

Piper Archer III DX

Question Bank

Q Choose the correct Option i.e. A, B, C or D from the following.

1. The Piper Archer III DX is equipped with an Engine Manufactured by:

- a. **Technify Motors GmbH**
- b. Thielert Aircraft Engines
- c. Continental Motors
- d. Textron Lycoming Engines

2. The Engine Model number is:

- a. **TAE 125-02-114**
- b. TAE 125-02-99
- c. IO-360-D2J
- d. IO-360-A4M

3. The Propeller Manufacturer is:

- a. **MT Propeller Entwicklung GmbH**
- b. MTV Propellers
- c. Sensenich Propellers
- d. McCauley Accessory Division

4. Propeller Model Number for the Piper Archer DX is:

- a. **MTV-6-A/190-69**
- b. MTV-6-A/187-129
- c. MT-6-A/187-129
- d. MT-6-A/190-69

5. Number of Blades in the Propeller of the Piper Archer DX is:

- a. **3 Blade Variable Pitch**
- b. 2 Blade Fixed Pitch
- c. 3 Blade Fixed Pitch
- d. 2 Blade Variable Pitch

6. Diameter of the propeller blades are:

- a. **1.90m**
- b. 1.87m
- c. 1.87ft
- d. 1.90ft

7. Approved fuels for the Piper Archer DX are:

- a. **JET A-1/JET A**
- b. AVGAS 100LL
- c. AVGAS 100
- d. ATF/Mogas

8. Take off and Max Continuous Power of the Engine is:

- a. **114 kW (155 HP)**

- b. 114 HP (155 kW)
 - c. 99 kW (135 HP)
 - d. 135 kW (99 HP)
9. Take off and Max. Continuous RPM is:
- a. **2300 RPM**
 - b. 2000 RPM
 - c. 2400 RPM
 - d. 2700 RPM
10. Max. Recommended Cruise:
- a. **85%**
 - b. 100% for 5 minutes
 - c. 85% for 5 minutes
 - d. 90%
11. What is Engine Load:
- a. **Available percentage of max. Engine power**
 - b. Available percentage of max. Brake Horse Power
 - c. Available percentage of max. Thrust Horse Power
 - d. Available percentage of max. Propeller thrust
12. Minimum Oil Pressure:
- a. **1.2 bar (14.5 psi)**
 - b. 1 bar
 - c. 2.3 bar (33.4 psi)
 - d. 6 bar (87 psi)
13. Minimum Oil Pressure (during take-off):
- a. **2.3 bar (33.4 psi)**
 - b. 1.2 bar (14.5 psi)
 - c. 1 bar
 - d. 6 bar (87 psi)
14. Minimum Oil Pressure (in flight):
- a. **2.3 bar (33.4 psi)**
 - b. 1.2 bar (14.5 psi)
 - c. 1 bar
 - d. 6 bar (94 psi)
15. Maximum Oil Pressure (during take-off):
- a. **6 bar (87 psi)**
 - b. 1.2 bar (14.5 psi)
 - c. 1 bar
 - d. 6.5 bar (94 psi)
16. Maximum Oil Pressure (cold start < 20 sec):
- a. **2.3 bar (33.4 psi)**
 - b. 1.2 bar (14.5 psi)
 - c. 1 bar

d. 6 bar (94 psi)

17. DOHC Stands for:

- a. **Double Overhead Camshaft**
- b. Double Overhead Crankshaft
- c. Direct Overhead Camshaft
- d. Direct Overhead Crankshaft

18. FADEC Stands for:

- a. **Full Authority Digital Engine Control**
- b. Full Autonomy Digital Engine Control
- c. Fully Automatic Digital Engine Control
- d. Full Authority Direct Engine Control

19. Minimum Engine Starting Oil Temperature is:

- a. **-32 deg C**
- b. 50 deg C
- c. -30 deg C
- d. 60 deg C

20. Maximum Engine Oil Operating Temperature is:

- a. **140 deg C**
- b. 50 deg C
- c. 120 deg C
- d. 105 deg C

21. Minimum Oil Temperature Operating Limit is:

- a. **50 deg C**
- b. 60 deg C
- c. -32 deg C
- d. -30 deg C

22. Minimum Engine Starting Coolant Temperature is:

- a. **-32 deg C**
- b. -30 deg C
- c. -35 deg C
- d. 32 deg C

23. Minimum Operating Coolant Temperature is:

- a. **60 deg C**
- b. 50 deg C
- c. 32 deg C
- d. 30 deg C

24. Maximum Operating Coolant Temperature is:

- a. **105 deg C**
- b. 120 deg C
- c. 140 deg C
- d. 90 deg C

25. Minimum Operating Gearbox Temperature is:

- a. **-30 deg C**
- b. -32 deg C
- c. 32 deg C
- d. 30 deg C

26. Maximum Operating Gearbox Temperature is:

- a. **120 deg C**
- b. 105 deg C
- c. 90 deg C
- d. 140 deg C

27. Maximum Oil Consumption is:

- a. **0.1l/h**
- b. 0.5l/h
- c. 1l/h
- d. 5l/h

28. Minimum Turning Radius from pivot point to wingtip is:

- a. **30ft**
- b. 23ft
- c. 25ft
- d. 40ft

29. Wingspan of the Piper Archer DX is:

- a. **35 feet 6 inches**
- b. 36 feet 5 inches
- c. 35 feet 5 inches
- d. 36 feet 6 inches

30. Vne for the Piper Archer DX is:

- a. **154 KIAS**
- b. 154 KCAS
- c. 163 KIAS
- d. 163 KCAS

31. Vno for the Piper Archer Dx is:

- a. **125 KIAS**
- b. 125 KCAS
- c. 99 KIAS
- d. 129 KIAS

32. Design Maneuvering Speed (Va) for the Piper is:

- a. **113 KIAS at 2550 lbs.**
- b. 113 KCAS at 2550 lbs.
- c. 99 KIAS at 1635 lbs.
- d. 129 KIAS at 1635 lbs.

33. Vfe for the Piper Archer Dx is:

- a. **102 KIAS**
- b. 100 KIAS

- c. 102 KCAS
- d. 99 KIAS

34. Red Radial Marking on the Air Speed Indicator shows:

- a. **154 KTS**
- b. 125 KTS
- c. 163 KTS
- d. 45 KTS

35. Maximum Ramp Weight for the Piper Archer DX in normal category is:

- a. **2558 lbs.**
- b. 2550 lbs.
- c. 2138 lbs.
- d. 2130 lbs.

36. The approved Engine Oil for use on the Piper Archer DX is L

- a. **All of the Above**
- b. Aeroshell Oil Diesel 10W-40
- c. Shell Helix Ultra 5W-40
- d. AeroShell Oil Diesel Ultra

37. The coolant used for the Piper Archer DX is:

- a. **Water/Radiator Protection at a ratio of 50:50**
- b. Water/Radiator Protection at a ratio of 70:30
- c. Water with 1% of Radiator Protection fluid
- d. None of the above

38. If the main battery and alternator fails, the engine will operate on FADEC A backup battery for:

- a. **30 min**
- b. 120 min
- c. 60 min
- d. 45 min

39. Max certified altitude is:

- a. **16400ft**
- b. 15400ft
- c. 10000ft
- d. 13000ft

40. Total Fuel Capacity of the aircraft is

- a. **50 USG**
- b. 48 USG
- c. 53 USG
- d. None of the above

41. Total Usable Fuel of the Aircraft is:

- a. **48 USG**
- b. 50 USG
- c. 53 USG
- d. None of the Above

42. Total Unusable fuel is:

- a. **2 USG**
- b. 1 USG
- c. 1.5 USG
- d. 4 USG (2 USG per tank)

43. Approved Gearbox Oil are:

- a. Centurion Gearbox Oil N1
- b. Shell Spirax S6 GXME 75W-80
- c. Shell Spirax EP 75W-90
- d. **All of the Above**

44. If the propeller speed control fails, Climbs are performed at:

- a. **65 KIAS & 100% Load**
- b. Vy & 100% load
- c. 67 KIAS & 100% Load
- d. 65 KIAS & 85% Load

45. During Engine Failure after take-off Airspeed with flaps retracted should be:

- a. **73 KIAS**
- b. 65 KIAS
- c. 68 KIAS
- d. 70 KIAS

46. In an Engine failure, the propeller will continue to turn as long as the airspeed is above:

- a. **65 KIAS**
- b. 73 KIAS
- c. 60 KIAS
- d. 68 KIAS

47. In case of a dead battery, the Aircraft can be started using external Power Source:

- a. **False**
- b. True
- c. Only Under Certain Conditions
- d. Both b & c

48. Shut down the engine immediately if the oil pressure of 1 bar is not indicated within:

- a. **3 seconds**
- b. 2 seconds
- c. 30 seconds in Summer and 60 seconds in winter
- d. 60 seconds

49. Lift off speed of the Piper Archer at 2550lbs(1157kg) is:

- a. **55 KIAS**
- b. 53 KIAS
- c. 54 KIAS
- d. 60 KIAS

50. After Takeoff, speed at 15 m (50 ft) at 2550lbs(1157kg) is:

- a. **60 KIAS**

b. 50 KIAS

c. 57 KIAS

d. 55 KIAS

51. Vy at 2550 lbs.(1157kg) is

a. **76 KIAS**

b. 70 KIAS

c. 67 KIAS

d. 65 KIAS

52. Best Glide Speed is:

a. **78 KIAS**

b. 75 KIAS

c. 65 KIAS

d. None of the Above

53. Main battery voltage is:

a. **24V**

b. 28V

c. 60V

d. 12V

54. Nose Gear Tyre Pressure:

a. **18 psi**

b. 24 psi

c. 16 psi

d. None of the above

55. Main Gear Tyre Pressure:

a. **24 psi**

b. 18 psi

c. 16 psi

d. None of the above

56. ELT Testing should be done on the freq of:

a. **121.5 Mhz**

b. 406 Mhz

c. 121.5 Khz

d. 406 Khz

57. During ELT Testing, the pulses should be restricted to _____ pulses:

a. **3**

b. 2

c. 5

d. 1

58. Stall Warning horn is activated:

a. **5-10 kts above stall speed**

b. 10 kts above stall speed

c. At stall speed

- d. 5 kts above stall speed

59. Max allowed baggage in baggage compartment is:

- a. **200 lbs.**
- b. 120 lbs.
- c. 100 lbs.
- d. None of the above

60. Baggage area is:

- a. **24 cu in.**
- b. 30 cu.in
- c. 200 cu in.
- d. None of the above

61. Warm up procedure is:

- a. **890 rpm for 2 min, then 1400 rpm till OT 50 deg C and CT 60 deg C**
- b. 1400 rpm till OT 50 deg C and CT 60 deg C
- c. 890 rpm for 2 min
- d. None of the above

62. Starter motor can be operated for a maximum of _____ seconds per attempt.

- a. **10 seconds**
- b. 6 seconds
- c. 20 seconds
- d. 8 seconds

63. After 6 attempts to start, _____ hours must be given to cool the starter motor

- a. **½ hr**
- b. 1 hr
- c. 2 hr
- d. ¼ hr

64. PFD stands for:

- a. **Primary Flight Display**
- b. Primary Function Display
- c. Both a & b
- d. None of the above

65. MFD Stands for:

- a. **Multi-Function Display**
- b. Multi Flight Display
- c. Both a and b
- d. None of the above

66. The Engine on the Piper Archer DX is:

- a. **Liquid Cooled**
- b. Air Cooled
- c. Oil Cooled
- d. Air and Oil Cooled

67. The Engine on the Piper Archer DX is:

- a. **In Line 4 Cylinder**
- b. In Line 6 cylinder
- c. Horizontally Opposed 4 cylinder
- d. Horizontally Opposed 6 cylinder

68. The Engine on the Piper Archer DX has a displacement of :

- a. **121.5 cubic inches**
- b. 125 cubic inches
- c. 114 cubic inches
- d. 121.5 cubic centimeters

69. The Engine on the Piper Archer DX is:

- a. **Turbocharged**
- b. Supercharged
- c. Turbo-Supercharged
- d. None of the Above

70. The Engine on the Piper Archer DX is:

- a. **Controlled by FADEC**
- b. Controlled by ECU
- c. Controlled by Magnetos
- d. None of the above

71. The freezing point of the coolant is:

- a. **-36 deg C**
- b. -30 deg C
- c. -32 deg C
- d. None of the above

72. The Yellow Arc in the ASI is:

- a. **125 KTS to 154 KTS**
- b. 99 KTS to 154 KTS
- c. 50 KTS to 124 KTS
- d. 45 KTS to 104 KTS

73. The Green Arc in the ASI is:

- a. **50 KTS to 124 KTS**
- b. 45 KTS to 104 KTS
- c. 99 KTS to 154 KTS
- d. 125 KTS to 154 KTS

74. White Arc in the ASI is:

- a. **45 KTS to 104 KTS**
- b. 50 KTS to 124 KTS
- c. 99 KTS to 154 KTS
- d. 125 KTS to 154 KTS

75. Final Approach speed with Flaps 40 deg is:

- a. **63 KTS**
- b. 70 KTS

- c. 65 KTS
- d. None of the above

76. Best rate of climb with flaps 10 deg is:

- a. **65 KIAS**
- b. 70 KIAS
- c. 75 KIAS
- d. 79 KIAS

77. Fuel Tanks must be switched every _____ Minutes

- a. **30 min**
- b. 20 min
- c. 60 min
- d. 10 min

78. During Takeoff, Fuel Pump must be ON:

- a. **True**
- b. False
- c. True but only in cold weather
- d. True but only in hot weather

79. Red Range of Electrical System voltage is:

- a. 0 – 24.9 V
- b. 25 – 25.9 V
- c. > 30V
- d. **Both A and C**

80. Alternator Red Range is:

- a. **>60 Amps**
- b. >60 Volts
- c. 0-52 Volts
- d. 53-60 Amps

81. Gearbox temperature green range:

- a. **<115 deg C**
- b. 115-120 deg C
- c. >120 deg C
- d. None of the above

82. Gearbox Temperature Amber Range

- a. **115 – 120 deg C**
- b. <115 deg C
- c. >120 deg C
- d. None of the above

83. Gearbox temperature red range

- a. **>120 deg C**
- b. <115 deg C
- c. 115 – 120 deg C
- d. None of the above

84. Tachometer Green Range:

- a. **0 – 2300 RPM**
- b. >2300 RPM
- c. 1200 – 2300 RPM
- d. 0 – 1200 RPM

85. Tachometer Red Range:

- a. **>2300 RPM**
- b. 0 – 2300 RPM
- c. 1200 – 2300 RPM
- d. 0 – 1200 RPM

86. Oil Pressure Red Range:

- a. **0 – 1.1 bar & > 6.5 bar**
- b. 1.2 to 2.2 bar
- c. Both a and b
- d. None of the above

87. Oil Temperature green range is:

- a. **50 – 129 deg C**
- b. 130 – 140 deg C
- c. -32 – 49 deg C
- d. None of the above

88. Oil pressure green range:

- a. **2.3 to 5.1 bar**
- b. 5.2 to 6.5 bar
- c. 1.2 to 2.2 bar
- d. None of the above

89. Coolant Temperature green range:

- a. **60 – 100 deg C**
- b. 101 – 105 deg C
- c. >105 deg C
- d. None of the above

90. Fuel Temperature green range

- a. **0 – 65 deg C**
- b. < - 30 deg C
- c. >75 deg C
- d. None of the above

91. FADEC Warning in the G1000 will display as:

- a. **ECU A Fail / ECU B Fail**
- b. FADEC A Fail / FADEC B Fail
- c. Both a and B
- d. None of the Above

92. Engine coolant level low will show on the G1000 as:

- a. **COOL LVL – Caution**

- b. COOL LVL – Warning
- c. COOL LVL – Advisory
- d. COOLANT LVL

93. When Force B is activated, the display on the G1000 shows:

- a. **ECU B Active**
- b. FADEC B Active
- c. B Active
- d. None of the above

94. Advisory information on the G1000 shows up as:

- a. **White text and Black background**
- b. Black text and yellow background
- c. Yellow Text and Black Background
- d. Red Text and Black Background

95. Caution information (not accepted) on the G1000 shows up as:

- a. **Black text and yellow background**
- b. White text and Black background
- c. Yellow Text and Black Background
- d. Red Text and Black Background

96. Caution information (accepted via Master Caution switch) on the G1000 shows up as:

- a. **Yellow Text and Black Background**
- b. Red Text and Black Background
- c. Black text and yellow background
- d. White text and Black background

97. Warning information (not accepted) on the G1000 shows up as:

- a. **Flash between white text, red background and red text, white background**
- b. Yellow Text and Black Background
- c. Red Text and Black Background
- d. Black text and yellow background

98. Warning information (accepted via master warning switch) on the G1000 shows up as:

- a. **Red Text and Black Background**
- b. Yellow Text and Black Background
- c. Flash between white text, red background and red text, white background
- d. Black text and yellow background

99. Aircraft Height is:

- a. 7 ft 3 in
- b. 6 ft 3 in
- c. 3 ft 7 in
- d. None of the above

100. Wingspan of the Aircraft

- a. **35 ft 6 in**
- b. 36 ft 6 in
- c. 36 ft 5 in

d. 35 ft 5 in

101. Length of the Aircraft

a. **7 ft 3 in**

b. 3 ft 7 in

c. 35 ft 6 in

d. None of the above

102. The Flaps of the aircraft are manually Operated and Spring Loaded to return to the _____ Position:

a. **UP**

b. DOWN

c. Neither A Nor B

d. 25 deg

103. The Flap positions are:

a. **0, 10, 25, 40 deg**

b. 0, 10, 20, 30 deg

c. 0, 10, 20, 40 deg

d. 0, 15, 25, 40 deg

104. This aircraft has rudder trim as standard:

a. **True**

b. False

c. Optional Accessory

d. Both A and C

105. The Tail Contains:

a. **Stabilator**

b. Elevator

c. Elevons

d. Ruddervators

106. The Fuel Selector Positions are:

a. **Right, Left & Off**

b. Right, Left, Both and Off

c. Only A as an optional accessory

d. None of the above

107. The Auxiliary Electric Fuel Pump should be on for:

a. **Takeoffs, Landings and switching tanks**

b. Takeoffs and Landings only

c. Switching Tanks Only

d. Always On

108. Fuel Draining should be done at:

a. **Each tank and Fuel Strainer twice (selecting each tank)**

b. Each Tank Only

c. Fuel Strainer Only

d. Each Tank and fuel strainer once

109. The three Landing Gear Use:

- a. **Cleveland Aircraft Products**
- b. Centurion Aircraft Products
- c. Thielert Aircraft Products
- d. Piper Aircraft Products

110.The Hydraulic Brake fluid used is:

- a. **MIL-H-5606**
- b. MIL-L-5606
- c. MIL-B-6082
- d. MIL-H-22851

111.Brake Fluid Level should be checked every:

- a. **50 hrs**
- b. 25 hrs
- c. 10 hrs
- d. Every hr

112.Power off stall with full flaps is

- a. **45 KIAS**
- b. 50 KIAS
- c. 44 KIAS
- d. 33 KIAS

113.Power off stall with flaps up is:

- a. **50 KIAS**
- b. 45 KIAS
- c. 44 KIAS
- d. 33 KIAS

114.Ht loss during stalls varies from:

- a. **100 to 350 feet**
- b. 150 to 350 feet
- c. 50 to 500 feet
- d. 200 to 400 feet

115.The Stall warning system is inoperative with the master switch OFF

- a. **TRUE**
- b. FALSE

116.Main Gear Strut should have

- a. **4.5 +/- 0.25 inches of strut exposure**
- b. 3.25 +/- 0.25 inches of strut exposure
- c. 4.5 inches of strut exposure
- d. None of the above

117.Nose Gear Strut should have

- a. **3.25 +/- 0.25 inches of strut exposure**
- b. 4.5 +/- 0.25 inches of strut exposure
- c. 4.5 inches of strut exposure
- d. None of the above

118.The Total number of Seats in the Aircraft are

- a. **4**
- b. 3
- c. 2
- d. 6

119.Short Field Takeoff Flaps Configuration is

- a. **25 deg**
- b. 10 deg
- c. 40 deg
- d. None of the above

120.Maximum demonstrated crosswind velocity is

- a. **17 kts**
- b. 20 kts
- c. 15 kts
- d. None of the above

121.Cabin Door of the Piper Archer is:

- a. **Double Latched**
- b. Single Latched
- c. Not Latched
- d. Triple Latched

122.If the door inadvertently opens, then to the close the door, speed should be:

- a. **87 KIAS**
- b. 65 KIAS
- c. 90 KIAS
- d. 100 KIAS

123.The Engine Mount is made of:

- a. **Tubular steel**
- b. Aluminum
- c. Carbon Fiber
- d. Iron

124.Landing Gear struts is made of:

- a. **Steel**
- b. Iron
- c. Carbon fiber
- d. Aluminum

125.The Wingtips and Tail surfaces are made of:

- a. **Fiberglass**
- b. Aluminum
- c. Steel
- d. Carbon Fiber

126. The Propeller for the Archer DX is:

- a. **Wooden composite**

- b. All metal
- c. All carbon fiber
- d. Aluminum Alloy

127.Archer is a :

- a. **Low Wing Monoplane with All Metal construction**
- b. High Wing Monoplane with Composite construction
- c. Low Wing Monoplane with Composite construction
- d. High Wing Monoplane with All metal construction

128.Type of Aerofoil is:

- a. **NACA 652-415**
- b. NACA 415-652
- c. Truss Type Aerofoil
- d. Positively cambered

129.Type of Wings are:

- a. **Semi - Tapered**
- b. Tapered
- c. Swept Back
- d. Elliptical

130.All 3 wheels are:

- a. **6.00 X 6, four ply rating**
- b. 6.00 X 6, six ply rating
- c. 8.00 X 6, four ply rating
- d. 8.00 X 6, six ply rating

131.Type of Landing Gear:

- a. **Tricycle type fixed landing gear**
- b. Tricycle type retractable Landing Gear
- c. Tailwheel Fixed Landing Gear
- d. Tailwheel Retractable Landing gear

132.Type of Struts:

- a. **Air-Oil Type**
- b. Nitrogen-Oil Type
- c. Water Type
- d. None of the above

133.Nose Gear Steering:

- a. **30 deg and Later Aircraft 20 deg**
- b. 20 deg and Later aircraft 30 degree
- c. 10 degree and Later aircraft 20 deg
- d. None of the above

134.Finish of the paint:

- a. **All Aircrafts are primed with etching primer and finished with a polyurethane finish**
- b. All Aircrafts are primed with normal primer and finished with a polyurethane finish
- c. All Aircrafts are primed with etching primer and finished with a normal finish

- d. None of the above

135. How do winds affect the Take off roll?

- a. Decrease 10% for each 9 kts Headwind
- b. Decrease 9% for each 10 kts headwind
- c. Increase 10% for each 2 kts tailwind
- d. **Both A and C**

136. For operation on dry, grass runway, increase distances by

- a. **15% of the ground roll figure**
- b. 10% of the ground roll figure
- c. 5% of the ground roll figure
- d. None of the Above

137. Economic cruise on the Piper Archer is:

- a. **70% load**
- b. 75% Load
- c. 90% load
- d. 80% Load

138. Increase airspeed and range by _____ above ISA

- a. **1% per 10 deg C**
- b. 10% per 10 deg C
- c. 5% per 10 deg C
- d. None of the above

139. How much is the compulsory fuel reserve to be maintained?

- a. **45 min**
- b. 30 min
- c. 60 min
- d. 15 min

140. Alternator Excitation Battery is used to ensure that the Alternator will continue to function even if the main battery fails:

- a. **TRUE**
- b. FALSE