6. The engine oil tanks are pressurized at altitude to:
   a. Prevent excessive oil consumption in the engines.
   b. Prevent excessive crankcase foaming and loss of oil through the engine breather line.
   c. Increase the efficiency of the engine driven oil pump at altitude.
   d. Prevent excessive oil foaming in the tanks at altitude.

7. The pressurized compartments could not normally be heated if which of the following engines were feathered?
   a. #6 and #1
   b. #5 and #2
   c. #2 and #3
   d. #3 and #4

8. When the carburetor pre-heat system is turned "ON".
   a. The right and left wing shut-off valves in the cabin pressurization system automatically close if they were in the open position.
   b. The cabin boost fan in the cabin pressurization system is automatically turned ON.
   c. A duct between the turbo inlets and the intercoolers, which bypasses the turbo compressors is opened.
   d. The anti-icing dump valves are closed automatically.

9. A fire in the jet pods would be registered in which of the following circuits:
   a. Will not be detected.
   b. Flight engineers engine compartment circuits.
   c. Pilots pod control panel detection lights.
   d. Flight engineers accessory compartment circuit.

10. How much leakage is permitted from each methyl-bromide bottle before it must be replaced?
   a. 20 psi after temperature correction.
   b. 32 psi before temperature correction.
   c. 400 psi.
   d. 40 psi after temperature correction.

11. The oil level warning lights on the flight engineers panel will glow when the oil level in the respective tank drops to:
   a. 5 gallons.
   b. 10 gallons.
   c. 25 gallons.
   d. 45 gallons.

12. When the aileron control wheel is turned to a left bank condition in flight:
   a. The left aileron servo tab is deflected down and the right aileron servo tab is deflected up.
   b. The right aileron servo tab is deflected down and the left aileron servo tab is deflected up.
   c. Both servo tabs remain streamlined with the control surface.
   d. The servo tabs are displaced electrically.

13. Automatic pilot servo motors are connected to the flight control cables that operate the flying servo tabs; this system required for operation.
    a. Alternating Current
    b. Direct 208V
    c. Both Alternating and Direct
    d. 115 AC

14. The wing span, length of the fuselage, and height of the RB36 are respectively:
    a. 230 ft., 142 ft., and 64 ft.
    b. 230 ft., 162', 2" and 46'10"
    c. 230'2"., 163'2"; and 46'

15. In event a take-off is attempted with the surface controls locked, a limit switch on which landing gear will automatically unlock the surface controls when the oleo is extended.
    a. On the nose gear.
    b. On the left main gear.
    c. On the right main gear.
    d. On the tail skid.

16. The red position lights on the pod control panel which indicate the position of the Jet manifold and the engine fuel valves are "OUT", when:
    a. The valves are fully open.
    b. The valves are fully closed.
    c. The jet engines are not in operation.
    d. The valves are positioned between fully open and fully closed.

17. When the aircraft is taxiing:
    a. The "Flight Cooling" doors in the oil cooler ducting system are open and the "Ground Cooling" doors are closed.
    b. The "Flight Cooling" doors in the oil cooler system are closed and the "Ground Cooling" doors are open.
    c. Both doors are partially open.
    d. Both doors are closed.

18. The surface control lock switch is located on the:
    a. Flight Engineers panel.
    b. Pilots pedestal.
    c. CoPilots control column.
    d. Pilots control column or Pilots instrument panel.

19. If flying pressurized at 35,000 feet, the three cabin altimeters should read:
    a. 8,000 feet.
    b. 10,250 feet.
    c. 11,300 feet.
    d. 35,000 feet.

20. Heated air for anti-icing the wings is exhausted overboard at:
    a. The lower surface of the wing tips.
    b. The main landing gear wheel wells.
    c. The bottom of Blk. #7, between the two bomb bays.
    d. The low pressure sections of the engine nacelles.

ELECTRICAL

21. The primary electrical power system on the RB36 aircraft is:
    a. 208 volt, 3 phase alternating current.
    b. 115 volt, single phase alternating current.
    c. 28 volt, single phase alternating current.
    d. 28 volt, direct current.

22. The required phase sequence of an alternator on the RB36 is:
    a. T1, T2, T3, or A, B, C.
    b. T1, T3, T2, or A, C, B.
    c. T3, T2, T1, or C, B, A.
    d. It is immaterial what phase sequence the AC electrical system has.

23. When attempting to start an alternator and it definitely fails to build up voltage, what would you do?
    a. Replace the alternator.
    b. Replace the carbon pile element in the voltage regulator.
    c. Flash the exciter field.
    d. Replace the exciter control relay.

24. If the alternator still fails to build up voltage after following the proper procedure in question #23, what would you do?
    a. Replace the exciter control relay.
    b. Plug in the external power supply.
    c. Check the alternator breaker to see that it is open.
    d. Check the overspeed latch on the constant speed drive to see that it is in the open position.

25. The red alternator breaker indicator light on the engineers power control panel is "ON", when:
    a. The alternator breaker is closed.
    b. The alternator breaker is open.

26. The kilowatt load on an alternator operating in parallel can be adjusted by:
    a. The frequency adjusting rheostat.
    b. The voltage adjusting rheostat.
    c. Can not be adjusted by either the governor or voltage adjusting rheostat.
    d. The system is automatic and no adjustment is necessary.

27. The controls for the D.C. power system consist of:
   a. Switch and relay combination for each transformer-rectifier unit to turn it On and Off.
   b. One voltmeter with a selector switch to measure the output of each transformer rectifier unit.
   c. An ammeter for each transformer rectifier unit.
   d. A switch to turn the battery on or off.

28. The output speed of the constant speed drive is controlled by:
   a. The aircraft engine.
   b. The voltage regulator.
   c. The governor, and its associated equipment, by regulating the position of the control system.
   d. Regulating the reactive load.

29. The engines are started on the ground by:
   a. A direct cranking 24 volt starter attached to each engine.
   b. Inertia starters attached to each engine.
   c. Pulling the propellers through by hand.
   d. A direct cranking, 205 volt, 3 phase, AC starter attached to each engine.

30. The bus-Tie breakers are used to:
   a. Parallel alternators on the line when the bus tie breaker switches on the engineers panel are closed.
   b. Close the alternator breakers.
   c. Connect the four main busses together so that one or more alternators may feed the entire AC system of the aircraft.
   d. Parallel the transformer rectifier units.

31. The power safety limit switch in the flap synchronizer:
   a. Prevents the flap motor from overheating.
   b. Is used to provide an override circuit for manual operation of the flaps.
   c. Stops flap operation in case of a short circuit in the synchronizer switchette circuit.
   d. Will stop operation of a pair of flaps if either flap becomes more than 3 degrees out of synchronization.

32. Each flap synchronizer unit works so as to synchronize the movement of:
   a. All six flaps on the airplane.
   b. The three flaps on one wing.
   c. The two corresponding flaps on each wing.
   d. A completed circuit to the trim tab meters.

33. If both the green and red indicator lights on the landing gear circuit are ON, this indicates:
   a. The main gear is down and locked, but the nose gear is in motion.
   b. The main gear is down and locked, but the landing gear doors are not closed.
   c. The main gear is up and locked, but the doors are not closed.
   d. The landing gear is down and locked, the doors closed, and a throttle is positioned below minimum cruise.

34. A steady tone on the warning horn with the ship on the ground indicates:
a. The throttles are positioned below minimum cruise.
b. The throttles are positioned for take off with the flaps up.
c. The cabin pressure is too low.
d. The throttles are positioned for take off with the flaps down.

35. The carburetor mixture control:
a. Amplifiers operate from the lever control.
b. Amplifiers operate from the switch control.
c. Is controlled through both the cable linkage and the electronic system.
d. Is a fully automatic system.

36. Take off power on the R-4360-41 (wet) is:
a. 3250 IHP.
b. 3500 IHP.
c. 3000 BHP.
d. 3500 BHP.

37. The torque meter oil pressure gauge is graduated in:
a. B. H. P.
b. BMEP.
c. P.S.I.
d. I. H. P.

38. The manual spark advance, advances the spark:
a. From T.D.C. to 35 degrees.
b. From B.D.C. to 35 degrees.
c. 20 degrees to 35 degrees.
d. From T.D.C. to 20 degrees.

39. High fan ratio is used, provided the engine is operated above 13,500 feet and below:
a. 22,000 BHP.
b. 2200 RPM.
c. 2200 I.H.P.
d. 2200 B.H.P.

40. Closing the de-richment valve at Take-off returns the mixture to:
a. Best economy.
b. Lean best power.
c. Rich best power.
d. .062 F/A ratio.

41. Too rich a mixture will cause:
a. Decrease in torque.
b. Increase in torque.
c. Higher BMEP.
d. Low fuel flow.

42. The torque meter pressure gauge measures:
   a. I. H. P.
   b. Power delivered to the propeller shaft.
   c. B.H.P. plus F.H.P.
   d. Indicated Mean Effective Pressure.

43. Water injected into the -41 engine will cause:
   a. Increase in torque, high fuel flow, and decrease in head temperature.
   b. Increase in water pressure, increase in fuel flow, and decrease in cylinder head temperatures.
   c. Increase in torque and a decrease in fuel flow.
   d. Decrease in cylinder head temperature, increase in M.P. and lower B.M.E.P.

44. The purpose of the engine air plug is to:
   a. Automatically regulate the air flow to the propeller.
   b. Control the volumn of air entering the intercooler ducts.
   c. Plug up the air entering the wing leading edge.
   d. Control the volumn of air flow over the engine.

45. A full open air plug will:
   a. Decrease air speed.
   b. Increase torque.
   c. Cause the fan to cavitate.
   d. Increase air speed.

46. In the event of an excessively rich mixture due to icing, the ice has formed:
   a. In the impact tubes.
   b. In the carburetor throat bleed.
   c. In the bleed between "A" and "B" chambers.
   d. In the automatic mixture control.

47. The source of carburetor heat is:
   a. The alternator bay.
   b. The engine bay.
   c. The diffuser bay.
   d. The pressure side of the turbo superchargers.

48. In changing from dual to single turbo, what change in manifold pressure should be obtained?
   a. 3 inch drop.
   b. 9 inch rise.
   c. 5 inch drop.
   d. 5 inch rise.

49. Back-firing when the emergency ignition switch is pulled is caused by:
   a. The turbo selector switch in dual position.
   b. The mixture too lean.
   c. The magneto switch in the detent position.
   d. Carburetor icing.

50. The war emergency power rating is:
    a. 3500 BHP at 2700 RPM for 5 minutes.
    b. 3250 BHP at 2700 RPM for 30 minutes.
    c. 3250 BHP at 2600 RPM with 218.7 pounds torque for 5 minutes.
    d. 3250 BHP at 2400 RPM for 15 minutes.

PROPELLERS

51. The master motor tachometer indicates the desires RPM of:
    a. #1 engine only.
    b. #4 and #5 engines only.
    c. All six engines.
    d. #5 engine only.

52. In the event of loss of prop hydraulic pressure while in flight the prop will:
    a. Be controlled by manual selector switches for remainder of flight.
    b. Go into fixed pitch and remain there.
    c. Be feathered and no used for remainder of flight.
    d. Go to low blade angle setting.

53. The reservoir oil used in the prop hydraulic system should be checked:
    a. At intermediate inspections.
    b. At major inspections.
    c. Before or after each flight.
    d. Only when prop shows signs of malfunctioning.

54. The crew members having control over reversing the props are:
    a. Pilot and co-pilot only.
    b. Pilot, engineer and co-pilot only.
    c. Engineer only.
    d. Engineer and co-pilot.

55. When the six red lights mounted on top of the pilots instrument panel are lighted, the props are:
    a. Not in automatic.
    b. In forward thrust.
    c. In fixed pitch and are inoperative.
    d. In reverse thrust.

HYDRAULICS

56. The operational time limit on the main system pump motors is:
    a. 5 minutes.
    b. 2 minutes out of 10.
    c. 1½ minutes during gear retraction.
    d. No time limit.

57. The four mechanisms operated by hydraulic pressure are:
    a. Landing gear, brakes, bomb bay doors and wing flaps.
    b. Steering system, bomb bay doors, wing flaps and landing gear.
    c. Brakes, steering system, bomb bay doors and landing gear.

58. To reset brake gauge fuse without leaving the forward pressurized compartment you would:
   a. Repress plunger on floor.
   b. Repress plunger on depressurization valve.
   c. Operate ground servicing hand pump.
   d. Operate emergency hand pump.

59. Location of Bomb Bay door control switches are:-
   a. Pilots and Co-Pilots instrument panel, and bombing control panel.
   b. Pilots and Co-Pilots isle stand and bomb control panel.
   c. Radio operators table and auxiliary crew members compartment.

60. Bomb Bay door emergency system is located:
   a. Right side of radio operator's compartment.
   b. Servicing bulkhead #7.
   c. Bulkhead #11 in aft pressurized compartment.
   d. Right hand side of #2 Bomb Bay.

61. How many ways are there to extend the landing gear.
   a. 6
   b. 3
   c. 2
   d. 4

62. With the landing gear extended and main gear wheel enclosure doors closed the landing gear indicator lights should be:
   a. Red.
   b. Green.
   c. Red and Green.
   d. No lights.

RADIO.

63. The "Cruise Combat - Private" switch on the Pilots pedestal is used in the "Cruise Combat" position:
   a. For normal operation.
   b. In emergency only.
   c. To seperate the Pilot, Co-Pilot, Radar Navigator, Photo Navigator, Camera Technician, Left Oblique Camera Man, and the Weather Observer from the rest of the crew.
   d. Only at altitudes above 40,000 feet.

64. The manual gain control on the front of the amplifier is left on which position normally:
   a. 4
   b. 1
   c. 3
   d. 2

65. The normal interphone amplifier is located:
   a. Under the navigators table.
   b. Behind the Engineers panel.
   c. Under the Radio Operators table.
   d. In the forward turret Bay.

66. What is the minimum number of tubes on which the Am26/AIC amplifier will operate?
   a. 1
   b. 4
   c. 2
   d. 3

AUTOPILOT QUESTIONS

67. For normal autopilot operation, the switches on the directional stabilizer should be positioned:
   a. Stab.; Servo; and PDI "ON".
   b. Stab.; Servo, and PDI "OFF".
   c. Stab.; and Servo "ON"; PDI "OFF".
   d. Stab., and Servo "OFF"; PDI "ON".

68. The radar operator cannot be given control of the autopilot:
   a. While the autopilot servo units are engaged to the control surfaces.
   b. While his turn control is out of the detent position.
   c. Unless the radar set is operating.
   d. While the bombardier is making a turn from the directional stabilizer.

69. Moving the autopilot Transfer Switch (Type N-2) to the BOMBARDIER position:
   a. Allows the radar operator to control the heading of the airplane.
   b. Renders the pilot's turn control inoperative.
   c. Gives the (visual) bombardier directional control over the airplane.
   d. Gives directional control of the airplane to the photographer.

INSTRUMENT QUESTIONS

70. The Master Thermometer (Pyrometer Potentiometer):
   a. Measures oil temperature, carburetor air temperature, and free air temperature.
   b. Measures oil temperatures, tail pipe temperatures, and constant speed drive temperatures.
   c. Measures wing anti-icing temperatures, cylinder head temperatures, and constant speed drive oil temperatures.
   d. Measures carburetor mixture temperatures, oil temperatures, and hydraulic oil temperatures.

71. Before the Gyrosyn Compass will work as a compass indicator:
   a. Power must be on the airplane and the flight instrument switch "ON".
   b. The "SLAVE-DE-SLAVE" switch must be on, the APQ-24 radar set must be closed.
   c. The autopilot switch must be placed in AUTOMATIC, and the DE-SLAVE switch "OFF".
   d. The co-pilot's circuit breaker must be ON, and the flight instrument switch ON.
   e. The DE-SLAVE switch must be on and the Co-pilots circuit breaker is in the ON position.

72. The operating Voltage for the Gyro Flight Instruments is:
   a. 26 volts, 400 cycles AC, and 28 volts DC.
   b. 115 volts AC, and 26 volts, 400 cycles AC.
   c. 28 volts DC, and 26 volts, 400 cycles AC.
   d. 28 volts DC, and 115 volts, 400 cycles AC.

73. What is the purpose of the AN/APQ-24
   a. Bombing.
   b. Navigation and bombing.
   c. Electronic Countermeasures.
   d. Automatic gunlaying.

74. What is the correct way to zero the steering meter?
   a. Turn into steering meter needle.
   b. Turn away from steering meter needle.
   c. By use of a manual control.
   d. By use of an electronic control.

75. What type of timing light is used in conjunction with the APQ-24?
   a. A-1.
   b. A-4.
   c. C-2.
   d. A-1A.

76. What is the minimum altitude for efficient operation of the gun-laying equipment?
   a. 5000 ft.
   b. 2000 ft.
   c. 20000 ft.
   d. 15000 ft.

ARMAMENT

77. The three salvo switches are located at the:
   a. Bombardiers control panel, Pilots instrument panel, and the Radio Operators panel.
   b. Bombardier's control panel, Co-Pilots instrument panel and in the aft pressurized compartment.
   c. Bombardier's control panel, Pilots instrument panel, and in the aft pressurized compartment.
   d. Bombardier's control panel, Pilots instrument panel, and the Radar Operators panel.

78. After salvo, it is not necessary to turn the salvo switch "OFF" before closing the bomb bay doors because:
   a. The doors close automatically after salvo.
   b. The salvo switch is spring loaded, and the salvo circuit is de-energized automatically after the last bomb drops.
   c. The salvo switch is a "normally open" switch and closing any door control switch to the "Door Close" position will de-energize the salvo circuit and allow the doors to be closed.

79. The cartridge, High Explosive Incendiary, M-47 Flash Bomb must be handled with caution, due to its sensitive fuse. It can be identified by its color code which is:

	BODY	OGIVE	MARKINGS
a.	Red	Yellow	Black
b.	Grey	Blue	White
c.	Black	Black	White
d.	Red	Yellow	White

80. The following are retractable turrets:
a. Nose and Tail.
b. Upper forwards, nose and lower forwards.
c. Upper forwards, lower forwards and upper aft.
d. Upper forwards, upper aft and lower aft.

81. The gun Safety switch is located on the:
a. Junction Box.
b. Control Box.
c. Sight.
d. Right control handle of the sight.

82. Secondary control of the Nose turret is controlled by:
a. The upper right forward sighting station.
b. The upper left forward sighting station.
c. The lower right forward sighting station.
d. No secondary control.

JET ENGINES:

83. Over heat inspections are required when the tail pipe temperature exceeds:
a. 870 degrees for three starts or 980 degrees for two starts.
b. 820 degrees for five starts or 870 degrees for one start.
c. 870 degrees for five starts or 980 degrees for one start.
d. 690 degrees for five starts or 870 degrees for one start.

84. In starting jet engines on the ground, release the starter when the tachometer reads:
a. Six to seven percent.
b. None to eleven percent.
c. Twenty percent.
d. Thirty percent.

85. When starting the jet engines at altitude, the throttles are not opened until the tachometer is reading:
a. Five to seven percent.
b. Ten to seventeen percent.
c. Twenty to twenty-five percent.
d. Twenty to thirty-five percent.

86. When starting jet engines, if the tail pipe temperature exceeds 980 degrees C:
   a. Record on Form 1A, and let the engine cool before attempting another start.
   b. Record on Form 1A. An overheat inspection is required before operating the engine again.
   c. Report a hot start to the crew chief after the mission is completed.
   d. Complete the start and operate the engine not to exceed 96% at 655 degrees C.

87. If jet engines exceed 104% the engine requires:
   a. Overhaul.
   b. Overspeed inspection.
   c. Overheat inspection.
   d. A check of fuel control valve and fuel regulator.

88. How long can you use 100% RPM continuous operation?
   a. 10 min.
   b. 20 min.
   c. 30 min.
   d. 60 min.

89. Ignition occurs when the ignition switch is in the normal position:
   a. The starter is engaged and the engine comes up to 5%.
   b. The throttle is closed and the starter engaged.
   c. The throttle is open and the starter engaged.
   d. The throttle is open and the starter is off.

90. In starting, the throttle is open when:
   a. The engine is turning over 9 to 11%.
   b. The engine is turning over 20 to 25%.
   c. The engine is turning over 5%.
   d. The starter is engaged.

91. The maximum tail pipe temperature at 96% continuous is:
   a. 690 degrees C.
   b. 720 degrees C.
   c. 655 degrees C.
   d. 870 degrees C.

92. If the tail pipe temperature fails to move between 9-11%:
   a. Close throttle and continue using starter.
   b. Release starter and close throttle until engine is stepped; then try starting again.
   c. Release starter and close throttle allowing engine to set three minutes before attempting another start.
   d. Switch ignition to altitude position and continue starting procedure.

93. The instruments for the jet engines on the RB-36 are:
a. Bearing temp., TP temp., fuel pressure and oil pressure.
b. TP temp., Fuel flow meter, fuel pressure, and oil pressure.
c. Fuel pressure, Fuel flow meter, TP temp., and tachometer.
d. Oil pressure, tachometer, fuel pressure, and TP temp.

94. When starting jet engines, fuel pressure should not exceed:
a. 20 lbs.
b. 40 lbs.
c. 60 lbs.
d. 50 lbs.

CRUISE CONTROL

95. Predicted airspeeds quoted in the RB-36 Handbook are based on CAT's, CHT'S in normal setting, and CHT'S in manual lean, respectively:
a. 37.8 degrees C., 250 degrees C., and 232 degrees C.
b. 58.7 degrees C., 232 degrees C., and 250 degrees C.
c. 37.8 degrees C., 232 degrees C., and 250 degrees C.
d. 28.7 degrees C., 215 degrees C., and 190 degrees C.

96. Overcool, i.e. excess intercooler shutter and exit air plug opening, have an appreciable affect on:
a. Cabin heating.
b. Airplane speed.
c. Wing and tail anti-icing.
d. Propeller anti-icing.

97. Which of the four losses do not account for the difference between the brake horsepower developed by the reciprocating engines and the net amount of useful thrust horsepower available for flying the airplane:
a. Propeller inefficiency.
b. Cooling air losses. (CAT, CHT, Oil temp.).
c. Power to drive engine cooling fan.
d. Internal friction.

98. The design gross weight of the RB-36 type aircraft is approximately:
a. 326,000 lbs.
b. 375,300 lbs.
c. 357,500 lbs.
d. 378,000 lbs.

99. The maximum indicated air speed for extending the landing gear and landing lights is:
a. 160 MPH.
b. 150 MPH.
c. 177 MPH.
d. 188 MPH.

100. What two (2) purposes does the liquidometers in the fuel tank serve?
a. give fuel quantity
b. Cut off refueling when tank full to air space