AFT CyberExam

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Subject: AFPA
Exam Reference Code: 39513407S

The correct answer is indicated in blue.
If you did not select the correct answer, the answer you selected is indicated in red.

For multi-choice questions, the sequence in which the answers are displayed below may differ from the sequence you saw in the exam, as exams display answers in a random sequence.

IMPORTANT - From 01 September 2014, CASR Part 61 KDR references and SSA (Supply-Short-Answer) 'type in the box' questions are being incorporated into CASA flight crew exams.

AFT's Practice CyberExams are also incorporating these changes. This means if you are reviewing exams you sat some time ago, you may find the marking/results/KDR reference has changed, especially if you did the question in multi-choice format and the same question is now in SSA typed answer format.

Question 1 of 18 (Marks: 2) *(AFPA_015)*

Using a forecast average wind component of -30 kt, the TOC position for a B727 aircraft is found to be 127 nm from the departure aerodrome. Climb time is 23 minutes. If the actual average wind component is +20 kt, the distance from departure to the actual TOC is -

Your answer of 146.2 nm was correct.

Part 61 MOS Schedule 3 Unit 1.10.2 AFPA 2.1.1(e) Climb Distance to Given Altitude

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Question 2 of 18 (Marks: 2) *(AFPA_016)*

A flight is being planned in a B727 from DARWIN to PORT MORESBY via route B598.

The planned details are:

GW overhead IDELU ..... 72500 kg
FL 330
TMN ..... LRC
Forecast for FL340 ..... W/V 170T/14
SAT for FL340.....-39 C

The planned FBO from IDELU to HORN ISLAND is closest to -

Your answer of 3174 kg was correct.

Part 61 MOS Schedule 3 Unit 1.10.2 AFPA 2.1.1(d) Sector Fuel Burn

Question 3 of 18 (Marks: 1) *(AFPA_020)*

Refer B727 Performance and Operating Handbook.

Given a BRW of 78000 kg under ISA conditions, the average rate of climb to climb from FL130 to FL330 is -

Your answer of 1290 fpm was correct.

Part 61 MOS Schedule 3 Unit 1.10.2 AFPA 2.1.1(f) Rate of Climb

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Question 4 of 18 (Marks: 1) *(AFPA_023)*

Given the following data:

IAS ..... 310 kt
SAT..... -36 C
QNH ..... 1013 HPA

To the nearest 100 ft, the pressure altitude that would give a TMN equivalent to 0.78 is

Your answer of 28500 ft was incorrect.

The correct answer is between 27500 ft and 28000 ft.

Part 61 MOS Schedule 3 Unit 1.10.2 AFPA 2.1.1(e) Relationship between IAS and Mach Number

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Question 5 of 18 (Marks: 1) *(AFPA_004)*

Refer B727 Performance and Operating Handbook.

You obtain a positive fix inflight and have the following inflight data:

FOB ..... 15900 kg
Payload ..... 13000 kg
BW ..... 47000 kg

Destination Weather: ACCEPTABLE, SUITABLE with 60 min holding fuel

Departure Weather: SUITABLE, requires 20 min operational holding for Traffic purposes

Your calculation of the amount of fuel available for flight from the current position to the PNR/1-INOP and return to departure aerodrome and the final landing weight respectively are -

1. PNR/1-INOP fuel available 13090 kg and LW 62809 kg
2. PNR/1-INOP fuel available 11879 kg and LW 64021 kg
3. PNR/1-INOP fuel available 9455 kg and LW 66445 kg
4. PNR/1-INOP fuel available 12960 kg and LW 62940 kg

5 PNR/1-INOP fuel available 13000 kg and LW 62900 kg

Submitted Answer was Answer 1 (Correct).

Part 61 MOS Schedule 3 Unit 1.10.2 AFPA 2.1.1(f) Engine Out Flight

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Question 6 of 18 (Marks: 2) *(AFPA_006)*

Refer B727 Performance and Operating Handbook.

You are making a one engine inoperative descent to your destination aerodrome, when an emergency at the aerodrome forces ATC to instruct you to hold in a racetrack holding pattern at FL230 for 45 minutes.

Holding data is:

GW at holding pattern entry ..... 72000 kg
Temperature ..... ISA+10

The average holding pattern fuel flow and TAS respectively are -

1 3922 kg/hr and 337 kt
2 3815 kg/hr and 323 kt
3 3883 kg/hr and 336 kt
4 3973 kg/hr and 333 kt

Submitted Answer was Answer 3 (Correct).

Part 61 MOS Schedule 3 Unit 1.10.2 AFPA 2.1.1(d) TAS and Fuel Consumption

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Question 7 of 18 (Marks: 2) *(AFPA_034)*

Refer B727 Performance and Operating Handbook.

You have the following flight planning data for a sector from PERTH (YPPH) to ALICE SPRINGS (YBAS):

Performance Limited BRW ..... 85650 kg
Performance Limited LW ..... 69650 kg
Basic Weight ..... 46920 kg

Estimated fuel burn Normal Operations ..... 13650 kg
Estimated fuel burn 1 INOP Operations ..... 14820 kg
Estimated fuel burn Depressurised Operations ..... 16250 kg

Abnormal operations FBO is based on either continuing or returning from the Critical Point

No other performance limits apply.

PERTH is ACCEPTABLE but may be considered SUITABLE if sufficient fuel is carried to cover a TEMPO (60 min) period forecast for the time of possible use.

ALICE SPRINGS is ACCEPTABLE but may be considered SUITABLE if sufficient fuel is carried to cover an INTER (30 min) period forecast for your arrival.

Your calculation of the maximum payload that may be carried is -

1 14478 kg
2 15648 kg
3 16500 kg
4 16580 kg

Submitted Answer was Answer 1 (Correct).

Part 61 MOS Schedule 3 Unit 1.10.2 AFPA 2.1.1(a) Payload Uplift Capability

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Question 8 of 18 (Marks: 2) *(AFPA_053)*

Refer B727 Performance and Operating Handbook.

Due to an inflight problem, the Pilot in Command decides to use engines 2 and 3 for airconditioning bleed air.

Inflight conditions are:

GW ..... 76000 kg
Cruise level FL310
TAT ..... -19 degrees C
TMN..... 0.79

Your determination of the maximum cruise EPR settings for Engines 1, 2 and 3 respectively are -

1 2.13 2.17 2.13
2 2.19 2.11 2.13
3 2.19 2.17 2.13
4 2.13 2.11 2.19

Submitted Answer was Answer 2 (Correct).

Part 61 MOS Schedule 3 Unit 1.10.2 AFPA 2.1.1(f) Inflight Computation EPR

Question 9 of 18 (Marks: 2) *(AFPA_060)*

Refer B727 Performance and Operating Handbook.

You are commencing a climb from FL150 to FL350 and have the following inflight details:

Temperature ..... ISA+10
Gross weight ..... 72500 kg

The average rate of climb and top of climb gross weight respectively are -

1 1000 ft/minute rate of climb and top of climb gross weight 70500 kg
2 1150 ft/minute rate of climb and top of climb gross weight 70675 kg
3 890 ft/minute rate of climb and top of climb gross weight 70325 kg
4 1200 ft/minute rate of climb and top of climb gross weight 70825 kg

Submitted Answer was Answer 1 (Correct).

Part 61 MOS Schedule 3 Unit 1.10.2 AFPA 2.1.1(f) Intermediate ROC

Question 10 of 18 (Marks: 3) *(AFPA_001)*

Refer B727 Performance and Operating Handbook.

You have the following flight planning data:

Gross Weight passing FL 230 on climb ..... 79400 kg
Cruise level FL330
Temperature ..... ISA+5
Wind component ..... +55 kt

Your calculation of the maximum TMN cruise schedule available when you reach FL 330, and the planned initial Groundspeed at that TMN is -

1 TMN .80, Groundspeed 531 kt
2 TMN .82, Groundspeed 532 kt
3 TMN .82, Groundspeed 537 kt
4 TMN .80, Groundspeed 532 kt
5 TMN .LRC, Groundspeed 519 kt

Submitted Answer was Answer 3 (Correct).

Part 61 MOS Schedule 3 Unit 1.10.2 AFPA 2.1.1(c) Selection of Cruise Schedules

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Question 11 of 18 (Marks: 3) *(AFPA_002)*

Refer B727 Performance and Operating Handbook and ERC H3. A B727 flight is enroute from ALICE SPRINGS to MELBOURNE via A461 and H119. Current position over AGAGO

Inflight data:

FL 330
TMN 0.82
IRS wind ..... 250(M) 66 kt
TAT ..... -10
GW ..... 73200 kg

Delays departing ALICE SPRINGS have put the flight behind schedule. You wish to increase cruise schedule to TMN 0.84 as soon as possible.

RSWT Extract

FL	-ISA	AS/LEC	LEC/NATYA	NATYA/ML
445	-56	2609062	2808058	2806555
385	-56	2611054	2710053	2809052
340	-52	2611045	2710048	2810048
300	-45	2609038	2708043	2808046
235	-32	2607524	2706030	2906034
185	-21	2603514	2703518	2804021

The distance from AGAGO and time in minutes at which TMN 0.84 is first available as a maximum speed cruise schedule respectively are closest to -

1. 183 nm, 23 minutes
2. 257 nm, 30 minutes
3. 232 nm, 26 minutes
4. 204 nm, 24 minutes
5. 165 nm, 20 minutes

Submitted Answer was Answer 2 (Correct).

Part 61 MOS Schedule 3 Unit 1.10.2 AFPA 2.1.1(c) Selection of Cruise Schedules - High Speed Cruise

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Question 12 of 18 (Marks: 4) *(AFPA_037)*

Refer B727 Performance and Operating Handbook and ERC H1.

You are enroute from MELBOURNE (YMML) to BRISBANE (YBBN) via H66.

Initial position fix ..... overhead MDG NDB
Flight level FL330
TMN 0.82
TAT ..... -15 degrees C
IRS Wind ..... 240(M)/68 kt - Use for all cruise and descent
Gross weight ..... 74400 kg
TAC distance ..... MOOVI to BRISBANE is 35 nm

15 minutes after the position fix one of the airconditioning packs fails. At this time you conduct a normal descent to FL250 and then continue the flight to BRISBANE at LRC TMN to save fuel.

Your planned Landing Weight at Brisbane is closest to -

1. 71285 kg
2. 71220 kg
3. 71150 kg
4. 71050 kg
5. 69045 kg

Submitted Answer was Answer 4 (Correct).

Part 61 MOS Schedule 3 Unit 1.10.2 AFPA 2.1.1(f) Inflight Computations

Question 13 of 18 (Marks: 2) *(AFPA_052)*

Refer B727 Performance and Operating Handbook, ERC H2 and H3.

You are pilot in command of a B727 aircraft proceeding from BRISBANE to ALICE SPRINGS via route T11 then to CURTIN direct. You are over NONET with a Total FOB of 12225 kg.

You decide to calculate the position of the PNR/1-INOP based on a return to ALICE SPRINGS from along the ALICE SPRINGS to CURTIN segment.

ALICE SPRINGS weather is forecast to be ACCEPTABLE, but SUITABLE with 30 min holding. ALICE SPRINGS also has a 20 min TRAFFIC holding requirement.

You have the following planning data:

NONET to PNR/1-INOP at normal cruise:
Fuel Flow ..... 4300 kg/hr
TAS ..... 460 kt
Wind Component ..... +50 kt

PNR/1-INOP to ALICE SPRINGS at 1-INOP cruise:
Fuel Flow ..... 4400 kg/hr
TAS ..... 420 kt
Wind Component ..... -30 kt

Disregarding adjustments for descent, your calculation of the distance to the PNR/1-INOP to ALICE SPRINGS as a distance from NONET is closest to -

1 230 nm
2 636 nm
3 576 nm
4 643 nm
5 629 nm

Submitted Answer was Answer 2 (Correct).

Part 61 MOS Schedule 3 Unit 1.10.2 AFPA 2.1.1(i) PNR 1-INOP

Question 14 of 18 (Marks: 4) *(AFPA_067)*

Refer B727 Performance and Operating Handbook, ERC H1 and RSWT Extract.

You are conducting a flight from BRISBANE (YBBN) to MELBOURNE (YMML) via Q94. You obtain a positive fix on track 120 nm past PARKES. ATC advise that you will be required to hold for 38 minutes due traffic sequencing, at FL280 at a position 15 track miles past POLSO.

Inflight data at your present position is:

Cruise level FL350
TMN 0.82
Gross weight ..... 72450 kg
TAC distance ..... CANTY to MELBOURNE is 52 nm

RSWT Extract

FL	-ISA	PKS/YMML
445	-56	2908062
385	-56	2903552
340	-52	3003054
300	-45	3002051
235	-32	3101539
185	-21	3101027

You continue the flight making a normal descent to arrive at the holding position at FL280. After holding for 38 minutes the flight makes a normal approach and landing.

Your calculation of the planned landing weight is closest to -

1 68295 kg
2 68405 kg
3 68133 kg
4 67914 kg
5 67866 kg

Submitted Answer was Answer 3 (Correct).

Part 61 MOS Schedule 3 Unit 1.10.2 AFPA 2.1.1(f) Replanning for Holding

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Question 15 of 18 (Marks: 5) *(AFPA_011)*

Refer B727 Performance and Operating Handbook, ERC H1 and RSWT Extract.

You are on descent into MELB0URNE (YMML) from BRISBANE (YBBN) via H66, after suffering an en-route cabin pressurisation failure. Approaching 1500 ft overhead MELB0URNE one engine fails. Your GW overhead MELB0URNE at 1500 ft is 69600 kg.

The weather conditions at MELB0URNE make it ACCEPTABLE, while the SYDNEY (YSSY) TAF indicates SYDNEY to be SUITABLE.

You have the following inflight data:

TAC distance ..... CULLIN to SYDNEY is 101 nm

RSWT Extract

FL	-ISA	YMML/YSSY
235	-32	2607524
185	-21	2503514

Your calculation of the GW for a landing at SYDNEY, after flying from MELBOURNE at FL130 with 1 engine INOP via Y59, is -

1 64350 kg
2 64550 kg
3 64750 kg
4 64950 kg

Submitted Answer was Answer 2 (Correct).

Part 61 MOS Schedule 3 Unit 1.10.2 AFPA 2.1.1(d) Alternate Fuel

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Question 16 of 18 (Marks: 5) *(AFPA_054)*

Refer B727 Performance and Operating Handbook, ERC H3 and RSWT Extract.

You are planning a maximum payload/minimum fuel flight from MELBOURNE (YMML) to ADELAIDE (YPAD) via H345.

Planning details are:

Cruise level ..... optimum IFR level
TMN 0.82

FL	RSWT ISA	YMML/YPAD
445	-56	2604561
385	-56	2403555
340	-52	2202549
300	-45	2202541
235	-32	2102026
185	-21	2202012

MELBOURNE is forecast to be SUITABLE for the duration of your planned operation and ADELAIDE is forecast to be ACCEPTABLE for your arrival, but may be considered SUITABLE if 60 minutes weather holding fuel is carried.

Your calculation of the planned Brakes Release Weight at MELBOURNE is closest to -

1 77562 kg
2 76495 kg
3 76359 kg
4 76245 kg
5 76577 kg

Submitted Answer was Answer 3 (Correct).

Part 61 MOS Schedule 3 Unit 1.10.2 AFPA 2.1.1(a) MTOW

Question 17 of 18 (Marks: 4) *(AFPA_056)*

Refer B727 Performance and Operating Handbook, ERC H2, ERC H3, RSWT Extract.

You are enroute from PERTH to DARWIN via Y36, T63 and KUNUNURRA. From the TAC: PERTH - KONIL distance 173 nm

You obtain a positive fix overhead BIDAP (604 nm from PERTH) at 0117Z and have the following inflight data at BIDAP:

Cruise level FL330
TMN 0.80
Gross weight ..... 76500 kg
Fuel on board ..... 13400 kg
Wind from IRS 260T/100
TAT ..... -12 degrees C

			RSWT			
FL	ISA	PH/MEK	MEK/PD	PD/CIN	CIN/KUN	KUN/DN
445	-56	2705560	2806064	2804567	2702067	2701067
385	-56	2605553	2807553	2905553	2702553	2701552
340	-52	2604546	2807043	2905042	2702541	2801541
300	-45	2303539	2806035	2905031	2811530	3110530
235	-32	2602025	2805021	2903517	3411016	0411016
185	-21	3502014	2902511	2802508	0505006	0810006

Using the IRS wind for your outbound cruise calculation, the distance to the PNR/DP for return to PERTH, measured from DARWIN, is closest to -

1 775 nm
2 688 nm
3 671 nm
4 655 nm
5 631 nm

Submitted Answer was Answer 2 (Correct).

Part 61 MOS Schedule 3 Unit 1.10.2 AFPA 2.1.1(i) PNR Depressurised

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Question 18 of 18 (Marks: 5) *(AFPA_073)*

Refer B727 Performance and Operating Handbook, ERC H2 and RSWT Extract.

A flight is enroute from DARWIN (YPDN) to TOWNSVILLE (YBTL) via J138. Current position is 99 nm past EGORE.

From the TAC ..... DARWIN - JANUS distance 80 nm

You have the following inflight data:

Cruise level FL330
TMN 0.79
Gross weight ..... 78600 kg
Useable Fuel on Board ..... 12820 kg

DARWIN is ACCEPTABLE, but may be considered SUITABLE if 30 minutes holding fuel is carried. TOWNSVILLE is SUITABLE.

		RSWT Extract		
FL	-ISA	YPDN/EGORE	EGORE/BIDAG	BIDAG/YBTL
445	-56	3104560	3205060	2905061
385	-56	3004549	3206049	3006050
340	-52	3004041	2708040	2306043

300	-45	2306034	2702034	2605030
235	-32	2303016	2304016	2005022
185	-21	2002008	2003012	2002013

Your calculation of the position of the PNR/1-INOP, measured as a distance from DARWIN is closest to -

1 606 nm
2 622 nm
3 638 nm
4 655 nm
5 671 nm

Submitted Answer was Answer 2 (Correct).

Part 61 MOS Schedule 3 Unit 1.10.2 AFPA 2.1.1(i) PNR 1-INOP
