_\_, ignition switch \_\_\_\_\_. (See FAA AFM)
46. For emergency landing gear extension, place landing gear handle \_\_\_\_\_, circuit breaker \_\_\_\_\_, engage emergency landing gear handle and turn \_\_\_\_\_ as far as possible (approximately \_\_\_\_\_ turns). (See FAA AFM)
47. Use the auxiliary fuel boost pump for \_\_\_\_\_, \_\_\_\_\_, landing and emergency use. Secure pump for normal use above 1,000 feet AGL. (See FAA AFM)
48. Only \_\_\_\_\_ canopy should be open in normal flight. (See FAA AFM)
49. Never operate aircraft with \_\_\_\_\_ landing gear shock struts. (See FAA AFM)
50. Maximum luggage weight is \_\_\_\_\_ pounds.

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