

Question block created by wizard

This exam contains 52 questions

1. What is the approximate thermal efficiency of a piston engine?

- (a) 30 to 35%
- o (b) 80 to 95%
- o (c) 20 to 25%

If choice a is selected set score to 1.

2. Actual power will be than the power produced by the engine.

- o (a) More
- (b) Less
- o (c) Equal

If choice b is selected set score to 1.

3. Compared to a petrol engine, diesel engines are:

- o (a) Less fuel efficient.
- o (b) More complex.
- (c) More reliable.

If choice c is selected set score to 1.

4. Diesel engines have....

- o (a) a simple ignition system.
- (b) no ignition system.
- o (c) a complex ignition system.

If choice b is selected set score to 1.

5. What is the correct cycle of a 4-stroke engine?

- o (a) Compression - induction - power - exhaust
- (b) Induction - compression - power - exhaust
- o (c) Exhaust - power - compression - induction

If choice b is selected set score to 1.

- 6.** What defines the cylinder size?
- (a) Distance between TDC and BDC and stroke
 - (b) Bore and diameter
 - (c) Bore and stroke

If choice c is selected set score to 1.

- 7.** What type of engine is also called a boxer engine?
- (a) Radial engine.
 - (b) In line engine.
 - (c) Horizontal opposed.

If choice c is selected set score to 1.

- 8.** Which horsepower definition is the theoretical power of a piston engine?
- (a) Shaft horsepower
 - (b) Indicated horsepower
 - (c) Brake horsepower

If choice b is selected set score to 1.

- 9.** Which of the three quantities has an effect on air humidity?
- (a) Altitude
 - (b) Temperature
 - (c) Dew point

If choice b is selected set score to 1.

- 10.** What does the carburetor control?
- (a) The density of air.
 - (b) The amount of air.
 - (c) The temperature of air.

If choice b is selected set score to 1.

11. An extreme rich mixture can be identified by?

- (a) Black smoke coming from the exhaust
- o (b) Popping back through the carburettor (back-fire)
- o (c) Blue smoke coming from the exhaust

If choice a is selected set score to 1.

12. Oil is transferred within the crankcase by....

- (a) Internal oil channels.
- o (b) external oil lines.
- o (c) internal oil lines.

If choice a is selected set score to 1.

13. Which of the following components is mounted **in** the cylinder head?

- o (a) Connecting rod
- (b) Exhaust valve
- o (c) Camshaft

If choice b is selected set score to 1.

14. What type of propeller reduction gear would be used if there was enough room?

- (a) Spur-pinion gear
- o (b) Bevel reduction gear
- o (c) Epicycle reduction gear

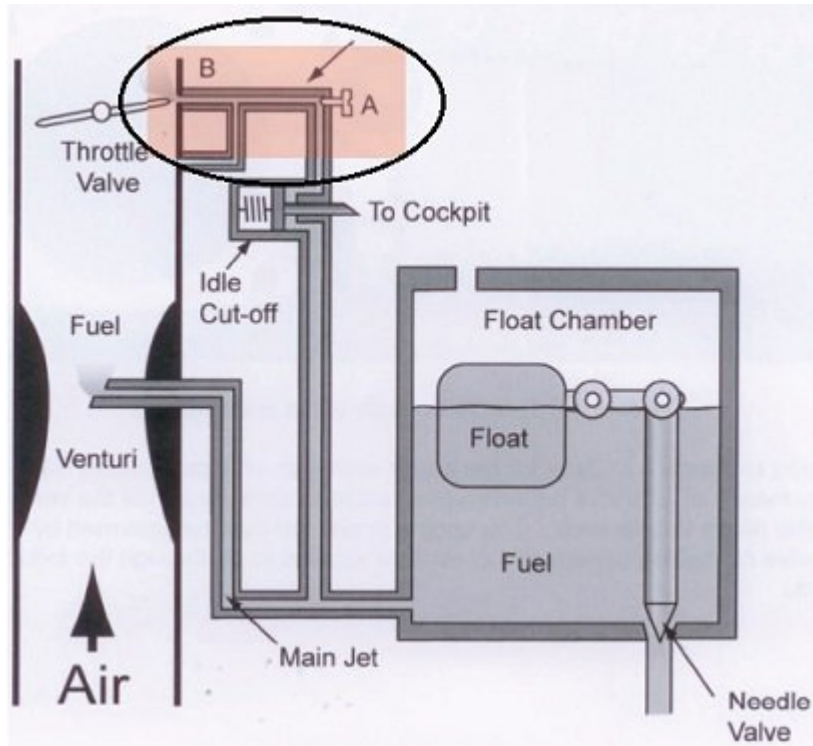
If choice a is selected set score to 1.

15. By which means is the fuel flow regulated in a float type carburetor?

- o (a) Throttle valve.
- o (b) Main jet.
- (c) Needle valve.

If choice c is selected set score to 1.

16. What is the component highlighted in the figure below?



- (a) Acceleration jet
- (b) Main jet
- (c) Idle jet

If choice c is selected set score to 1.

17. By which means is the carburetor accelerator pump activated?

- (a) The throttle
- (b) The throttle control
- (c) The float chamber

If choice b is selected set score to 1.

18. What happens to a piston engine with fixed pitch propeller when icing occurs?

- (a) Fuel pressure fluctuates
- (b) Engine RPM drops
- (c) Engine fails

If choice b is selected set score to 1.

19. How is ice build-up prevented on float type carburetor?

- (a) Hot air from around the engine
- o (b) Hot exhaust gasses fed into the intake
- o (c) Electrical heating of the intake

If choice a is selected set score to 1.

20. What type of ice would normally form on the intake?

- o (a) Throttle ice.
- (b) Impact ice.
- o (c) Evaporation ice.

If choice b is selected set score to 1.

21. The pressure of an airflow through a venture will:

- o (a) Stay the same
- (b) Drop
- o (c) Increase

If choice b is selected set score to 1.

22. Which component is not part of a fuel injection throttle body?

- (a) Float operated needle valve.
- o (b) Throttle valve.
- o (c) Venture.

If choice a is selected set score to 1.

23. The discharge nozzle in a fuel injection system is located....

- o (a) in front of the throttle valve.
- (b) downstream of the throttle valve.
- o (c) inside the fuel pressure pump.

If choice b is selected set score to 1.

24. Which component is not part of a FADEC?

- (a) Engine control unit.
- (b) Ignition system.
- (c) Carburettor.

If choice c is selected set score to 1.

25. Starting a FADEC engine is:

- (a) harder than a carburetor engine
- (b) the same as a carburetor engine
- (c) easier than a carburetor engine

If choice c is selected set score to 1.

26. A FADEC system communicates between other computers using what other type of system?

- (a) Digital databus.
- (b) Ethernet.
- (c) Analog wiring.

If choice a is selected set score to 1.

27. When will a FADEC switch channels?

- (a) It can not switch channels
- (b) Automatically if the opposite channel has less faults.
- (c) Manually if the opposite channel has less faults

If choice b is selected set score to 1.

28. What is used to energize the engaging lever for cranking the engine, in a pre-engaged starter?

- (a) A flywheel.
- (b) A solenoid.
- (c) A manual engaging lever.

If choice b is selected set score to 1.

29. The voltage induced in the secondary winding in a Magneto depends on?

- (a) number of turns in the secondary winding

- (b) number of turns in the primary winding
- o (c) the number of magnets

If choice b is selected set score to 1.

30. What types of booster coil categories do we have?

- (a) High and low tension coils
- o (b) Primary and secondary coils
- o (c) High and low voltage coils

If choice a is selected set score to 1.

31. What are NACA ducts used for?

- (a) Air scoop for cooling engine accessories
- o (b) Air scoop for fresh air in the cabin
- o (c) Air intake for cold air to the carburetor or injection system

If choice a is selected set score to 1.

32. Which engine type is not air-cooled?

- o (a) Boxer engine.
- o (b) Radial engine.
- (c) In-line engine.

If choice c is selected set score to 1.

33. How is the cold air directed around the cylinders?

- o (a) By using multiple air intakes
- o (b) By using a fan
- (c) By using deflectors

If choice c is selected set score to 1.

34. What happens to the power of an aspirated engine when the aircraft climbs?

- o (a) The engine power will increase due to the colder air.
- o (b) Nothing.
- (c) The engine power will decrease due to the lower atmospheric pressure.

If choice c is selected set score to 1.

35. What drives the roots supercharger?

- (a) An electric motor.
- (b) The engine directly.
- (c) The exhaust gasses via a turbine.

If choice b is selected set score to 1.

36. By which input is the waste gate of a turbocharger positioned?

- (a) Air pressure from the turbocharger.
- (b) Fuel pressure.
- (c) Engine lubrication system.

If choice c is selected set score to 1.

37. When is a straight grade oil used?

- (a) When a new engine needs breaking-in.
- (b) When the aircraft is operated in very cold environments.
- (c) When the engine is a 2-stroke engine.

If choice a is selected set score to 1.

38. Which type of reciprocating engine fuel contains additives to prevent knocking?

- (a) Diesel.
- (b) Jet Fuel.
- (c) Avgas.

If choice c is selected set score to 1.

39. What is the danger when using MOGAS blended with bio-alcohol?

- (a) Water will be absorbed by the alcohol and freeze when flying at high altitude.
- (b) The engine will overheat easily.
- (c) The fuel becomes very volatile.

If choice a is selected set score to 1.

40. What is the disadvantage of splash oil distribution?

- (a) Does not work well at all attitudes.

- (b) Does not work with dry-sump system.
- (c) Does not clean the engine.

If choice a is selected set score to 1.

41. What is installed in the oil system to detect abnormal wear of metal components?

- (a) Chip detector.
- (b) Oil dipstick.
- (c) Screen.

If choice a is selected set score to 1.

42. What are the main component(s) used to clean lubrication oil?

- (a) Oil filter and chip detector.
- (b) Oil filter.
- (c) Oil filter and oil cooler.

If choice a is selected set score to 1.

43. The AC powered tachometer relates RPM to....

- (a) frequency (Hertz)
- (b) voltage (Volts)
- (c) current (Amps)

If choice a is selected set score to 1.

44. What type of temperature sensor is used for measuring the cylinder head temperature?

- (a) Temperature probe
- (b) Thermocouple
- (c) Temperature bulb

If choice b is selected set score to 1.

45. On a turbo charged engine, the fuel pressure will:

- (a) Remain constant at all altitudes.
- (b) Increase with increasing altitude.
- (c) Decrease with increasing altitude.

If choice a is selected set score to 1.

46. In what type of control system could you find walking beams?

- (a) Teleflex control
- (b) Push-pull rod controls.
- (c) Bowden cable controls.

If choice b is selected set score to 1.

47. What type of lines and hoses are typically found in a wing nacelle of the engine?

- (a) Fuel, oil and hydraulic lines.
- (b) Fuel lines.
- (c) Fuel, hydraulic and pneumatic lines.

If choice a is selected set score to 1.

48. What type of control systems are used to operate engine systems?

- (a) Push-pull control rods.
- (b) Bowden cable.
- (c) Teleflex.

If choice c is selected set score to 1.

49. What must first be done before doing a check during the engine ground run?

- (a) Engine must be warmed up.
- (b) Engine must be cold.
- (c) Engine must be at full throttle.

If choice a is selected set score to 1.

50. The engine ground check is done:

- (a) After engine warm-up
- (b) Before engine warm-up
- (c) Before engine start

If choice a is selected set score to 1.

51. On a light aircraft, what are the basic engine instruments?

- (a) Tachometer - fuel flow meter - cylinder head temperature
- (b) Tachometer - oil quantity - oil temperature

- (c) Tachometer - oil pressure - oil temperature

If choice c is selected set score to 1.

52. Which of the following, is part of an engine inspection?

- (a) Open all cowlings.
- o (b) Engine must be removed.
- o (c) Engine must be dirty.

If choice a is selected set score to 1.

If assessment score is 0% to 100% Feedback