TEMA: 0622 ATP-RTC - Performance - Chap.4

COD_PREG: **PREGUNTA:** **RPTA:**

8344 How can turbulent air cause an increase in stalling speed of an airfoil? A

OPCION A: An abrupt change in relative wind
OPCION B: A decrease in angle of attack
OPCION C: Sudden decrease in load factor

8407 Which type of rotor system is more susceptible to ground resonance? A

OPCION A: Fully articulated rotor system.
OPCION B: Semi-rigid rotor system.
OPCION C: Rigid rotor system.

8414 What type frequency vibration is associated with a defective transmission? C

OPCION A: Low frequency.
OPCION B: Medium frequency.
OPCION C: High frequency.

8415 What type frequency vibration is associated with the main rotor system? A

OPCION A: Low frequency.
OPCION B: Medium frequency.
OPCION C: High frequency.

8416 What type frequency vibration is indicative of a defective tail rotor system? B

OPCION A: Low frequency.
OPCION B: Medium frequency.
OPCION C: High frequency.

8426 What is the primary purpose of the free-wheeling unit? B

OPCION A: To provide speed reduction between the engine, main rotor system, and the tail rotor system.
OPCION B: To provide disengagement of the engine from the rotor system for autorotation purposes.
OPCION C: To transmit engine power to the main rotor, tail rotor, generator/alternator, and other accesories.

8427 The main rotor blades of a fully articulated rotor system can B

OPCION A: flap, drag, and feather collectively.
OPCION B: flap, drag, and feather independently of each other.
OPCION C: flap and drag individually, but can only feather collectively.

8428 The main rotor blades of a semi-rigid system can A

OPCION A: flap and feather as a unit.
OPCION B: flap, drag, and feather independently.
OPCION C: flap and drag individually, but can only feather collectively.

8533 (Refer to Figure 36.) Given the following conditions, what is the maximum allowable measured gas temperature (MGT) during the power assurance check? C
Engine Torque 57%
Pressure altitude .....2,500 ft.
Temperature (OAT).....+5°C

OPCION A: 810°C.
OPCION B: 815°C.
OPCION C: 828°C.

(Ver figura referencial FIG. 36 en el Manual de Figuras)

8534 (Refer to Figure 36.) Given the following conditions, what is the maximum allowable measured gas temperature (MGT) during the power assurance check? A
Engine Torque 49%
Pressure altitude ..... 5,500 ft.
Temperature (OAT) ..... +25°C

OPCION A: 870°C.
OPCION B: 855°C.

OPCION C: 880°C.
(Ver figura referencial FIG. 36 en el Manual de Figuras)

8535 (Refer to Figure 36.) Given the following conditions, what is the maximum allowable measured gas temperature (MGT) during the power assurance check?
Engine torque 54%
Pressure altitude ..... 500 ft.
Temperature (OAT) ..... +25°C
A

OPCION A: 840°C.
OPCION B: 830°C.
OPCION C: 820°C.
(Ver figura referencial FIG. 36 en el Manual de Figuras)

8536 (Refer to Figure 36.) Given the following conditions, what is the maximum allowable measured gas temperature (MGT) during the power assurance check?
Engine torque 43%
Pressure altitude ..... 9,000 ft.
Temperature (OAT) ..... -15°C
B

OPCION A: 782°C.
OPCION B: 768°C.
OPCION C: 750°C.
(Ver figura referencial FIG. 36 en el Manual de Figuras)

8537 (Refer to Figure 36.) Given the following conditions, what is the maximum allowable meassured gas temperature (MGT) during the power assurance check?
Engine torque 52%
Pressure altitude ..... 1,500 ft.
Temperature (OAT) ..... +35°C
B

OPCION A: 880°C.
OPCION B: 865°C.
OPCION C: 872°C.
(Ver figura referencial FIG. 36 en el Manual de Figuras)

8538 (Refer to Figure 37.) What is the maximum gross weight for hovering in ground effect at 3,000' preesure altitude and +25°C?
A

OPCION A: 17,300 pounds.
OPCION B: 14,700 pounds.
OPCION C: 16,600 pounds.
(Ver figura referencial FIG. 37 en el Manual de Figuras)

8539 (Refer to Figure 37.) What is the maximum gross weight for hovering in ground effect at 6,000' preesure altitude and +15°C?
B

OPCION A: 17,200 pounds.
OPCION B: 16,600 pounds.
OPCION C: 14,200 pounds.
(Ver figura referencial FIG. 37 en el Manual de Figuras)

8540 (Refer to Figure 37.) What is the maximum gross weight for hovering in ground effect at 7,000' pressure altitude and +35°C?
A

OPCION A: 13,500 pounds.
OPCION B: 14,700 pounds.
OPCION C: 12,100 pounds.
(Ver figura referencial FIG. 37 en el Manual de Figuras)

8541 (Refer to Figure 37.) What is the maximum gross weight for hovering in ground effect at 4,500' pressure altitude and +20°C?
C

OPCION A: 14,500 pounds.
OPCION B: 16,500 pounds.
OPCION C: 17,000 pounds.
(Ver figura referencial FIG. 37 en el Manual de Figuras)

8542 (Refer to Figure 37) What is the maximum gross weight for hovering in ground effect at 2,500' pressure altitude and 35°C? A

OPCION A: 16,200 pounds.
OPCION B: 16,600 pounds.
OPCION C: 14,600 pounds.
(Ver figura referencial FIG. 37 en el Manual de Figuras)

8543 (Refer to Figure 38.) What is the maximum gross weight for hovering out of ground effect at 3,000' pressure altitude and +30°C? B

OPCION A: 17,500 pounds.
OPCION B: 14,300 pounds.
OPCION C: 13,400 pounds.
(Ver figura referencial FIG. 38 en el Manual de Figuras)

8544 (Refer to Figure 38.) What is the maximum gross weight for hovering out of ground effect at 6,000' pressure altitude and +15°C? C

OPCION A: 16,800 pounds.
OPCION B: 13,500 pounds.
OPCION C: 14,400 pounds.
(Ver figura referencial FIG. 38 en el Manual de Figuras)

8545 (Refer to Figure 38.) What is the maximum gross weight for hovering out of ground effect at 7,000' pressure altitude and +35°C? B

OPCION A: 14,000 pounds.
OPCION B: 11,600 pounds.
OPCION C: 12,500 pounds.
(Ver figura referencial FIG. 38 en el Manual de Figuras)

8546 (Refer to Figure 38.) What is the maximum gross weight for hovering out of ground effect at 4,500' pressure altitude and 20°C? A

OPCION A: 14,500 pounds.
OPCION B: 14,000 pounds.
OPCION C: 17,000 pounds.
(Ver figura referencial FIG. 38 en el Manual de Figuras)

8547 (Refer to Figure 38.) What is the maximum gross weight for hovering out of ground effect at 2,500' pressure altitude and +30°C? C

OPCION A: 17,400 pounds.
OPCION B: 15,000 pounds.
OPCION C: 14,500 pounds.
(Ver figura referencial FIG. 38 en el Manual de Figuras)

8548 (Refer to Figure 39.) What is the takeoff distance over a 50-foot obstacle? A
Pressure altitude ..... 3,500 ft
Temperature (OAT) .....+20°C
Gross weight ..... 15,000 lb.

OPCION A: 1,070 feet.
OPCION B: 1,020 feet.
OPCION C: 1,100 feet.
(Ver figura referencial FIG. 39 en el Manual de Figuras)

8549 (Refer to Figure 39.) What is the takeoff distance over a 50-foot obstacle? C
Pressure altitude ..... 5,000 ft.
Temperature (OAT) ..... -10°C
Gross weight ..... 11,000 lb.

OPCION A: 1,000 feet.
OPCION B: 920 feet.
OPCION C: 870 feet.
(Ver figura referencial FIG. 39 en el Manual de Figuras)

8550 (Refer to Figure 39.) What is the takeoff distance over a 50-foot obstacle? B
Pressure altitude ..... 6,500 ft.
Temperature (OAT) ..... 0°C
Gross weight ..... 13,500 lb.
OPCION A: 1,500 feet.
OPCION B: 1,050 feet.
OPCION C: 1,100 feet.
(Ver figura referencial FIG. 39 en el Manual de Figuras)

8551 (Refer to Figure 39.) What is the takeoff distance over a 50-foot obstacle? B
Pressure altitude ..... 9,000 ft.
Temperature (OAT) ..... +20°C
Gross weight ..... 15,000 lb.
OPCION A: 1,300 feet.
OPCION B: 1,350 feet.
OPCION C: 1,250 feet.
(Ver figura referencial FIG. 39 en el Manual de Figuras)

8552 (Refer to Figure 39.) What is the takeoff distance over a 50-foot obstacle? B
Pressure altitude ..... -1,000 ft.
Temperature (OAT)..... +25°C
Gross weight ..... 14,000 lb.
OPCION A: 1,000 feet.
OPCION B: 900 feet.
OPCION C: 950 feet.
(Ver figura referencial FIG. 39 en el Manual de Figuras)

8553 (Refer to Figure 40.) What is the climb performance with both engines operating? B
Pressure altitude 9,500 ft
Temperature (OAT) -5°C
Heater ON
OPCION A: 925 ft/min
OPCION B: 600 ft/min
OPCION C: 335 ft/min

8554 (Refer to Figure 40.) What is the climb performance with both engines operating? B
Pressure altitude 7,500 ft
Temperature +5° C
Heater ON
OPCION A: 905 ft/min
OPCION B: 765 ft/min
OPCION C: 1,080 ft/min

8555 (Refer to Figure 40.) What is the climb performance with both engines operating? B
Pressure altitude ..... 6,500 ft.
Temperature (OAT) ..... +25°C
Heater ..... OFF
OPCION A: 285 ft/min
OPCION B: 600 ft/min
OPCION C: 400 ft/min

8556 (Refer to Figure 40.) What is the climb performance with both engines operating? B
Pressure altitude .....11,500 ft
Temperature (OAT).....-15°C
Heater ..... ON
OPCION A: 645 ft/min
OPCION B: 375 ft/min
OPCION C: 330 ft/min

8557 (Refer to Figure 40.) What is the climb performance with both engines operating? A
Pressure altitude .....3,500 ft
Temperature (OAT).....-10°C
Heater ..... ON
OPCION A: 985 ft/min
OPCION B: 1,300 ft/min
OPCION C: 1,360 ft/min

8558 (Refer to Figure 41.) What is the single-engine climb or descent performance? A
Pressure altitude .....7,500 ft
Temperature (OAT).....-0°C
OPCION A: 80 ft/min descent
OPCION B: 10 ft/min climb
OPCION C: 50 ft/min climb

8559 (Refer to Figure 41.) Given the following, what is the single-engine climb or descent performance? C
Pressure altitude ..... 3,000 ft
Temperature (OAT)..... +35°C
OPCION A: 150 ft/min descent
OPCION B: 350 ft/min climb
OPCION C: 100 ft/min descent

8560 (Refer to Figure 41.) Given the following, what is the single-engine climb or descent performance? B
Pressure altitude ..... 4,700 ft
Temperature (OAT) ..... +20°C
OPCION A: 420 ft/min climb
OPCION B: 60 ft/min climb
OPCION C: 60 ft/min descent

8561 (Refer to Figure 41.) Given the following, what is the single-engine climb or descent performance? C
Pressure altitude ..... 9,500 ft
Temperature (OAT) ..... -10°C
OPCION A: 600 ft/min descent
OPCION B: 840 ft/min descent
OPCION C: 280 ft/min descent

8562 (Refer to Figure 41.) Given the following, what is the single-engine climb or descent performance? A
Pressure altitude ..... 1,500 ft
Temperature (OAT) ..... +45°C
OPCION A: 100 ft/min descent
OPCION B: 360 ft/min climb
OPCION C: 200 ft/min descent

8563 (Refer to Figure 42.) Given the following, what is the airspeed (VNE)? A
Gross weight ..... 16,500 lb
Pressure altitude ..... 5,000 ft
Temperature (OAT) ..... -15°C
OPCION A: 128 KIAS
OPCION B: 133 KIAS
OPCION C: 126 KIAS

8564 (Refer to Figure 42.) Given the following, what is the airspeed (VNE)? B
Gross weight ..... 17,500 lb
Pressure altitude ..... 4,000 ft
Temperature (OAT) ..... +10°C
OPCION A: 114 KIAS
OPCION B: 120 KIAS
OPCION C: 130 KIAS

8565 (Refer to Figure 42.) What is the airspeed limit (VNE)? A
Gross weight ..... 15,000 lb
Pressure altitude ..... 6,000 ft
Temperature (OAT) ..... +0°C
OPCION A: 135 KIAS
OPCION B: 127 KIAS
OPCION C: 143 KIAS

8566 (Refer to Figure 42.) What is the airspeed limit (VNE)? A
Gross weight ..... 14,000 lb
Pressure altitude ..... 8,000 ft
Temperature (OAT) ..... -15°C
OPCION A: 121 KIAS
OPCION B: 123 KIAS
OPCION C: 113 KIAS

8567 (Refer to Figure 42.) What is the airspeed limit (VNE)? C
Gross weight ..... 12,500 lb
Pressure altitude ..... 14,000 ft
Temperature (OAT) ..... -20°C
OPCION A: 99 KIAS
OPCION B: 108 KIAS
OPCION C: 103 KIAS

8568 (Refer to Figure 42.) What is the single-engine landing distance over a 50 foot obstacle? C
Gross weight ..... 12,500 lb
Pressure altitude ..... 3,500 ft
Temperature (OAT) ..... +30°C
OPCION A: 850 feet
OPCION B: 900 feet
OPCION C: 1,000 feet

8569 (Refer to Figure 43.) What is the single-engine landing distance over a 50-foot obstacle? B
Gross weight ..... 16,500 lb
Pressure altitude ..... 5,500 ft
Temperature (OAT) ..... -10°C
OPCION A: 1,700 feet
OPCION B: 1,550 feet
OPCION C: 1,600 feet

8570 (Refer to Figure 43.) What is the single-engine landing distance over a 50 foot obstacle? A
Gross weight ..... 15,000 lb
Pressure altitude ..... 8,000 ft
Temperature (OAT) ..... +20°C
OPCION A: 1,900 feet
OPCION B: 1,800 feet
OPCION C: 2,000 feet

8571 (Refer to Figure 43.) What is the single-engine landing distance over a 50 foot obstacle? B
Gross weight ..... 14,000 lb
Pressure altitude ..... 1,000 ft
Temperature (OAT) ..... +10°C
OPCION A: 650 feet
OPCION B: 920 feet
OPCION C: 800 feet

8572 (Refer to Figure 43.) What is the single-engine landing distance over a 50-foot obstacle? C
Gross weight ..... 17,000 lb
Pressure altitude ..... 4,000 ft
Temperature (OAT) ..... +40°C
OPCION A: 1,850 feet
OPCION B: 2,200 feet
OPCION C: 2,000 feet

9058 Which place in the turbojet engine is subjected to the highest temperature? C
OPCION A: Compressor discharge
OPCION B: Fuel spray nozzles
OPCION C: Turbine inlet

9059 What effect would a change in ambient temperature or air density have on gas-turbine-engine performance? C
OPCION A: As air density decreases, thrust increases
OPCION B: As temperature increases, thrust increases
OPCION C: As temperature increases, thrust decreases

9060 The most important restriction to the operation of turbojec or turboprop engines is B
OPCION A: limiting compressor speed
OPCION B: limiting exhaust gas temperature
OPCION C: limiting torque

9061 An outside air pressure decreases, thrust output will C
OPCION A: increase due to greater efficiency of jet aircraft in thin air
OPCION B: remain the same since compression of inlet air will compensate for any decrease in air pressure
OPCION C: decrease due to higher density altitude

9062 What effect will an increase in altitude have upon the available equivalent shaft horsepower (ESHP) of a turboprop engine? A
OPCION A: Lower air density anda engine mass flow will cause a decrease in power
OPCION B: Higher propeller efficiency will cause an increase in usable power (ESHP) and thrust
OPCION C: Power will remain the same but propeller efficiency will decrease

9063 What effect, if any, does high ambient temperature have upon the thrust output of a turbine engine? A
OPCION A: Thrust will be reduced due to the decrease in air density
OPCION B: Thrust will remain the same, but turbine temperature will be higher
OPCION C: Thrust will be higher because more heat energy is extracted from the hotter air

9064 What characterizes a translent compressor stall? C
OPCION A: Loud, steady roar accompanied by heavy shud-dering
OPCION B: Sudden loss of thrust accompanied by a loud whine
OPCION C: Intermittent "bang", as backfires and flow reversals take place

9065 What indicates that a compressor stall has developed and become steady? A
OPCION A: Strong vibrations and loud roar
OPCION B: Occasional loud "bang" and flow reversal
OPCION C: Complete loss of power with severe reduction in airspeed

9066 Which type of compressor stall has the greatest potential for severe engine damage? C
OPCION A: Intermittent "backfire" stall
OPCION B: Transient "backfire" stall
OPCION C: Steady, continuous flow reversal stall

9067 What recovery would be appropriate in the event of compressor stall? A
OPCION A: Reduce fuel flow, reduce angle of attack, and increase airspeed
OPCION B: Advance throttle, lower angle of attack, and reduce airspeed
OPCION C: Reduce throttle, reduce airspeed, and increase angle of attack

9068 Under normal operating conditions, which combination of MAP and RPM produce the most severe wear, fatigue, and damage to high performance reciprocating engines? A

OPCION A: High RPM and low MAP
OPCION B: Low RPM and high MAP
OPCION C: High RPM and high MAP

9069 What effect does high relative humidity have upon the maximum power output of modern aircraft engines? B

OPCION A: Neither turbojet nor reciprocating engines are affected
OPCION B: Reciprocating engines will experience a significant loss of BHP
OPCION C: Turbojet engines will experience a significant loss of thrust

9071 Minimum specific fuel consumption of the turbo-prop engine is normally available in which altitude range? B

OPCION A: 10,000 feet to 25,000 feet
OPCION B: 25,000 feet to the tropopause
OPCION C: The tropopause to 45,000 feet

9129 If severe turbulence is encountered, which procedure is recommended? B

OPCION A: Maintain a constant altitude
OPCION B: Maintain a constant attitude
OPCION C: Maintain constant airspeed and altitude

9321 Which is the correct symbol for design cruising speed? A

OPCION A: Vc
OPCION B: Vs
OPCION C: Vma