

# INFRASTRUCTURES DEL TRANSPORT AERI (ITA)

## Final Exam - Spring semester 2017

Correct answer: +1 point – Incorrect answer: -1/3 points – Blank answer: 0 points  
For each question **only one answer** is correct

Assignatura 00213 – Centre 300 – Parcial 01

### Permutacio (CODE) 1

1. Airspace Management (ASM) is responsible for:
  - (a) all the answers are correct.
  - (b) alert, information and control services.
  - (c) avoiding air traffic demand exceeding capacity.
  - (d) the design of the ATS sectors.
2. In which of the following processes, the capacity of a sector is modelled and analysed?
  - (a) In AirSpace Management (ASM).
  - (b) In Air Traffic Flow and Capacity Management (ATFCM).
  - (c) In the provision of Air Traffic Services (ATS).
  - (d) In the provision of Air Information Services (AIS).
3. In which of the following processes, the class of an airspace (A, B, C, D, E, F or G) is determined?
  - (a) In AirSpace Management (ASM).
  - (b) In Air Traffic Flow Management (ATFM).
  - (c) In the provision of Air Traffic Services (ATS).
  - (d) In the provision of Air Information Services (AIS).
4. What features are taken into account when designing the size and shape of ATC sectors?
  - (a) The actual traffic demand, based on submitted flight plans by aircraft operators.
  - (b) The route structure.
  - (c) The forecast weather conditions.
  - (d) All answers are correct.
5. Regarding the airspace opening scheme:
  - (a) It defines how elementary sectors are collapsed. During the entire day, the sector configuration does not change.
  - (b) It defines how elementary sectors are collapsed. The sector configuration actually may change during the day.
  - (c) It defines at what time the airspace will be available for civil traffic.
  - (d) None of the other answers are correct.
6. Which of the following answers is correct?
  - (a) the ATC supervisor designs the size and shape of the different ATC sectors as a function of the traffic demand in his/her control center.
  - (b) the ATC supervisor decides the best sectorisation to apply as a function of the traffic demand in his/her control center.
  - (c) the ATC supervisor decides the best regulation to apply in case the traffic demand exceeds the capacity in one or more sectors of his/her control center.
  - (d) all answers are correct.
7. What is a CBA (cross-border area)?
  - (a) a type of flexible use of airspace that spans over international boundaries
  - (b) a TMA that spans over international boundaries
  - (c) a FIR that spans over international boundaries
  - (d) a CTR that spans over international boundaries
8. Regarding the flexible use of airspace (FUA) concept, the first level (strategic level) deals with:
  - (a) The definition of national airspace policy and predetermined airspace structures.
  - (b) The day-to-day allocation of airspace, according to users requirements.
  - (c) The real-time use and management of available airspace.
  - (d) The definition of the sectorisation and capacity of the military airways.
9. A secondary objective of air traffic flow management (ATFM) is...
  - (a) to monitor the CNS infrastructure.
  - (b) to monitor the aeronautical information publications (AIP).
  - (c) to monitor the network operations.
  - (d) all the answers are correct.
10. Which of the following ATFM initiatives is the most widely used in Europe and in the U.S.?
  - (a) Ground stop.
  - (b) Call for release.
  - (c) Air holding.
  - (d) Re-routing.
11. Schedule (or IATA) slots...
  - (a) are defined in European airports twice a year.
  - (b) are defined early in the morning in European airports.
  - (c) are defined early in the morning in European airports, only if there is a demand/capacity imbalance.
  - (d) are defined by the CFMU at any time when a demand/capacity imbalance exists.
12. In Europe, when a CTOT (Calculated take-off time) is given, the aircraft should take-off within the period:
  - (a) [CTOT, CTOT +10 min]
  - (b) [CTOT - 5min, CTOT +5 min]
  - (c) [CTOT - 5min, CTOT +10 min]
  - (d) [CTOT - 10min, CTOT +10 min]
13. According to the following definitions: EOBT (Estimated Off-Block Time), ETOT (Estimated take-off time), ETO (Estimated Time Over), COBT (Calculated Off-Block Time), CTOT (Calculated Take-Off Time), CTO (Calculated Time Over); which of the following time relationships is correct for an aircraft that has been affected by a ground holding ATFM regulation:
  - (a) CTO = EOBT + Ground Delay + Taxi Time
  - (b) CTO = COBT + Taxi Time + Trip Time
  - (c) CTO = ETO
  - (d) CTO = ETOT + Trip Time
14. An airspace sector has been regulated and its maximum capacity is set to 6 aircraft per hour. Table below depicts the Estimated Time Over (ETO) the concerned sector for a given set of aircraft. What is the ATFM delay that would be assigned to EZY078 according to the computed assisted slot allocation (CASA) algorithm?

Flight	ETO	Flight	ETO
BAW123	10:01	DAL077	10:24
IBE222	10:06	BAW444	10:40
RYR069	10:07	AFR022	11:02
EZY078	10:11	AZA333	11:05

- (a) No delay.  
(b) 1 minute.  
(c) 4 minutes.  
(d) 19 minutes.
15. An airspace sector has been regulated and its maximum capacity is set to 6 aircraft per hour. The table above depicts the Estimated Time Over (ETO) the concerned sector for a given set of aircraft. What is the ATFM delay that would be assigned to AZA333 according to the computed assisted slot allocation (CASA) algorithm?
- (a) No delay.  
(b) 1 minute.  
(c) 5 minutes.  
(d) 10 minutes.
16. An airspace sector has been regulated and its maximum capacity is set to 6 aircraft per hour. The table above depicts the Estimated Time Over (ETO) the concerned sector for a given set of aircraft. What is the ATFM delay that would be assigned to BAW444 according to the computed assisted slot allocation (CASA) algorithm?
- (a) No delay.  
(b) 1 minute.  
(c) 5 minutes.  
(d) 10 minutes.
17. An airspace sector has been regulated and its maximum capacity is set to 6 aircraft per hour. The table above depicts the Estimated Time Over (ETO) the concerned sector for a given set of aircraft. If the first slot (slot #1) is given at 10h00, which aircraft will take slot #7?
- (a) This slot will not be used by any aircraft.  
(b) AFR022  
(c) EZY078  
(d) DAL077
18. An airspace sector has been regulated and its maximum capacity is set to 6 aircraft per hour. The table above depicts the Estimated Time Over (ETO) the concerned sector for a given set of aircraft. What is the ATFM delay that would be assigned to AFR022 according to the computed assisted slot allocation (CASA) algorithm?
- (a) No delay.  
(b) 4 minutes.  
(c) 10 minutes.  
(d) 19 minutes.
19. Strategic ATFM should:
- (a) Balance flights next day with available ATC Capacity.  
(b) Match long-term demand and needed ATC capacity.  
(c) Manage current flights with existing ATC capacity.  
(d) Define the national airspace policy and predetermined airspace structures.
20. Pre-tactical ATFM should:
- (a) Balance flights next day with available ATC Capacity.  
(b) Match long-term demand and needed ATC capacity.  
(c) Manage current flights with existing ATC capacity.  
(d) Define the national airspace policy and predetermined airspace structures.
21. What is the primary information sent by ATC dependencies to the CFMU?
- (a) sector and airport capacities.  
(b) aircraft flight plans.  
(c) accurate weather data.  
(d) slots and reroutings.
22. What is the primary information sent by aircraft operators to the CFMU?
- (a) sector and airport capacities.  
(b) aircraft flight plans.  
(c) accurate weather data.  
(d) slots and reroutings.
23. What is a Flow Management Position (FMP)?
- (a) a special position within an ATC area control center devoted to ATFM issues and interfacing the center with the CFMU.  
(b) the European implementation of ATFM, managed by Euro-control.  
(c) the results of running the CFMU PREDICT system the day before of operations (D-1) allowing Eurocontrol to define the ATFM measures that will be applied the D day.  
(d) the CFMU system (or facility) that processes the flight plans sent by the aircraft operators.
24. Which of the following CFMU systems implements the Computer Assisted Slot Allocation (CASA) algorithm?
- (a) The RPL  
(b) The IFPS  
(c) The ETFMS  
(d) The PREDICT
25. Which of the following CFMU systems can provide historical data to generate future possible demand scenarios?
- (a) The DWH  
(b) The EAD  
(c) The ENV  
(d) The RCAT
26. Which of the following is a clear objective of the air traffic control (ATC) service?
- (a) To expedite and maintain an orderly flow of air traffic (\*).  
(b) To prevent collisions between aircraft (\*).  
(c) To provide advice and information useful for the safe and efficient conduct of flights.  
(d) the two answers labeled with (\*) are correct.
27. If no communication has been received from an aircraft in 30 minutes, or it fails to arrive at a given reporting fix/waypoint within the same amount of time, which of the following phases shall be activated?
- (a) Uncertainty phase.  
(b) Alert phase.  
(c) Distress phase.  
(d) Awareness phase.
28. Which of the following VHF frequencies is the emergency or guard frequency?
- (a) 121.50 MHz  
(b) 177.00 MHz  
(c) 175.00 MHz  
(d) 123.50 MHz
29. An air traffic controller issues the following radiotelephony message: *Echo Charlie Uniform Papa Charlie, traffic at your 10 o'clock position, Cessna 172 westbound at 4 miles, 300 ft below.* Which of the following answers is correct?
- (a) The message is a separation instruction to prevent a mid-air collision.  
(b) It is a collision hazard flight information message.  
(c) It is a distress signal message.  
(d) It is a urgency signal message.
30. A VFR flight is flying inside an airspace of class B. The air traffic controller is responsible to separate it from:

- (a) all other IFR flights.
  - (b) all other VFR flights.
  - (c) all other VFR and IFR flights.
  - (d) the controller has no separation responsibility with VFR flights in airspace class B.
31. Which of the following summarises the three high-level tasks that are always performed by an air traffic controller?
- (a) Gather and process data from flights and/or ground vehicles, issue clearances, coordinate clearances with other ATC units.
  - (b) Gather and process data from flights and/or ground vehicles, separate aircraft, give flight information instructions.
  - (c) Prevent collisions between aircraft (air and ground), expedite and maintain an orderly flow of air traffic, provide advice and information useful for the safe and efficient conduct of flights.
  - (d) Coordinate clearances with other ATC units, coordinate civil-military operations, coordinate emergencies.
32. North Atlantic oceanic control typically require the aircraft crew to:
- (a) Report their position only when requested by the ATC.
  - (b) Report periodically their position every 2h.
  - (c) Report periodically their position every 10° of longitude.
  - (d) Switch-off the transponder.
33. The letters of agreement (LoA) define de conditions for:
- (a) The coordination between IFR flights and the ATS.
  - (b) The coordination between adjacent sectors.
  - (c) The correlation between the transponder code and the flight plan.
  - (d) The coordination between the CFMU and the ATS centres to manage departure slots.
34. An aircraft has just landed at a major airport and has vacated the runway. In order to reach its gate at the terminal, an active runway needs to be crossed. Which control is responsible to deliver the needed clearance to cross the runway?
- (a) The tower control.
  - (b) The delivery control.
  - (c) The ground control.
  - (d) The approach control.
35. What air traffic control dependency is typically in charge to issue start-up and push-back clearances?
- (a) The en-route control.
  - (b) The ground control.
  - (c) The IFR clearance delivery.
  - (d) The approach control.
36. Which of the following options is correct, when talking about an ILS?
- (a) the glideslope is the ground-based system and the localiser is the on-board system, both sending the appropriate navigation signals.
  - (b) the localiser is the ground-based system and the transponder is the on-board system, both sending the appropriate navigation signals.
  - (c) the localiser and the glideslope are ground-based systems that send different navigation signals.
  - (d) the localiser and the glideslope are ground-based systems that send the same redundant navigation signal.
37. Regarding the propagation properties of HF and VHF airbands which of the following statements is NOT correct?
- (a) HF airband is refracted back to the Earth, thus enabling long range radio communications.
  - (b) In order to avoid mutual interference, two close VHF transmitters must use different frequencies.
  - (c) VHF radio waves refract in the atmosphere and, therefore, the interference of the overall system is increased.
  - (d) The VHF spectrum is a scarce resource but it is used in air navigation for several purposes.
38. Regarding the Satellite Based Augmentation System (SBAS)...
- (a) It is a system that supports a wide-area or regional augmentation by using several additional satellite broadcast messages.
  - (b) Such systems are commonly composed of multiple ground stations, located at accurately-surveyed points.
  - (c) The ground stations take measurements of one or more GNSS satellite signals and other environmental factors which may impact the signal received by the users.
  - (d) All the answers are correct.
39. In civil aviation, which of the following transponder modes transmits more information?
- (a) Mode A.
  - (b) Mode B.
  - (c) Mode C.
  - (d) Mode S.
40. Regarding the Instrumental Approach Chart (IAC) **Amarillo Intl. (AMA) VOR/DME RWY 22** annexed to this exam, the minimum descent altitude for an aircraft of **Category C** in a straight-in approach is
- (a) 4080 ft.
  - (b) 3960 ft
  - (c) the approach depicted in this chart cannot be executed straight-in and therefore there is no minimum descent altitude for this case.
  - (d) None of the other answers is correct.
41. Regarding the Instrumental Approach Chart (IAC) **Amarillo Intl. (AMA) VOR/DME RWY 22** annexed to this exam, the decision altitude for an aircraft of Category C in a straight-in approach is
- (a) 4080 ft.
  - (b) 3960 ft
  - (c) the approach depicted in this chart cannot be executed straight-in and therefore there is no minimum descent altitude for this case.
  - (d) None of the other answers is correct.
42. Regarding the Instrumental Approach Chart (IAC) **Amarillo Intl. (AMA) VOR/DME RWY 22** annexed to this exam, the landing minima for an aircraft of **Category C** in approach to **runway 31** are:
- (a) 4080 ft altitude and 1.5 statute miles of visibility.
  - (b) 4080 ft altitude and 1 statute mile of visibility.
  - (c) 3960 ft altitude and 1.5 statute miles of visibility.
  - (d) 3960 ft altitude and 1 statute miles of visibility.
43. Regarding the Instrumental Approach Chart (IAC) **Amarillo Intl. (AMA) VOR/DME RWY 22** annexed to this exam, the landing minima for an aircraft of **Category D** in approach to **runway 22** are:
- (a) 4080 ft altitude and 1.5 statute miles of visibility.
  - (b) 4080 ft altitude and 1 statute mile of visibility.
  - (c) 3960 ft altitude and 1.5 statute miles of visibility.
  - (d) 3960 ft altitude and 1 statute miles of visibility.
44. Regarding the Instrumental Approach Chart (IAC) **Amarillo Intl (AMA) VOR/DME RWY 22** annexed to this exam...
- (a) it is a non precision and straight-in approach.
  - (b) it is a non precision and circling to approach.
  - (c) it is a precision and straight-in approach.
  - (d) it is a precision and circling to approach.



45. Consider the Instrumental Approach Chart (IAC) **Amarillo Intl (AMA) VOR/DME RWY 22** annexed to this exam. Imagine an aircraft established in the final approach segment for runway 22 and in present strong wind conditions **from the south**. If we assume that the pilot is correctly using the final approach radionavigation guidance, the **heading** of the aircraft will be:
- approximately 055
  - approximately 235
  - greater than 235
  - smaller than 235
46. Consider the Instrumental Approach Chart (IAC) **Amarillo Intl (AMA) VOR/DME RWY 22** annexed to this exam. Imagine an aircraft established in the final approach segment for runway 22 and in present strong wind conditions **from the south**. If we assume that the pilot is correctly using the final approach radionavigation guidance, the **track** of the aircraft will be:
- approximately 055
  - approximately 235
  - greater than 235
  - smaller than 235
47. Consider the Instrumental Approach Chart (IAC) **Amarillo Intl (AMA) VOR/DME RWY 22** annexed to this exam. How is the MAPt defined?
- in this procedure, there is no MAPt.
  - the MAPt is defined over the PNH VOR/DME facility at the MDA.
  - the MAPt is defined at the intersection  $235^{\circ}/0.5\text{NM}$  of PNH VOR/DME and at the MDA.
  - the MAPt is defined by a timing of 0.5 minutes after overflying the FAF and at the MDA.
48. Consider the Instrumental Approach Chart (IAC) **Amarillo Intl (AMA) VOR/DME RWY 22** annexed to this exam. How is the FAF defined?
- in this procedure, there is no FAF.
  - the FAF is defined over PNH VOR/DME.
  - the FAF is defined at the intersection  $235^{\circ}/0.5\text{NM}$  of PNH VOR/DME.
  - the FAF is at DEXBE.
49. Consider the Instrumental Approach Chart (IAC) **Amarillo Intl (AMA) VOR/DME RWY 22** annexed to this exam. The area P-47 that appears North of the IAF DEXBE is...
- a Dangerous area.
  - a Parachuting area.
  - a Prohibited area.
  - a Restricted area.
50. Regarding the Instrumental Approach Chart (IAC) **Anchorage ILS RWY 7R ILS**, annexed to this exam, the decision height published is:
- there is no decision height for this procedure.
  - 130 ft.
  - 600 ft.
  - 700 ft.
51. Regarding the Instrumental Approach Chart (IAC) **Anchorage ILS RWY 7R ILS**, annexed to this exam, the minimum runway visual range for an ILS CAT-IIIB approach is:
- there is no minimum runway visual range for this procedure.
  - 130 ft.
  - 600 ft.
  - 700 ft.
52. Regarding the Instrumental Approach Chart (IAC) **Anchorage ILS RWY 7R ILS**, annexed to this exam and assuming that the FIX TULLI is an IAF, an aircraft ending the STAR at this point will immediately execute:
- a 45/180 reversal procedure.
  - a base turn reversal procedure.
  - a racetrack procedure.
  - a direct approach following the ILS path.
53. Regarding the Instrumental Approach Chart (IAC) **Anchorage ILS RWY 7R ILS**, annexed to this exam, the holding fix of the holding procedure defined at the end of the missed approach procedure is defined by:
- the intersection of two NDB courses.
  - the intersection of two VOR radials.
  - the ENA VOR facility.
  - the ANC VOR facility.
54. Regarding the Instrumental Approach Chart (IAC) **Anchorage ILS RWY 7R ILS**, annexed to this exam, imagine an aircraft is instructed to hold at NAPTO after executing the missed approach procedure. The aircraft will enter the hold with...
- a racetrack entry procedure.
  - a direct entry procedure.
  - an offset or a parallel entry procedure.
  - the entry procedure in a holding after a missed approach is free and the pilot can choose the best way to execute it.
55. Regarding the Instrumental Approach Chart (IAC) **Anchorage ILS RWY 7R ILS**, annexed to this exam, the radionavigation aid labeled as *I-ANC* is a:
- Localizer.
  - VOR/DME.
  - DME.
  - NDB.
56. Regarding the Instrumental Approach Chart (IAC) **Anchorage ILS RWY 7R ILS**, annexed to this exam, once the aircraft is established in the ILS (and assuming no wind conditions) the heading of the aircraft will be approximately:
- 089
  - 269
  - 069
  - 249
57. Regarding the Instrumental Approach Chart (IAC) **Anchorage ILS RWY 7R ILS**, annexed to this exam, the missed approach segment is composed by three legs, which are:
- a ILS course followed by a VOR radial followed by another VOR radial.
  - a VOR radial followed by a dead reckoning leg followed by another VOR radial.
  - a dead reckoning leg followed by a VOR radial followed by another VOR radial.
  - a dead reckoning leg followed by another dead reckoning leg followed by a VOR radial.
58. Regarding the Instrumental Approach Chart (IAC) **La Palma NDB**, annexed to this exam, the aircraft operator will publish for their crew...
- a decision altitude.
  - a minimum descent altitude.
  - an obstacle clearance altitude.
  - a NDB altitude.
59. Regarding the Instrumental Approach Chart (IAC) **La Palma NDB**, annexed to this exam, the missed approach segment is mainly:
- a NDB course.
  - a VOR radial.
  - a DME arc.
  - a dead-reckoning segment.

60. Regarding the Instrumental Approach Chart (IAC) **La Palma NDB**, annexed to this exam, imagine an aircraft arriving at NA-SOL IAF with heading 005°. Imagine the ATC instructs the aircraft to execute the holding pattern. In this case, the aircraft will enter the hold with...
- a racetrack entry procedure.
  - a direct entry procedure.
  - an offset entry procedure.
  - a parallel entry procedure.
61. Regarding the Instrumental Approach Chart (IAC) **La Palma NDB**, annexed to this exam, imagine an aircraft is instructed to hold at ARACO after executing the missed approach procedure. The aircraft will enter the hold with...
- a racetrack entry procedure.
  - a direct entry procedure.
  - an offset or a parallel entry procedure.
  - the entry procedure in a holding after a missed approach is free and the pilot can choose the best way to execute it.
62. Regarding the Instrumental Approach Chart (IAC) **La Palma NDB**, annexed to this exam...
- it is a CAT-I approach.
  - it is an APV approach.
  - it is a precision approach.
  - it is a circling to approach.
63. Regarding the Instrumental Approach Chart (IAC) **La Palma NDB**, annexed to this exam, the radionavigation aid labeled as *BV* is a:
- VOR/DME.
  - ILS/DME.
  - DME.
  - NDB.
64. Regarding the Instrumental Approach Chart (IAC) **La Palma NDB**, annexed to this exam, the approach starts at:
- The intersection of course 214 of BX with the arc of 11.0NM from BV
  - The intersection of course 238 of BX with the arc of 22.5NM from BV
  - The intersection of course 214 of BX with the arc of 4.0NM from BV
  - The intersection of course 214 of BX with the arc of 16.0NM from BV
65. A circling to approach with prescribed tracks...
- consists of a sequence of visual tracks that guide the pilot when flying the circling procedure.
  - consists of a sequence of instrumental tracks that guide the pilot when flying the circling procedure.
  - consists of a sequence of visual tracks to be avoided by the pilot when flying the circling procedure.
  - consists of a sequence of instrumental tracks to be avoided by the pilot when flying the circling procedure.
66. An APV is a:
- an approach with vertical guidance but with navigation performance worse than precision approaches.
  - a RNAV non precision approach.
  - a circling to approach.
  - a visual approach.
67. Which of the following statements is correct?
- APV and PA provide vertical and lateral guidance, while NPA provide only lateral guidance.
  - NPA and PA provide vertical and lateral guidance, while APV provide only lateral guidance.
  - PA provide vertical and lateral guidance, NPA provide only lateral guidance and APV are non-guided (visual) approaches.
  - APV provide vertical and lateral guidance, PA provide only lateral guidance and NPA are non-guided (visual) approaches.
68. An approach procedure using a DME as principal guidance system in the final approach segment is...
- a precision approach.
  - a non-precision approach.
  - an APV approach.
  - a DME cannot be used as principal guidance system in the final approach segment.
69. The OCA...
- is also known as the minima-minima.
  - is the minimum altitude in the final approach segment regarding obstacle clearance.
  - is the minimum visibility required for an instrumental approach procedure.
  - is a synonym of minimum descent altitude.
70. In a Locator approach, the approach minima are given by:
- A decision altitude and a minimum visibility.
  - A minimum descent altitude.
  - A minimum descent altitude and a minimum obstacle clearance altitude.
  - A minimum descent altitude and a minimum visibility.
71. In an ILS approach, the approach minima are given by:
- A decision altitude and a minimum visibility.
  - A decision altitude and a minimum obstacle clearance altitude.
  - A minimum descent altitude and a minimum obstacle clearance altitude.
  - A minimum descent altitude and a minimum visibility.
72. For a given runway threshold, which of the following approaches will lead (in general) to the highest MDA or DA?
- a NDB circling to approach procedure.
  - a NDB straight-in approach procedure.
  - a VOR circling to approach procedure.
  - a VOR straight-in approach procedure.
73. In which of the following procedures the final approach segment will start at a POINT and not a FIX?
- In an ILS approach.
  - In a VOR approach (\*).
  - In a Localizer approach (\*).
  - The answers labelled with (\*) are correct.
74. If the misalignment of the final approach track with respect to the runway centre line exceeds 40 degrees...
- only a circling to approach is possible.
  - only a precision approach is possible
  - a straight-in approach is possible if the final descent gradient does not exceed some specific limits.
  - an instrumental approach cannot be designed in such circumstances.
75. Imagine a twin engine aircraft departing in IMC from a controlled airport. Few seconds after take-off, it hits birds, which cause a fire in one of the engines and losing all of its power. In this situation, the **communicate** function of the aircraft crew would be:
- to send a distress message to the air traffic control.
  - to revert to manual control and visual flight to safely land as soon as possible.

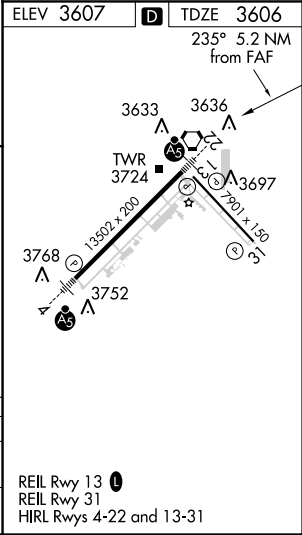
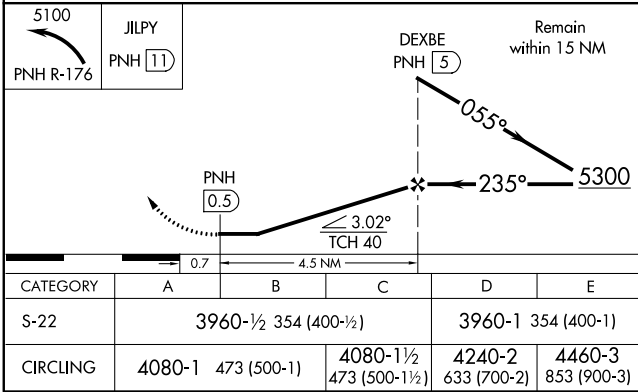
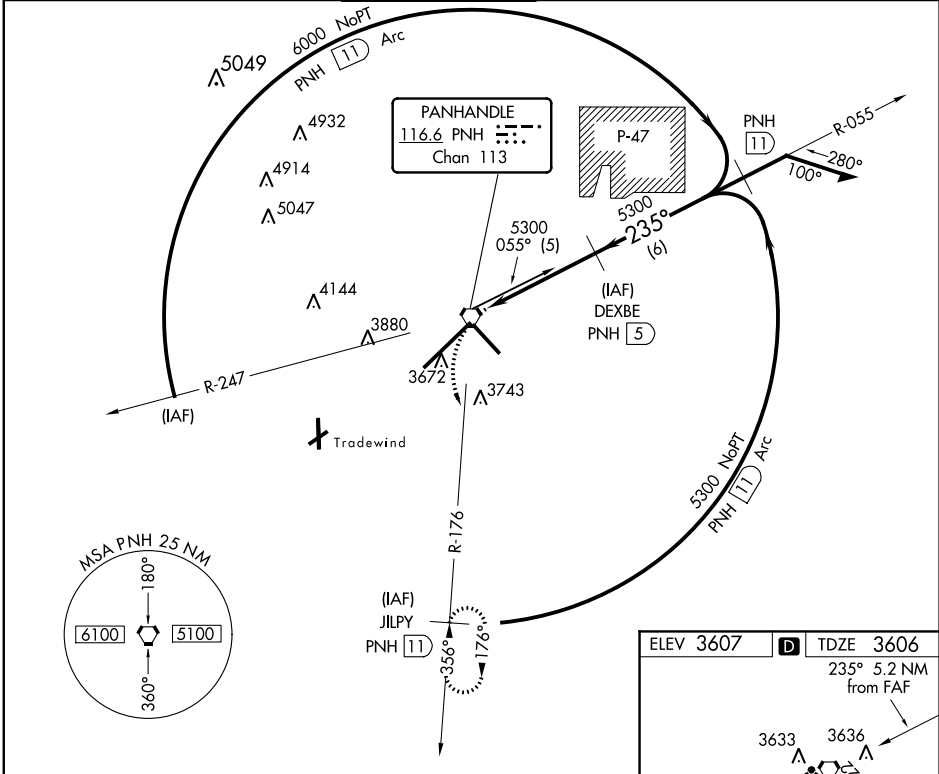
- (c) to safely control the aircraft trajectory with the loss of power and to manage to extinguish the fire and shut down the engine.
- (d) to check if there is a contingency departure published for that airport and execute it.
76. What is required to fly according to IFR?
- (a) Certified radionavigation equipment on-board the aircraft.
- (b) A special training (and rating) for the pilot.
- (c) To file an ATS flight plan.
- (d) All answers are correct.
77. What is the en-route phase?
- (a) The phase of the flight where the aircraft is at a constant cruise altitude.
- (b) The phase of the flight that follows the departure procedure.
- (c) The phase of the flight that precedes the descent.
- (d) All answers are correct.
78. When executing an airfield traffic pattern, how is the aircraft guided?
- (a) there is no guidance, the traffic pattern is always executed visually.
- (b) with an ILS.
- (c) with one or more conventional radionavigation systems.
- (d) with an RNAV system.
79. Who decides if a IFR procedure is RNAV or conventional?
- (a) The aircraft operator.
- (b) The air traffic controller.
- (c) The procedure designer.
- (d) The aircraft manufacturer.
80. Who decides if a waypoint is of type fly-by or fly-over?
- (a) The aircraft operator.
- (b) The air traffic controller.
- (c) The procedure designer.
- (d) The pilot in command.
81. A small aircraft, flying in VFR wants to fly from *Peronne (L FAG)* to *Soissons (L FJS)* following a straight line. Check the VFR chart provided in annex to this exam. You will find these two aerodromes at the upper right part of the chart. Which of the following answers is correct?
- (a) This flight can only be done in IFR.
- (b) This flight can always be done, providing the aircraft is equipped with a VHF radio.
- (c) This flight can only be done if the altitude is kept below FL55 ft.
- (d) This flight can only be done if the altitude is kept below 3500 ft.
82. Consider the VFR chart of the Paris area provided in annex to this exam. The airspace class E over the aerodrome *La Ferte Gaucher (L FFG)* (lower right part of the chart)...
- (a) goes from ground level to 3500 ft.
- (b) goes from 3500 ft to FL45.
- (c) goes from FL45 to the upper airspace.
- (d) goes from FL55 to the upper airspace.
83. Consider the VFR chart of the Paris area provided in annex to this exam. The airspace class over the town of *Nanteuil le Haudouin* (North-East of Paris Charles de Gaulle airport) at 3000 ft is:
- (a) Class A.
- (b) Class D.
- (c) Class E.
- (d) Class G.
84. Consider the VFR chart of the Paris area provided in annex to this exam. The airspace class over the town of *Chauny* (upper right part of the chart) at FL60 ft is:
- (a) Class A.
- (b) Class D.
- (c) Class E.
- (d) Class G.
85. Air Traffic Management (ATM) is composed by:
- (a) AS, FIS and ATC.
- (b) ASM, ATFM and ATS.
- (c) ASM, ATFM, AIP, NOTAM and CIRC.
- (d) CNS, ASM, ATFM, ATS, S&R, AIS and MET
86. Aeronautical Information Services (AIS) are composed by:
- (a) CNS, ATM, Search and Rescue, AIS, and Meteorology services.
- (b) Alert services, flight information services and air traffic control.
- (c) ASM, ATFM and ATS.
- (d) AIP, NOTAM and CIRC.
87. What is a NOTAM?
- (a) It is a notice or advisory that contains useful information for pilots or potential hazards along a flight route or at a location, such an airport.
- (b) It is a type of airspace without air traffic control.
- (c) It is the name that receives the aeronautical radiotelephony alphabet.
- (d) It is a collision hazard information typically given by a flight information service to a pilot.
88. When talking about the Short Term Conflict Alert (STCA) system, which of the following statements **is wrong**?
- (a) The STCA function alerts the controller to potential aircraft to aircraft collisions prior to loss of separation.
- (b) The STCA does not take into account the possible clearances given to the aircraft.
- (c) Future aircraft positions are estimations based on the velocity vectors of the aircraft.
- (d) The STCA communicates with the on-board TCAS and when a TCAS alarm triggers, also does the STCA alarm and vice-versa.
89. When talking about the Medium Term Conflict Detection (MTCD) system, which of the following statements **is wrong**?
- (a) The MTCD is the future version of the STCA, where conflicts will be detected much in advance.
- (b) The MTCD can issue contextual warnings, where no loss of separation is likely if the aircraft is cleared according to the plan, but the encounter should be considered if one of the aircraft involved requests an alternative level.
- (c) The MTCD takes into account the flight plan data to detect conflicts.
- (d) The MTCD alerts the controller that a loss of separation is likely to occur within the limits of the current clearance.
90. If a potential collision conflict is detected by an ACAS II/TCAS system, what type of advisory is triggered first?
- (a) A Resolution Advisory (RA) that includes the range of vertical speed at which the aircraft should be flown to avoid the thread aircraft.
- (b) A Resolution Advisory (RA) that includes the range of indicated airspeed at which the aircraft should be flown to avoid the thread aircraft.
- (c) A Traffic Advisory (TA) that includes the range of path angle at which the aircraft should be flown to avoid the thread aircraft.
- (d) A Traffic Advisory (TA), which is intended to assist the pilot in the visual acquisition of the conflicting aircraft.

VORTAC PNH <b>116.6</b> Chan <b>113</b>	APP CRS <b>235°</b>	Rwy Idg TDZE Apt Elev	<b>13502</b> <b>3603</b> <b>3605</b>
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VOR/DME RWY 22  
AMARILLO/ RICK HUSBAND AMARILLO INTL (A.M.A.)

 ASR	For inop MALSRS, increase S-22 visibility Cat D and E to 1¼.	 MALSR	MISSED APPROACH: Climbing left turn to 5100 via PNH R-176 to JILPY/11 DME and hold.
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ATIS <b>118.85 350.3</b>	AMARILLO APP CON★ <b>119.5 307.0</b>	AMARILLO TOWER★ <b>118.3(CTAF) 257.9</b>	GND CON <b>121.9 348.6</b>	CLNC DEL <b>121.65</b>	UNICOM <b>122.95</b>
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ANCHORAGE, ALASKA

AL-1500 (FAA)

LOC/DME  
I-ANC  
111.3  
Chan 50

APP CRS  
069°

Rwy 7R Idg  
10900  
TDZE  
130  
Apt Elev  
152

ANCHORAGE/ TED STEVENS ANCHORAGE INTL (ANC) (PANC)

ILS RWY 7R (CAT III)

MISSSED APPROACH: Climb to 600 then climbing right turn to 2500 via heading 200° and ANC R-173 to NAPTO Int/ANC 21.8 DME and hold, or when directed by ATC, climb to 600 then climbing right turn to 2000 via heading 280° direct BOB NDB and hold W, RT, 069° inbound. (ADF required).

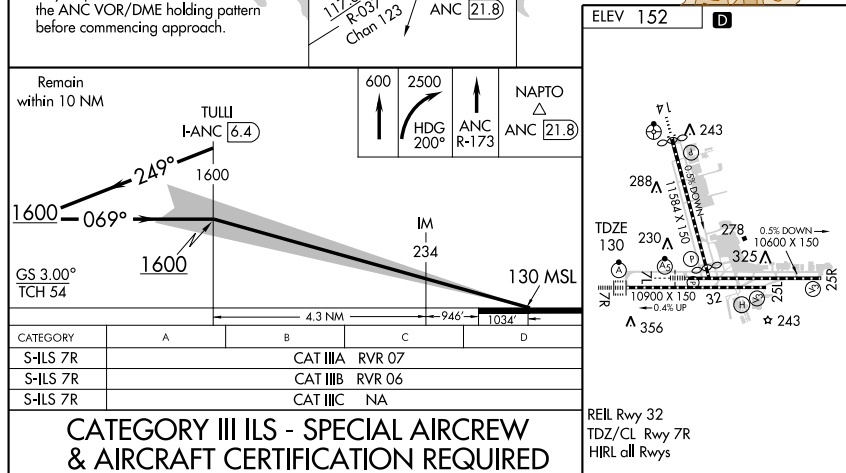
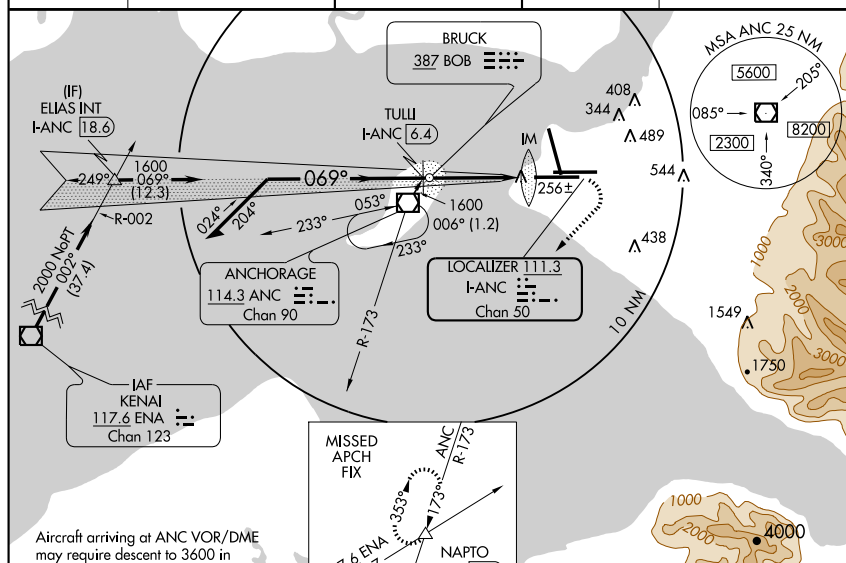
ATIS  
118.4

ANCHORAGE APP CON  
118.6 290.5

ANCHORAGE TOWER  
118.3 257.8

GND CON  
121.9 338.35

CLNC DEL  
119.4 323.1



ANCHORAGE, ALASKA

Orig-A 08325

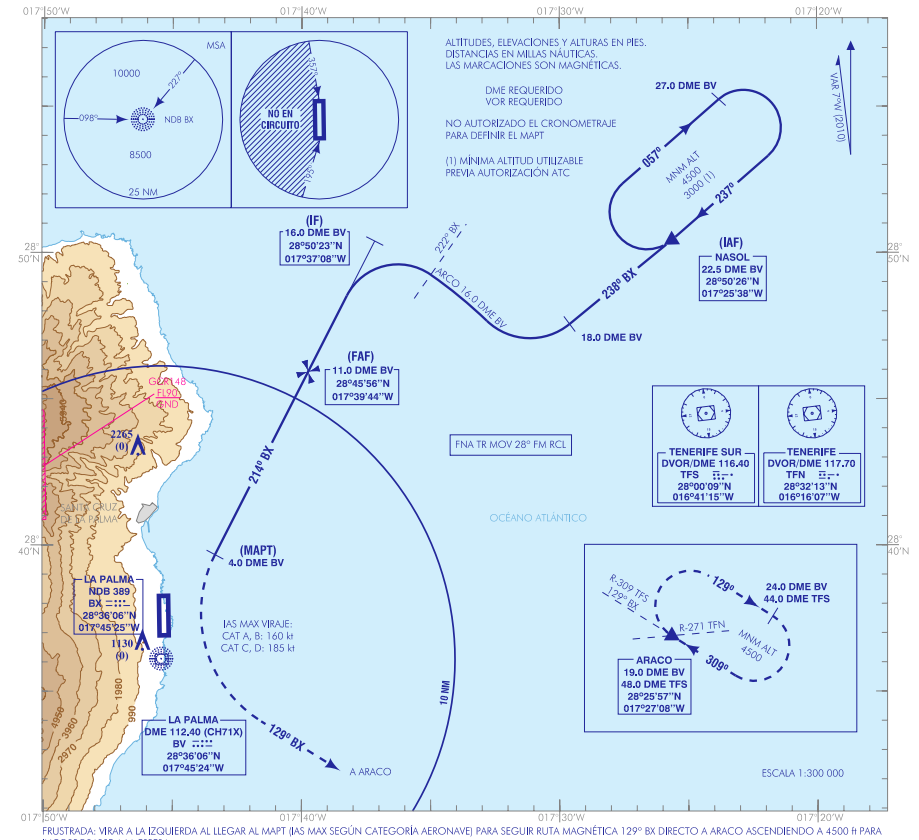
ANCHORAGE/ TED STEVENS ANCHORAGE INTL (ANC) (PANC)

61° 10' N-150° 00' W

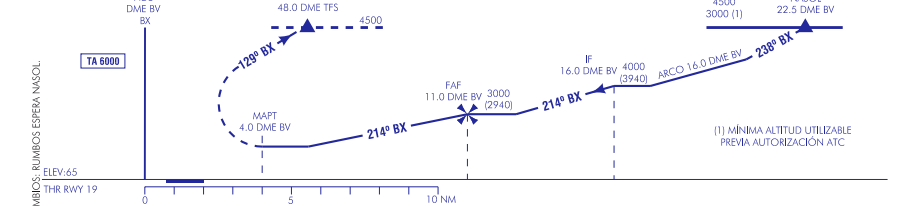
ILS RWY 7R (CAT III)

CARTA DE APROXIMACIÓN  
POR INSTRUMENTOS-OACIELEV AD  
107

APP 126.100  
TWR 118.900  
GMC 121.800

LA PALMA  
NDB

FRUSTRADA: VIRAR A LA IZQUIERDA AL LLEGAR AL MAPT (IAS MAX SEGÚN CATEGORÍA AERONAVE) PARA SEGUIR RUTA MAGNÉTICA 129° BX DIRECTO A ARACO ASCENDIENDO A 4500 H PARA INCORPORARSE A LA ESPERA.



HGT REF ELEV AD					
OCA/H		A	B	C	D
STA	2.5%	RESTRINGIDA A OCA/H DE CIRCUITO POR ANGULO DE LA DERROTA ENTRE FNA Y RCL EXCESIVO			
En circuito (H) sobre		1520 (1420)	1630 (1530)	2750 (2650)	

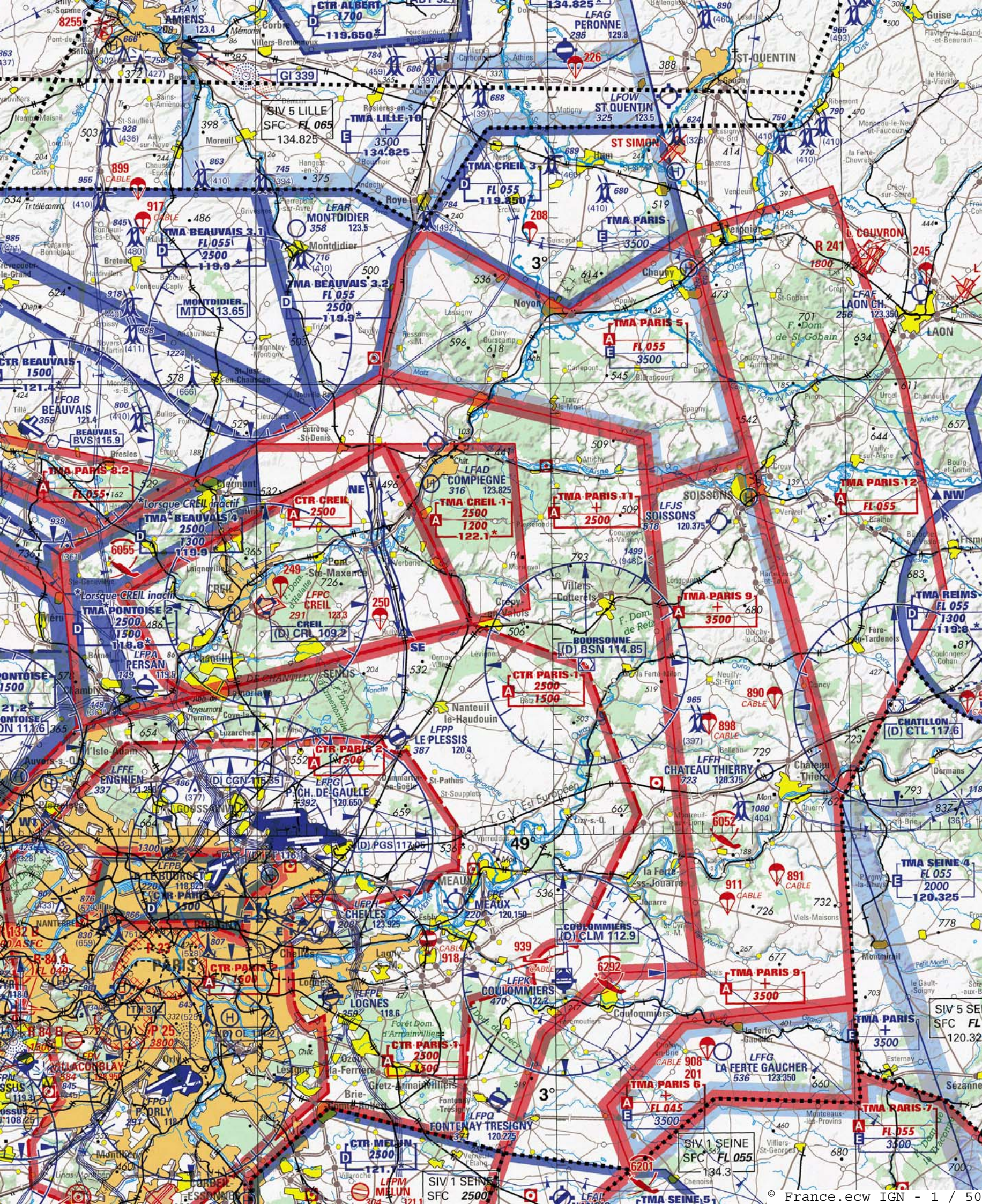
GS		kt	80	100	120	140	160	180				
FAF-THR:		m/min										
FAF-MAPT:		m/min										
ROD:		ft/min										
ALT/HGT DME ( ) FNA												
13 DME	12 DME	11 DME	10 DME	9 DME	8 DME	7 DME	6 DME	5 DME	4 DME	3 DME	2 DME	1 DME

WEF 12-JAN-12 (AIRAC AMDT 12/11)

AIP-ESPAÑA

AD 2-GCLA IAC/2







# INFRAESTRUCTURES DEL TRANSPORT AERI (ITA)

## Final Exam - Spring semester 2017

Correct answers

Pregunta	PERM. 1	PERM. 2	PERM. 3	PERM. 4
P 01	d	c	a	c
P 02	a	b	d	a
P 03	a	c	b	b
P 04	b	d	d	d
P 05	b	b	c	c
P 06	b	d	d	a
P 07	a	b	c	c
P 08	a	d	c	d
P 09	c	c	a	c
P 10	d	d	a	b
P 11	a	c	c	b
P 12	c	b	a	c
P 13	b	a	a	c
P 14	d	d	d	c
P 15	c	d	c	c
P 16	d	d	c	a
P 17	b	b	b	a
P 18	a	b	d	d
P 19	b	b	d	b
P 20	a	b	d	d
P 21	a	c	c	c
P 22	b	a	a	b
P 23	a	a	d	d
P 24	c	d	a	d
P 25	a	a	a	a
P 26	d	d	c	c
P 27	a	c	d	d
P 28	a	b	b	c
P 29	b	c	c	c
P 30	c	c	a	d
P 31	a	b	d	b
P 32	c	d	b	a
P 33	b	c	c	a
P 34	a	c	a	a
P 35	b	a	b	c
P 36	c	c	a	a
P 37	c	b	a	c
P 38	d	d	b	d
P 39	d	b	b	a
P 40	b	a	c	c
P 41	d	b	b	b
P 42	a	d	a	a
P 43	d	c	d	a
P 44	a	a	c	b
P 45	d	c	a	b
P 46	b	c	a	c
P 47	c	a	a	d
P 48	d	c	b	b

P 49	c	d	d	b
P 50	a	b	b	d
P 51	c	d	a	d
P 52	a	c	b	d
P 53	b	a	d	d
P 54	b	d	a	c
P 55	a	d	c	b
P 56	c	a	c	d
P 57	d	b	c	d
P 58	b	b	c	c
P 59	a	c	b	a
P 60	c	b	b	d
P 61	c	c	a	b
P 62	d	c	d	c
P 63	c	d	b	a
P 64	b	c	a	a
P 65	a	c	a	d
P 66	a	c	a	d
P 67	a	c	b	d
P 68	d	d	a	d
P 69	b	a	a	a
P 70	d	d	c	a
P 71	a	c	c	a
P 72	a	a	a	b
P 73	a	d	d	b
P 74	a	b	d	a
P 75	a	d	c	d
P 76	d	c	b	b
P 77	b	d	b	a
P 78	a	d	b	c
P 79	c	c	a	a
P 80	c	d	c	c
P 81	d	b	c	b
P 82	b	a	b	b
P 83	a	a	a	d
P 84	a	c	a	d
P 85	b	b	b	b
P 86	d	b	c	b
P 87	a	b	b	b
P 88	d	c	a	a
P 89	a	d	b	a
P 90	d	d	b	c