

Metro Recurrent test (135)

1. What are the three functions of the SRL computer?

- ENGINE SPEED SWITCHING
- AUTO FUEL ENRICHMENT
- SINGLE RED LINE COMPUTATION

2. What are the speed switching functions of the autostart (SRL) computer?

- AUTOMATIC CONTROL START SEQUENCE FROM 10% TO 60% RPM
- ~~EGT~~ EGT COMPUTATION ABOVE 80% RPM
- CAN1 OPERATION AND EGT TEMP LIMITING ABOVE 90% RPM

3. When does the SRL computer open the bypass valve?

650°C

4. When is the fuel solenoid valve opened during engine start?

@ 10%

5. What is an indication that the start fuel enrichment valve is priming during start?

EGT BUMP

6. When does the temp limiter become active?

ABOVE 90%

7. What should be the maximum normal indicated EGT during an autostart?

690°C

8. How can the fuel solenoid valve be closed?

- ELECTRICALLY — STOP SWITCH
- MANUALLY — STOP & FEATHER KNOB

9. What is the engine starter duty time limitation?

30 — 60
30 — 60
30 — 15

10. When would the fuel shutoff valve need to be closed? Where is the valve and the switch that controls it?

ENGINE FIRE VALVE IS ON THE FIREWALL AND SWITCH IS LOCATED ON
ENGINE FAILURE CENTER PISTON
OR CKLST DRIVES 400 TO 500

11. What is the purpose of the start locks?

REDUCES DRAG AND DURING START

12. What keeps the NTS system from activating during landing?

NTS LOCKOUT VALVE

13. With the speed levers in LOW and the power levers in ground idle, RPM should be between 70 % and 72 %.

14. When is the start test switch used?

RESUME HEAT START

15. What is the maximum fuel imbalance during refueling?

125 GALL

16. If a L/R XFER light illuminates with 600/700lbs of fuel remaining, what action should the pilot take?

SWITCH AUX BOOST PUMP

17. The L/R FUEL lights are DISAGREEMENT LIGHTS lights. Where are they? ON INSTRUMENT PANEL

18. How is the outflow valve closed? Opened?

SPRING PRESSURE CLOSED AND VACUUM CLOSED

19. What is the purpose of the pneumatic relay?

SPEED UP COMMANDS FROM PRESSURE CONTROLLER

20. If the pressurization system loses vacuum, the OUTFLOW VALVE will

CLOSE.

21. When will the dump valve open?

DUMP SWITCH

7.31 PSI

RIGHT MAIN GEAR SWITCH

22. Where is the CABIN PRESSURE SELECTOR? (auto/manual control)

PILOT LEFT CONSOLE

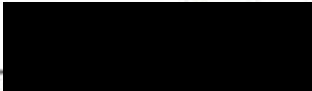
23. Moving the CABIN PRESSURE MANUAL CONTROL to DECREASE does what?

CABIN INCREASES DIFFERENTIAL DECREASE

24. At what cabin altitude will the CABIN ALTITUDE annunciator light illuminate?

10,000 FT

Name: LANCE MCCAN

Signature: 

Date: 10-10-2015

Metro Recurrent test (135)

1. What are the three functions of the SRL computer?

- CONTROLS ENGINE SPEED SWITCHING
- CONTROLS AUTOMATIC START ENRICHMENT FROM 10% - 60%
- CONTROLS SRL EGT COMPUTATION ABOVE 80% RPM

✓ 2. What are the speed switching functions of the autostart (SRL) computer?

- AUTOMATIC CONTROL OF THE START SEQUENCE FROM 10% - 60% RPM
- SRL EGT COMPUTATION ABOVE 80%
- ?

3. When does the SRL computer open the bypass valve?

- WHEN THE SRL SWITCH IS IN NORMAL AND RPM IS ABOVE 90%

4. When is the fuel solenoid valve opened during engine start?

- AT 10% RPM

5. What is an indication that the start fuel enrichment valve is priming during start?

- WHEN YOU SEE EGT OSCILLATION AS FUEL IS MODULATED TO MAINTAIN 690°

6. When does the temp limiter become active?

- THE TEMP LIMITER BECOMES ACTIVE @ 90% RPM AND SRL SWITCH IS IN NORM

7. What should be the maximum normal indicated EGT during an autostart?

- 770°

8. How can the fuel solenoid valve be closed?

- BY PULLING THE STOP AND FEATHER KNOB OUT HALF WAY AND DEPRESSING THE STOP BUTTON

9. What is the engine starter duty time limitation?

START ATTEMPT	STARTER ON TIME	STARTER OFF TIME
1	30 SEC	60 SEC
2	30 SEC	60 SEC
3	30 SEC	15 MIN

10. When would the fuel shutoff valve need to be closed? Where is the valve and the switch that controls it?

- FUEL SHUTOFF IS LOCATED ON THE CENTER THROTTLE QUADRANT
- ON THE ENGINE CLEAN UP CHECKLIST FOR ENGINE SHUT DOWN

11. What is the purpose of the start locks?

- TO MAINTAIN MINIMUM BLADE ANGLE TO REDUCE PROPELLER DRAG DURING ENGINE START

12. What keeps the NTS system from activating during landing?

- NTS LOCKOUT : PREVENTS NTS ACTIVATION WHEN POWER LEVER IS BELOW THE IDLE POSITION

13. With the speed levers in LOW and the power levers in ground idle, RPM should be between 71 % and 79 %.

14. When is the start test switch used?

- FOR RESIDUAL HEAT STARTS

15. What is the maximum fuel imbalance during refueling?

- 125 GAL

16. If a L/R XFER light illuminates with 600/700lbs of fuel remaining, what action should the pilot take?

- TURN ON BOOST PUMPS

17. The L/R FUEL lights are Disagreement AMBER CAUTION lights. Where are they?

- MAIN ANNUNCIATOR PANEL

18. How is the outflow valve closed? Opened?

- THE OUTFLOW VALVE IS OPENED BY VACUUM
CLOSED BY SPRING FORCE

19. What is the purpose of the pneumatic relay?

— THE PNEUMATIC RELAY IS USED TO SPEED UP THE REACTION TIME OF THE OUTFLOW VALVE TO COMMANDS PROVIDED BY THE PRESSURIZATION CONTROL SYSTEM

20. If the pressurization system loses vacuum, the OUTFLOW VALVE will ~~close~~ OPEN.

21. When will the dump valve open?

— ON THE GROUND WHEN DUMP VALVE SWITCH IS IN "NORMAL"
— IN THE AIR BY PLACING CABIN PRESSURE SWITCH IN "DUMP" POSITION

22. Where is the CABIN PRESSURE SELECTOR? (auto/manual control)

— LEFT CONSOL JUST FORWARD OF LEFT ESSENTIAL BUS PANEL

23. Moving the CABIN PRESSURE MANUAL CONTROL to DECREASE does what?

— OPENS THE OUTFLOW VALVE DECREASES DIFFERENTIAL PRESSURE AND INCREASES CABIN PRESS ALTITUDE

24. At what cabin altitude will the CABIN ALTITUDE annunciator light illuminate?

10,000 FT

Name: LANCE McEAM

Signature: 

Date: 11-20-2014

91% converted to 100%

Dan Clark

Key Lime Air ¹
Metro Systems Final Exam

Name LANCE MCCAW

1. What is the SA 227-DC maximum takeoff weight?
A. 13,130 lbs
B. 14,500 lbs
☒ C. 16,500 lbs
2. At what temperature will the SRL computer bypass fuel?
A. 770° C
☒ B. 650° C
C. 690° C

3. What are the 5 indications that the SRL computer is inoperative?

1. SRL INDICATION LIGHT ON ABOVE 80% BELOW 80% LIGHT OFF
2. 20% FUELION INLET SWITCH NOT TURNED

80 80 20 ERATIC STUPID

4. What is the SA 227-DC maximum landing weight?
☒ A. 15,675 lbs
B. 16,000 lbs
C. 16,500 lbs
5. What is V_{le} on the SA 227-DC?
A. 180 KIAS
☒ B. 175 KIAS
C. 215 KIAS
6. What is the average fuel burn on the SA 227?
A. 400 pounds per hour
☒ B. 600 pounds per hour
C. 600 gallons per hour
7. What is the maximum torque from a SA227-DC
A. 3100 ft lbs
☒ B. 1100 HP
C. 3301 ft lbs

Key Lime Air ²
Metro Systems Final Exam

8. Can the SA 227-DC maintain hydraulic pressurization with only one engine operating? Yes or No
9. What are the 3 functions of the SRL computer?
- CONTROLS ENGINE SPEED SWITCHING
- CONTROLS AUTOMATIC START ENRICHMENT
- CONTROLS SRL EGT COMPUTATION
10. What are the speed switch functions of the SRL computer?
- AUTOMATIC CONTROL OF THE START SEQUENCE FROM 10% - 60% RPM
- SRL EGT COMPUTATION ABOVE 80%
11. What is the purpose of the start locks?
- TO MAINTAIN MINIMUM BLADE ANGLE TO REDUCE PROPELLER DRAG DURING ENGINE START.
12. Name the items in the junction box.
- BATTERY BUSS
- NON-ESSENTIAL BUSS CIRCUIT BREAKER (150 AMP)
- RH ESSENTIAL BUSS (225 AMP)
- LH GENERATOR (325 AMP)
- LH ESSENTIAL BUSS (225 AMP)
- RH GENERATOR (325 AMP)
13. What does the XFER PUMP light indicate?
A. There is less than 75 lbs of fuel in the hopper tank.
B. The aircraft is out of fuel.
C. There is 600-700 pounds of fuel in tank.
14. What is the maximum normal operating temperature?
A. 770° C
B. 650° C
C. 690° C
15. What type of oil does the SA 227 use?
A. Mineral Oil
B. BP 2380
C. Mil Spec 83282
16. What type of hydraulic fluid does the SA-227 use?
A. Mineral Oil
B. BP 2380
C. Mil Spec 83282

17. What is the zero fuel weight for the SA 227-BC?
☒ A. 14,000 lbs
B. 13,130 lbs
C. 13,900 lbs
18. What is the zero fuel weight for the SA 227-AC (light McCauley props)?
A. 14,000 lbs
B. 13,130 lbs
☒ C. 13,900 lbs
19. The Negative Torque Sensing system
A. is an Auto Feather System
B. decreases blade angle
☒ C. decreases propeller drag
20. A residual heat start is required above
☒ A. 200°
B. 300°
C. 100°
21. Following an aborted start, the engine should be cleared prior to attempting another start. Clearing an engine means cranking without fuel and ignition but holding the START TEST switch to the appropriate L or R position for
A. fifteen seconds or 10% rpm whichever occurs first.
B. twenty seconds or 15% rpm whichever occurs first.
☒ C. ten seconds or 15% rpm whichever occurs first.
22. The air accumulator is fully charged by
☒ A. engine bleed air when engine rpm increases to approximately 96%.
B. engine bleed air when engine rpm increases to approximately 80%.
C. engine bleed air when engine rpm increases to approximately 90%.
23. A Flashing Wing Overheat Light is an indication of
A. the temperature is exceeding 350°F in the wheel well.
B. the temperature is exceeding 450° in the air-conditioning duct.
☒ C. the temperature exceeding 250°F in the wing leading edge.

24. A Battery Fault light will always be accompanied by
☒ A. both the L and R Bat Disc annunciators.
B. a complete electrical failure.
C. both generator relays opening.
25. A Hydraulic Pressure light indicates
A. A total hydraulic failure
☒ B. one hydraulic pump output is below 1700 PSI.
C. the hydraulic system has failed.
26. A XFER PUMP light signifies that
A. the transfer pump is inoperative.
☒ B. Fuel level in hopper tank is low.
C. the transfer pump needs to be turned on.
27. A L/R Generator Fail light indicates
☒ A. the generator relay is open.
B. the associated generator failed.
C. the generator circuit breaker has opened.
28. A flashing NWS FAIL indicates
☒ A. a fault has been detected, and the nose steering has disconnected.
B. the nose wheel steering has been turned off.
C. Use of the nose wheel steering system is unsafe.
29. A green NWS light indicates
☒ A. nosewheel steering system is armed and engaged.
B. the nose wheel steering has been turned off.
C. Use of the nose wheel steering system is unsafe.
30. A BYPASS OPEN light indicates
A. the engine is over the recommended maximum temperature.
B. the oil system is being bypassed.
☒ C. the associated engine fuel bypass valve is open.

Key Lime Air ⁵
Metro Systems Final Exam

31. Which aircraft has an ITT gauge?
A. Metro III AC
B. Metro 23
☒ C. Metro
32. Which aircraft has a service ceiling of 31,000'?
☒ A. Metro III AC
B. Metro 23
C. Metro II
33. Which aircraft has counter clockwise rotating propellers?
☒ A. Metro III
B. Metro
C. Metro II
☒ D. NONE OF THE ABOVE
34. Which aircraft has a tiller wheel for taxiing?
A. Metro III
☒ B. Metro
C. Metro II

Name: LANCE MCCLAW

Signature: 

Date: 11-15-2013

86% corrected to 100%
Dan Clark

Key Lime Air | ¹
135 Indoc Final Exam

Name LANCE MCCAUN

1. A PIC must have at least _____ hours in type of aircraft to not be considered a High Mins captain.
A. 75 hours
☒ B. 100 hours
C. 50 hours
2. What must be added to approach minimums if the captain has High Mins?
☒ A. 100 feet to the DH/DA or MDA and ½ mile to the visibility.
B. 200 feet to the DH/DA or MDA and 1 mile to the visibility.
C. 300 feet to the DH/DA or MDA and 1 mile to the visibility.
3. Where is the VDP on the LDA/DME RWY 29 at Grand Junction Airport (GJT)?
A. 2.0 DME from I-ACD
☒ B. 1.8 DME from I-ACD
C. 1.8 DME from JNC
4. What is the maximum amount of hours a Key Lime Air pilot may fly in a calendar year?
A. 900 hours
☒ B. 1200 hours
C. 1000 hours
5. What is the maximum amount of hours a Key Lime Air pilot may fly in a calendar month?
A. 80 hours
B. 100 hours
☒ C. 120 hours
6. What is the maximum amount of hours a Key Lime Air pilot may fly in 7 consecutive days?
☒ A. 34 hours
B. 40 hours
C. 50 hours

Key Lime Air | ²
135 Indoc Final Exam

7. What is the normal rest required for a Key Lime Air pilot if they fly less than 8 hours?
☒ A. 9 hours
☐ B. 8 hours
C. 7 hours
8. What is the least (reduced) amount of rest that a Key Lime Air pilot may be scheduled if they fly less than 8 hours?
☒ A. 9 hours
☐ B. 8 hours
C. 7 hours
9. Jumpseat passengers do not need to be searched or pat down since they have a background check.
True
☒ False
10. How many times per day are TAF's issued and at what time to they come out?
A. Six times daily at 0000, 0400, 0800, 1200, 1600, and 2000 UTC
B. Four times daily at 0200, 0600, 1400, and 1800 UTC
☒ C. Four times daily at 0000, 0600, 1200, and 1800 UTC
11. What is the aircraft type on KLA Part 121 certificate?
A. Dornier 328 Jet
B. Navajo
☒ C. SA 227- DC
12. Key Lime Air Operation Specifications allow for Takeoffs down to what minimum visibility?
☒ A. 1800 RVR
B. 1200 RVR
C. 1 statute mile
13. Key Lime Air pilots are to avoid convective activity (CB) by _____ miles?
☒ A. 20
☐ B. 10
C. 5

Key Lime Air ³
135 Indoc Final Exam

14. Key Lime Air is allowed to operate under VFR in class G airspace.
☒ True
☐ False
15. Oxygen is required on
A. All flights above 14,500 feet
B. All flights filed about 10,000 feet
☒ C. For crew members while at cabin altitudes above 12,000 feet
16. How many gallons of fuel does the Navajo hold? (other than 9993R)
☒ A. 192 gallons
B. 182 gallons
C. 150 gallons
17. Convert 30° C to Fahrenheit 86° F.
18. Which Category of Approach Minimums are used for the Navajo?
☒ A. Category C
B. Category B
C. Category D
OK. That is what the Metro uses
19. Key Lime Air is not allowed to operate under IFR in class G airspace.
☐ True
☒ False
20. Define a Stabilized Approach.
A. Airplane is within 2 degrees, proper landing configuration, speed plus 10 knots minus 0.
☒ B. Airplane is on the correct track, proper landing configuration, speed within acceptable range, and no greater than 1000 FPM.
C. From FAF aircraft will remain on course, gear down, and flaps in landing configuration.

Key Lime Air | 5
135 Indoc Final Exam

27. Explain how to derive weather minimums for an alternate airport.

FIRST LOOK FOR A IN THE APPROACH BOOK

① PROVIDING A STRAIGHT-IN OR CIRCLING
PRECISION OR NON-PRECISION APPROACH

ADD:

400 FT TO THE HAT OR HAA WHEN APPLICABLE
1 SM TO CAT I LANDING MINIMUMS

② PROCEDURE
NAVIGATION FACILITIES THAT HAVE TWO DIFFERENT
IDENTIFIERS EACH PROVIDING A STRAIGHT-IN OR
CIRCLING PRECISION OR NON-PRECISION APPROACH
TO DIFFERENT RUNWAYS CAN BE DIFFERENT END
OF RUNWAY SAME SLAB OF CONCRETE

ADD:

200 FT TO THE HIGHEST
CAT I HAT/HAA MINIMUMS OF THE
2 APPROACHES

ADD:

1/2 SM TO THE HIGHEST CAT I
LANDING MINIMUMS OF THE
TWO APPROACHES

28. Key Lime Air is allowed to carry Hazardous material on cargo flights.

True

False

Name:

LANKE MCCAW

Signature:

[REDACTED]

Date:

11-15-2013

Lance McCaw

98%

Metro Systems Exam
Year Three Recurrent

1. Name the components for which ice and rain protection are provided.

- PITD HEAT - DUCT HEAT
- WINDSHIELD - SAS HEAT
- PROP HEAT
- BOOTS

2. Why would the "PROP & DUCT HEAT" position ever be used?

- ON GROUND

3. What is the limitation for the use of engine intake heat on the ground?

10 SEC 5 DEG

4. How is the oil cooler duct heated on the SA227? SA226?

226 SCVENING OIL / 227 ELECTRIC

5. Explain the use of the "ENG INTAKE HEAT" test switches.

IF LIGHT COMES ON VALVE IS CLOSED

6. Are the props heated continuously?

OPPOSING PROPS HEAT TOGETHER FOR 34 SEC

7. How do you know if the prop heat is working properly?

CHECK TRIM METER 1m 8 SEC

8. What is the procedure for turning on the intake heat during an "inadvertent" icing encounter?

IGNITION TO CONTINUOUS, AND INTAKE HEAT ONE AT A TIME

9. When must continuous ignition be used when operating in icing conditions?

GO TO CONTINUOUS BEFORE TURNING ON DUCT/PROP HEAT

10. What is the ignition duty-time limitation for the SA226?

1 - ON 1 - OFF 2 - ON - 23 OFF
2 - ON 2 - OFF 5 - ON - 55 OFF

11. What is your opinion of "ice bridging"?

I THINK IT HAPPENS

12. Under what conditions would you most be likely to encounter clear ice? Rime ice?

CLEAR ICE: IN CUMULUS OR OFF TO THE SIDE

RIME ICE: WITH STRATUS TYPE FREEZING RAIN

13. The deice pressure gauge also functions as what?

18 PSI GAUGE

14. Which ice protection components are "Essential Bus Transfer" items?

- PROP/DUCT
- DEICE BOOTS
- WING/HEAD HEAT

15. What is the bleed air source for the window defog system?

DOOR SEAL

16. What is normal hydraulic system pressure?

2000

17. What is the "hydraulic power pack" and where is located?

- COMPONENTS, SHUTTER VALVES RESIDUE
- LEFT ENGINE NACELLE

18. How is fluid drawn from the hydraulic reservoir?

THROUGH THE STRAW PIPES

19. What is the significance of a "R HYDR PRESS" annunciator light? What will the hydraulic pressure gauge read with this condition? 1700 PSI LIGHT COMES ON

PUMP OUTPUT PRESSURE IS LOW

READ NORMAL BECAUSE IT PULLS FROM OTHER SIDE.

20. If hydraulic pressure is lost on one side, what will the effect be on the subsystems?
STILL WORK AT A REDUCED RATE
21. Where are the valve and annunciator light that corresponds to the "HYD SHUT OFF" switch?
THROTTLE QUADRANT / VALVES ARE AT FIREWALL
22. What type of hydraulic fluid is used on KLA aircraft? Why?
BRACO 83282 ~~LOW~~ HIGHER FLASH POINT
23. What is the minimum indicated fluid level for normal operation?
BOTTOM FULL AND EUM SHOWING ON TOP
24. If all system pressure is lost, flap retraction is still possible due to system bypass of the flap logic box. True or false?
false
25. Under what circumstance(s) would the hydraulic shutoff valve need to be closed?
- FIRE
- ENGINE SHUTDOWN / CLEAN UP
26. The emergency gear extension system draws fluid through the standpipes. True or false?
false
27. If left essential bus power is lost, how can gear operation be restored?
ESSENCIAL BUS TRANSFER SWITCH
28. The gear handle will not move to the up position after takeoff. How can the gear be retracted?
LEVER LOCK OVERRIDE SWITCH
29. What does the emergency gear release lever do?
- REPOSITION THE BYPASS VALVES
- RELEASES UP LOCKS
30. What does a flashing green "NOSE STEERING" annunciator light mean?
NOSE WHEEL STEERING IS DISCONNECTED
31. What precautions should be taken if the amber "NOSE STEER FAIL" light illuminates?
UNCOMMANDED STEERING
32. What are Vle and Vlo for the SA227AC with Dowty props? SA227BC
173/176

33. What is the main wheel tire ground speed limit? 165

34. What is the significance of a main gear door warning light?

GEAR DOOR NOT CLOSED ON GROUND

35. When will the gear warning horn sound?

FLIGHT IDLE WITH GEAR UP
FAPS MORE THAN $\frac{1}{2}$

36. What is the purpose of the brake shuttle valve?

- FIRST COME FIRST SERVE
- OTHER PILOT CAN'T OUSPIDE

37. Why is the trim switch on the control wheel a split rocker type?

ONE SIDE IS POWER OTHER SIDE IS GROUND
SO IF SHORT IN SYSTEM WON'T GET THEM

38. When will the trim warning horn sound?

BOTH POWER LEVERS ADVANCED AND OUT OF GREEN BAND

39. When will the stick pusher activate?

JUST BEFORE THE STALL

40. What will be shown on the SAS indicator at the onset of a stall?

ON THE BORDER OF STALL / RED

41. What is the meaning of a steady SAS FAULT light? Flashing?

STEADY: - VANE IS UP ON GROUND
- COMPUTER FAILED ON DECENT

FLASHING: NO POWER TO SERVO

42. How does the SAS receive airspeed information?

COPLOT SIDE AIRSPEED

43. What indication should you see during the SAS "cruise" test?

SHOULD SEE INDICATOR GO FROM 1.3 TO 1.2

44. The SAS indicator may also be used as an approach angle-of-attack indicator. True or false?

45. What are the two types of SAS vanes?

ROSMOUNT / CONRACIL

46. Which aircraft components use a static pressure reference?

- FLIGHT INSTRUMENTS
- PRESSURIZATION PRESSURIZER CONTROLS, ~~AND~~ SAFETY RELIEF FOR OUTFLOW VALVE AND DUMP VALVE
- ALT STATIC
- STATIC PORT FOR DOOR HANDLE

47. The alternate static source supplies static pressure to both pilot and copilot instruments. True or false?

48. Where is the alternate static source located?

NOSE BAGAGE

49. What is an operational consideration when using the alternate static system?

- LOWER THAN STANDARD READINGS

50. Where would you find altitude and airspeed correction values for using the alternate static system?

CHAPTER 4-3 IN AFM

10-24-08

SECTION 21: AIR CONDITIONING / PRESSURIZATION

1. What causes the dump valve to open?

- A. An excessive cabin pressure.
- B. An excessive cabin altitude.
- C. A negative cabin pressure.
- ☒ D. A squat switch when on the ground.

2. What happens when the cabin pressurization is in the normal position?

- A. Outflow valve opens on the ground.
- B. Outflow valve closes on the ground.
- C. Dump valve closes when the aircraft is on the ground.
- ☒ D. Dump valve opens when the aircraft is on the ground.

3. Where can you find the dump valve?

- ☒ A. Forward bulkhead.
- B. Aft bulkhead.
- C. Entry door.
- D. Cargo door.

4. The cabin pressure controller controls the _____.

- ☒ A. Outflow valve.
- B. Needle valve.
- C. Outflow valve and pressure relief valves.
- D. Needle valve and pressure relief valves.

5. An illuminated cabin altitude light indicates that the cabin altitude is in excess of _____ feet.

- A. 10,000
- ☒ B. 11,000
- * C. 12,000
- D. 13,000

6. The aft bulkhead relief valve relieves pressure at _____ PSI.

- A. 6.75
- B. 7.0
- ☒ C. 7.25
- * D. 7.5

7. What is the purpose of the pneumatic relay?

- A. There is no such mechanism.
- B. Transfers vacuum source for the outflow valve.
- * C. To provide for a backup mode.
- ☒ D. To improve reaction time.

8. What controls the outflow valve?

- ☒ A. A vacuum.
- B. Electric actuator.
- ☐ C. A hydraulic actuator.
- D. A mechanical actuator.

9. What happens in the event there is a loss of vacuum to the pressurization system?

- A. The system automatically reverts to the manual backup mode.
- B. The outflow valve remains in its last position.
- C. The outflow valve opens.
- ☒ D. The outflow valve closes.

10. Where can you find the outflow valve?

- ☒ A. Aft bulkhead.
- B. Forward bulkhead.
- C. Passenger door.
- D. Cargo door.

11. What causes the outflow valve to close?

- A. Hydraulic mechanism.
- B. Electrically.
- C. Pneumatically.
- ☒ D. Spring force.

☐ 12. How is the dump valve operated?

- ☒ A. By vacuum.
- B. By an ejector pump.
- C. By a suction fan.
- D. Electrically.

13. What should you do in the event of a non essential bus failure?

- ☒ A. Close bleeds.
- B. Open bleeds.
- C. Increase cabin pressurization.
- D. None of the above.

14. The forward bulkhead relief valve relieves pressure at _____ PSI.

- ☒ A. 7.31
- B. 6.31
- C. 7.25
- D. 6.25

SECTION 26: FIRE PROTECTION

☐ 15. What temperature is indicative of a wing leading edge overheat condition?

- ☒ A. 250 degrees F.
- B. 350 degrees F.

- C. 450 degrees F.
- D. 600 degrees F.

16. What temperature is indicative of a bleed air line overheat condition?

- A. 250 degrees F.
- ☒ B. 350 degrees F.
- C. 450 degrees F.
- D. 600 degrees F.

17. What is the significance of a flashing L/R WING OVHT light?

- ☒ A. There is a leading edge overheat condition, set off by the 250 degrees F thermal switch.
- B. There is a leading edge overheat condition, set off by the 350 degrees F thermal switch.
- C. There is a wheel well overheat condition, set off by the 250 degrees F thermal switch.
- D. There is a wheel well overheat condition, set off by the 350 degrees F thermal switch.

18. Where can you check the pressure status of the halon bottle?

- A. The "E" light illuminates to indicate the bottle is empty.
- B. There is a red disk on the right side of each engine nacelle. Its absence indicates a loss of pressure.
- C. You must physically check the integrity of the squib.
- ☒ D. There is a pressure gauge on the right side of the nacelle.

19. What is the significance of an illuminated L/R ENG FIRE light?

- ☒ A. Engine overheat is detected (350 degrees F sensor).
- B. Engine overheat is detected (600 degrees F sensor).
- ☒ C. Engine nacelle fire detected (450 degrees F/600 degrees F thermal switch).
- D. None of the above.

20. What is the significance of a STEADY L/R WING OVHT light?

- ☒ A. There is a wheel well overheat. This is actuated by the 350 degree F thermal switch.
- ☒ B. There is a wheel well overheat. This is actuated by the 350/450 degree F thermal switches.
- C. There is a leading edge overheat. This is actuated by the 350 degrees F sensor.
- D. There is a leading edge overheat. This is actuated by the 250 degrees F sensor.

21. How many fire bottles are available for fighting an engine fire?

- ☒ A. One halon bottle in each nacelle.
- B. One halon bottle for both engines in the left wheel well.
- C. Two halon bottles. They are located in the respective wheel well.
- D. None of the above.

SECTION 35: OXYGEN

22. The oxygen system includes two separate bottles: one for the pilots, one for the cabin.

- A. True.
- ☒ B. False.

23. Will the passengers receive oxygen in the event the manual shutoff & regulator valve is closed?

- ☐ A. Yes.
☒ B. No.

24. Where can you find the passenger oxygen mask?

- A. It drops out of the ceiling.
B. It is passed out by the flight attendant.
☒ C. It is stowed in the seat pockets.
D. It is stowed in a door in the side wall.

25. Are the passenger masks hooked into the system when stowed?

- A. Yes.
☒ B. No.

SECTION 36: PNEUMATICS

26. Placing the bleed air (L or R) to open removes power from the bleed air valve.

- ☒ A. True.
B. False.

☐ 27. Are the bleed air valves spring loaded opened?

- A. Yes.
☒ B. No.

28. The bleed air valves are electrically closed when the engine is running.

- ☒ A. True.
B. False.

29. What does the suction indicator monitor?

- ☒ A. The vacuum system.
B. The de-ice boots deflation line.
C. The pressure within the standby attitude gyro.
D. None of the above.

30. When does the vacuum system operate?

- A. Anytime electrical power is applied to the aircraft.
☒ B. Anytime an engine is running.
C. Anytime both engines are running.
D. Anytime an engine is running and the aircraft is in flight.

☐ 31. What is the temperature of the bleed air extracted from the engine (P3)?

- A. 400 degrees F.
B. 500 degrees F.

- ☒ C. 600 degrees F.
- D. 700 degrees F.

32. What is the pressure of the bleed air extracted from the engine?

- A. 80 PSI.
- B. 100 PSI.
- ☒ C. 120 PSI.
- D. 140 PSI.

33. What systems use unregulated bleed air?

- A. Engine/nacelle anti-icing.
- B. Start fuel scheduling.
- C. EPA kit.
- ☒ D. All of the above.

SECTION 73: PROPELLER

34. What is the purpose of the start locks?

- A. Maintains maximum blade angle to minimize drag in flight.
- B. Maintains maximum blade angle to minimize drag during start.
- ☒ C. Maintains minimum blade angle to minimize drag during start.
- D. None of the above.

35. What is the blade angle for the Dowty Rotol type propeller when feathered?

- ☒ A. 84.5
- B. 86.5
- C. 88.5
- D. 90.0

36. Once engaged, how are the start locks held in place?

- ☒ A. By shear force.
- B. By centrifical force.
- C. By oil pressure.
- D. By a spring.

37. Which of the following is true concerning the Beta tube?

- A. It transfers oil from the Propeller Pitch Control to servos.
- B. It controls the propeller pitch in the beta mode with the propeller pitch controller.
- ☒ C. A and B.
- D. None of the above.

38. What does the syncrophasing unit do?

- A. It matches the phase of the propellers.
- B. It matches the speed of the propellers.
- ☒ C. A and B above.
- D. None of the above.

39. What is the blade angle for the McCauley type propeller at full reverse?

- A. -3.0
- B. -4.0
- ☒ C. -5.0
- D. -6.0

40. What is the blade angle for the Dowty Rotol type propeller at start locks?

- A. 0.0
- ☒ B. -0.5
- C. 0.5
- D. 1.0

41. What is the blade angle for the Dowty Rotol type propeller at flight idle?

- A. 4.0
- B. 5.0
- C. 6.0
- ☒ D. 7.0

42. Where does the syncrophasing system receive its input from?

- ☒ A. Tach generators.
- B. Engine temperature.
- ☐ C. Engine vibration.
- D. Oil pressure.

SECTION 74: POWER CONTROL

43. What are the power levers connected to?

- A. Prop governor and underspeed governor.
- ☒ B. Prop pitch control and manual fuel valve.
- C. Prop governor and manual fuel valve.
- D. Prop pitch control and underspeed governor.

44. What are the various positions of the speed levers?

- ☒ A. RPM HIGH, RPM LOW.
- B. HIGH, FLT IDLE, GROUND IDLE.
- C. RPM HIGH, FLT IDLE, GROUND IDLE.
- D. RPM HIGH, FLT IDLE, GROUND IDLE, RPM LOW.

45. In the Beta mode, what does the power lever control?

- ☒ A. Fuel.
- B. Blade angle.

46. Which of the following is the prop governing mode?

- A. Power lever aft of flight idle.
- ☒ B. Power lever forward of flight idle.
- C. None of the above.

47. What are the various positions of the power levers?

- A. FLT IDLE, GROUND IDLE, REVERSE, HIGH.
- B. HIGH, FLT IDLE, GROUND IDLE, REVERSE.
- C. HIGH, FLT IDLE, GROUND IDLE, REVERSE, LOW.
- ☒ D. HIGH, FLT IDLE, GROUND IDLE, REVERSE, HIGH.

48. When are you in the beta mode?

- A. When the power lever is forward of flight idle.
- ☒ B. When the power lever is aft of flight idle.
- C. None of the above.

49. In the prop governing mode, what does the speed lever control?

- A. Fuel.
- ☒ B. Blade angle.

50. What are the speed levers connected to?

- A. Prop pitch control and manual fuel valve.
- B. Prop pitch control and Prop governor.
- ☒ C. Manual fuel valve, Prop governor and underspeed governor.
- D. Prop governor and underspeed governor.