Infrastructures del Transport Aeri

Final exam - Spring semester 2014

Short questions: answer them with one word or one sentence in the space provided.

Correct answer: +1 point – Incorrect answer: -1point – Blank answer: 0 points.

The missed approach published in the SEVILLA ILS Y chart for RWY27 (annexed to this exam) has mainly two legs. How is defined the fix delimiting the end of the first leg and the beginning of the second leg?

What is the ATIS?

What is "**procedural control**", when talking about ATC?

Cite **three (3)** different aspects that may influence the design (shape and size) of an ATC sector.

Cite **three (3)** different ATFM initiatives

INFRAESTRUCTURES DEL TRANSPORT AERI (ITA)
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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 02 – Permutacio A:0 B:1 C:2 D:3
Use the **right** side numbering to mark your answers into the optical mark recognition sheet
Marking an option into the first answer line selects this option, marking an option into the second answer line cancels it

Permutacio A

1. Which of the following transponder codes indicates *distress*?
   (a) 7700
   (b) 1215
   (c) 7500
   (d) 7600

2. Which is the correct order of these types of airspace/areas if we sort them **from fully segregated to non-segregated**? (TSA: temporary segregated area; RCA: reduced coordination airspace; TRA: temporary reserved area; PCA: prior coordination airspace)
   (a) RCA, PCA, TRA, TSA.
   (b) TRA, TSA, RCA, PCA.
   (c) PCA, RCA, TSA, TRA.
   (d) TSA, TRA, PCA, RCA.

3. An APV is a:
   (a) a precision approach with vertical guidance.
   (b) an approach procedure where only vertical guidance is provided (but not lateral).
   (c) an approach procedure where only lateral guidance is provided (but not vertical).
   (d) an approach with vertical guidance but with navigation performances worse than precision approaches.

4. Which of these statements is correct:
   (a) The DME is used to define airways.
   (b) The DME aid is 1° accurate.
   (c) The DME aid generates a straight line of position (LOP).
   (d) The DME aid generates a curved line of position (LOP).

5. If a significant amount of aircraft in a given airspace operate with CPDL, the ATC workload not related with communications may presumably:
   (a) Decrease.
   (b) Remain approximately the same.
   (c) Increase.
   (d) None of the other options is correct.

6. 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 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.
   (c) the CFMU system (or facility) that processes the flight plans sent by the aircraft operators.
   (d) the European implementation of ATFM, managed by Eurocontrol.

7. Who is the responsible to coordinate the transfer of an aircraft which is not going to respect the Letter of Agreement (LoA) between two ATC sectors?
   (a) The strategic controller
   (b) The tactical controller.
   (c) The ATC supervisor.
   (d) The executer controller.

8. An airspace sector has been regulated and its maximum capacity is set to 6 aircraft per hour. Table 1 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) 1 minute.
   (b) 5 minutes.
   (c) 10 minutes.
   (d) No delay.

9. 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 - 10min, CTOT +10 min]
   (d) [CTOT - 5min, CTOT +10 min]

10. In a Localizer only approach procedure, the decision to land or to execute a missed approach must be taken, at the latest, when...
    (a) reaching the DA.
    (b) reaching the MDA.
    (c) reaching the MAPt.
    (d) reaching the OCA.

11. Regarding the figure 1(a), the heading of the Delta aircraft is:

(a) approximately 0

(b) approximately 90

(c) approximately 45

(d) approximately 130

12. North Atlantic oceanic airspace is...

(a) A free-flight area.

(b) A free-route area with an organised track system (called north Atlantic tracks).

(c) A free-route area.

(d) An area with only RNAV airways.

13. Regarding the Instrumental Approach Chart (IAC) **Sevilla ILS Y RWY27**, annexed to this exam, the initial approach segment is...

(a) a tear-drop procedure.

(b) a 45/180 procedure turn.

(c) a dead-reckoning segment that depends on the aircraft speed.

(d) a racetrack procedure.

14. The OCA...

(a) is the safety margin between the aircraft and the highest obstacle in the final approach segement.

(b) is a synonym of minimum descent altitude.

(c) is the minimum visibility required for an instrumental approach procedure.

(d) None of the other answers are correct.

15. Which of the following statements is *correct*:

(a) two or more existing airspace sectors can be collapsed into a single one if the air traffic demand decreases

(b) an airspace sector is continuously resized and shaped in real-time in order to adapt the air traffic demand to the workload of the air traffic controller

(c) all the answers are correct

(d) at pre-tactical level (one day before operations for instance), the size and shape of sectors are defined to better accommodate their capacity to the forecast demand.

16. In a NDB approach procedure, the decision to land or to execute a missed approach must be taken, at the latest, when...

(a) reaching the MDA.

(b) reaching the OCA.

(c) reaching the DA.

(d) reaching the MAPt.

17. In a conventional IFR holding, which leg is typically a dead reckoning leg?

(a) The inbound and the outbound legs.

(b) The outbound leg.

(c) The inbound leg.

(d) Only the two turns are executed in dead reckoning.

18. Regarding the Instrumental Approach Chart (IAC) **Sevilla ILS Y RWY27**, annexed to this exam, the approach procedure starts...

(a) when overflying a LOC facility.

(b) when overflying a NDB facility.

(c) at a radionavigation FIX.

(d) when overflying a VOR facility.

19. Regarding the Instrumental Approach Chart (IAC) **Sevilla ILS Y RWY27**, annexed to this exam, the radionavigation aid labeled as *ISV* is a:

(a) Localizer.

(b) Locator.

(c) DME.

(d) VOR/DME.

20. An airspace sector has been regulated and its maximum capacity is set to 6 aircraft per hour. Table 1 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) 10 minutes.

(b) No delay.

(c) 1 minute.

(d) 5 minutes.

21. Regarding the flexible use of airspace (FUA) concept, the second level (pre-tactical level) deals with:

(a) The day-to-day allocation of airspace, according to users requirements.

(b) The definition of national airspace policy and predetermined airspace structures.

(c) The definition of the sectorisation and capacity of the military airways.

(d) The real-time use and management of available airspace.

22. Which of the following statements does NOT apply to the FUA concept?

(a) Airspace should be considered as one continuum and used flexibly on a day-to-day basis.

(b) Airspace segregations are not longer permanent and they are based on real use during conveniently chosen time periods.

(c) All the other options apply to the FUA concept.

(d) Airspace should no longer be designated either military or civil.

23. How the letter T is spelled, according to the ICAO radio-telephony alphabet?

(a) Turtle

(b) Tanger

(c) Tango

(d) Tiger

24. 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) Alert phase.

(b) Distress phase.

(c) Uncertainty phase.

(d) Awareness phase.

25. 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) CTOT = EOBT + ground delay + Taxi Time + Trip Time

    (b) CTOT = EOBT + ground delay + Taxi Time

    (c) CTOT = EOBT + ground delay

    (d) CTOT = EOBT + COBT

26. Given a specific runway, which of the approaches will lead (in general) to the highest MDA or DA?

    (a) a VOR straight-in approach approach procedure.

    (b) a ILS CAT-II straight-in approach approach procedure.

    (c) a ILS CAT-I straight-in approach approach procedure.

    (d) a VOR circling to approach approach procedure.

27. According to Figure 1(b)...

    (a) Turns in the airfield traffic pattern are always to the left.

    (b) Turns in the airfield traffic pattern are to the right for runway 09 and to the left for runway 27.

    (c) Turns in the airfield traffic pattern are to the left for runway 09 and to the right for runway 27.

    (d) Turns in the airfield traffic pattern are always to the right.

28. Which of the following controlled airspace zones is sized to accommodate, approximately, the intermediate and final segments of an instrumental approach procedure?

    (a) The CTA.

    (b) The ATZ.

    (c) The CTR.

    (d) The TMA.

29. Regarding the Instrumental Approach Chart (IAC) **Sevilla ILS Y RWY27**, annexed to this exam, imagine an aircraft is instructed to hold at NIKAL after executing the missed approach procedure. The aircraft will enter the hold with...

    (a) a parallel entry procedure.

    (b) an offset entry procedure.

    (c) a racetrack entry procedure.

    (d) a direct entry procedure.

30. Who decides if a waypoint is of type fly-by or fly-over?

    (a) The aircraft operator.

    (b) The pilot in command.

    (c) The procedure designer.

    (d) The air traffic controller.

31. An airspace sector has been regulated and its maximum capacity is set to 6 aircraft per hour. Table 1 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) EZY078

    (b) AFR022

    (c) This slot will not be used by any aircraft.

    (d) DAL077

32. In which of the following airspace classes VFR flights are not allowed?

    (a) in airspace class G.

    (b) VFR flights are allowed in all airspace classes, providing that they are conveniently equipped with VHF radio equipment and secondary radar transponder if so required.

    (c) in airspace class A.

    (d) in airspace class E.

33. Regarding the airborne separation assurance systems (ASAS) and airborne collision avoidance systems (ACAS), which of the following statements is correct?

    (a) ASAS serves as a last-resort safety net irrespective of any separation standards.

    (b) All the answers are correct.

    (c) ACAS could be an enabler of the Free Flight concept.

    (d) Traffic collision avoidance system (TCAS) is a commercially available ACAS system.

34. A VFR flight is flying inside an airspace of class D. The air traffic controller is responsible to separate it from:

    (a) other IFR flights.

    (b) the controller has no separation responsibility with VFR flights in airspace class D.

    (c) other VFR and IFR flights.

    (d) other VFR flights.

35. Consider the VFR chart of the area around Perpignan, provided in annex to this exam. The lower limit of the Dangerous area D142, located over the mediterranean sea is:

    (a) the sea level.

    (b) 3000 ft above the sea level.

    (c) 3000 ft above the 1013.25 hPa isobar.

    (d) 3000 ft above the elevation of Perpignan airport.

36. Imagine an airport with SIDs going into all directions and STARs coming from all directions, such as Barcelona airport. Which of the following measures, aiming to reduce the workload of air traffic controllers, is the more **strategic** one?

(a) Apply an ATFM measure (regulation) in case the forecast demand exceeds the estimated capacity.

(b) Give *d*irect-to instructions (radar vectoring) to aircraft, by air traffic controllers, to avoid potential conflicts at crossing points.

(c) Apply an ATFM measure (regulation) in case the actual demand exceeds the existing capacity.

(d) Publish SIDs and STARs such that they cross at points where conflicting aircraft will be typically flying at very different altitudes.

37. Consider the VFR chart of the area around Limoges, provided in annex to this exam. The airspace class over the NDB LSU (south-west of Limoges airport) at 4500 ft is:

(a) Class C.

(b) Class E.

(c) Class G.

(d) Class A.

38. Mark the **wrong** statement:

(a) Air Traffic Control is provided when Flight Information Services are provided.

(b) Flight Information Services are provided when Air Traffic Control is provided.

(c) Alert Services are provided when Air Traffic Control is provided.

(d) Alert Services are provided when Flight Information Services are provided.

39. 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) All the answers are correct.

(c) Such systems are commonly composed of multiple ground stations, located at accurately-surveyed points.

(d) 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.

40. The main objective of airspace management (ASM) is to:

(a) provide flight information services to civil aircraft according to the class of airspace.

(b) all the answers are correct.

(c) develop a network of ATS routes and airspace structures to try to accommodate the forecast air traffic volumes.

(d) keep the forecast demand below estimated capacity in airports and airspace sectors by issuing different flow management initiatives.

41. Which of the following statements is correct?

(a) In general, the majority of aircraft will start the descent from the cruise altitude when starting the STAR (*).

(b) None of the other answers are correct.

(c) Both answers marked with a (*) are correct.

(d) In general, the majority of aircraft will arrive at the cruise altitude when finishing the SID (*).

42. Regarding the Instrumental Approach Chart (IAC) **Pamplona VOR B**, annexed to this exam, imagine an aircraft is instructed to hold at PPN after executing the missed approach procedure. The aircraft will enter the hold with...

(a) a racetrack entry procedure.

(b) an offset entry procedure.

(c) a direct entry procedure.

(d) a parallel entry procedure.

43. Regarding the Instrumental Approach Chart (IAC) **Pamplona VOR B**, annexed to this exam, the missed approach segment is mainly:

(a) mainly composed by a NDB course and dead-reckoning leg.

(b) mainly composed by a dead-reckoning leg and a VOR radial.

(c) mainly composed by a NDB course and a VOR radial.

(d) mainly composed by two VOR radials.

44. Which of the following CFMU systems is used to generate the network operations plan?

(a) The PREDICT

(b) The IFPS

(c) The ETFMS

(d) The RPL

45. Which of the following information given by an air traffic controller should NOT be read-back by the aircraft crew?

(a) the altimeter setting.

(b) the wind direction in a landing clearance.

(c) the transponder code.

(d) the altitude in a altitude change clearance.

46. Regarding the Instrumental Approach Chart (IAC) **Pamplona VOR B**, annexed to this exam...

(a) it is a precision approach.

(b) it is an APV approach.

(c) it is a CAT-I approach.

(d) it is a circling to approach.

47. Regarding the Instrumental Approach Chart (IAC) **Sevilla ILS Y RWY27**, annexed to this exam, the aircraft operator will publish for their crew a...

(a) decision altitude.

(b) obstacle clearance altitude.

(c) minimum descent altitude.

(d) ILS minimum altitude.

48. Which of the following CFMU systems can provide historical data to generate future possible demand scenarios?

(a) The ENV

(b) The DWH

(c) The RCAT

(d) The EAD

49. Regarding the Instrumental Approach Chart (IAC) **Sevilla ILS Y RWY27**, annexed to this exam:

(a) It is a straight-in and a precision approach.

(b) It is a straight-in and a non precision approach.

(c) It is a circling and a precision approach.

(d) It is a circling and a non precision approach.

50. Tactical ATFM should:

(a) Manage current flights with existing ATC capacity.

(b) Balance flights next day with available ATC Capacity.

(c) Define the national airspace policy and predetermined airspace structures.

(d) Match long-term demand and needed ATC capacity.

51. The goal of the Air Navigation Services (ANS) is to improve one or more of the following indicators at the same time none of the remaining ones are degraded:

(a) Safety, security and predictability.

(b) Safety and security.

(c) Safety and traffic.

(d) Safety, capacity and efficiency.

52. Regarding the Instrumental Approach Chart (IAC) **Pamplona VOR B**, annexed to this exam, the aircraft operator will publish for their crew...

(a) a minimum descent altitude.

(b) an obstacle clearance altitude.

(c) a decision altitude.

(d) a NDB altitude.

53. The *free flight* concept allows...

(a) the pilot to freely chose a route joining two points without the need for overflying specific ground facilities at tactical level assuring self-separation with other aircraft.

(b) the procedure designer to design guided segments joining two points without the need for overflying specific ground facilities.

(c) the pilot to freely plan a route joining two points without the need for overflying specific ground facilities and submit the route in the flight plan.

(d) all the answers are correct.

54. Regarding the Instrumental Approach Chart (IAC) **Pamplona VOR B**, annexed to this exam, the radionavigation aid labeled as *PAM* is a:

(a) NDB.

(b) VOR/DME.

(c) DME.

(d) Locator.

55. A small aircraft **with no radio equipment** flying in VFR wants to fly from *St Junien (LFBJ)*, located at the east of Limoges, to the north-east following a route of constant heading of approximatelly 030^o. Check the VFR chart provided in annex to this exam. Which of the following answers is correct?

(a) This flight can be done providing the aircraft will not enter the CTR of Limoges.

(b) This flight cannot be done without a radio.

(c) This flight can be done providing the aircraft will not enter the CTR of Limoges, and remain always below 1000 ft above ground level.

(d) This flight can be done providing the aircraft will not enter the CTR of Limoges, and remain always above 1000 ft above ground level and below 4000 ft above the mean sea level.

56. Which of these statements is **correct**?

(a) Precision and APV approaches provide vertical guidance in the final approach segment, while non precision approaches do not provide any vertical guidance.

(b) APV approaches are those where the final approach segment is executed visually.

(c) Precision approaches provide vertical guidance in the initial, intermediate and final approach segments, while APV and non precision approaches do not provide any vertical guidance.

(d) Precision approaches provide vertical guidance in the final approach segment, while APV and non precision approaches do not provide any vertical guidance.

57. A VFR aircraft is flying in RVSM airspace with heading 295^o, following the *odd-even* rule to assign a flight level, a possible flight level for the flight could be:

(a) FL120

(b) FL130

(c) FL125

(d) FL135

58. Dead reckoning navigation...

(a) can only be used by IFR flights (except in case of an emergency).

(b) is typically used by IFR flights and eventually used by VFR flights.

(c) is typically used by VFR flights and eventually used by IFR flights.

(d) can only be used by VFR flights (except in case of an emergency).

59. What is the main drawback of the very high frequency (VHF) spectrum for air navigation purposes?

(a) In order to avoid mutual interference, two close transmitters must use different frequencies.

(b) VHF radio waves refract in the atmosphere and, therefore, the interference of the overall system is increased.

(c) In order to avoid mutual interference, two distant transmitters must use different frequencies.

(d) The VHF spectrum is not used in air navigation due to its bad spectral behaviour.

60. Consider the VFR chart of the area of Perpignan, provided in annex to this exam. The airspace class over the town of *Le Soler* (East of Perpignan city) at 1300 ft above ground level is:

    (a) Class A.

    (b) Class D.

    (c) Class E.

    (d) Class G.

61. Alerting services shall be provided...

    (a) As far as practicable, to all other aircraft having filed a flight plan or otherwise known to the air traffic services.

    (b) To any aircraft known or believed to be the subject of unlawful interference.

    (c) All are correct.

    (d) For all aircraft provided with ATC service.

62. Regarding the figure 1(a), what does the tip of the black line appearing next to each aircraft symbol indicate?

    (a) The black line gives a visual information to the controller regarding the vertical speed of the aircraft.

    (b) The estimated position of the aircraft, after a given period of time, based on the filed flight plan.

    (c) The estimated position of the aircraft, after a given period of time, based on the current aircraft heading and speed.

    (d) The minimum separation distance between two aircraft.

63. Which transponder mode transmits only the transponder code and the barometric altitude of the aircraft??

    (a) Mode C.

    (b) Mode A.

    (c) Mode S.

    (d) Mode B.

64. Regarding the figure 1(a), the Delta aircraft is:

    (a) at FL250 and descending, cleared to FL190 and with a planned exit level at FL160.

    (b) at FL190 and descending, cleared to FL160 and with a planned exit level at FL250.

    (c) at FL190 and descending, cleared to FL250 and with a planned exit level at FL160.

    (d) at FL250 and descending, cleared to FL160 and with a planned exit level at FL190.

65. Which of the following statements is NOT a new concept/system regarding the **communications** in the future CNS systems for ATM?

    (a) Aircraft Communications Addressing and Reporting System (ACARS).

    (b) Controller-Pilot DataLink Communications (CPDLC).

    (c) Reduced VHF frequency spacing (8.33 kHz).

    (d) Automatic Dependent Surveillance (ADS).

66. What is a TSA (temporary segregated area)?

    (a) a volume of airspace temporary reserved for IFR terminal maneuvers where VFR traffic cannot transit under any circumstance

    (b) a volume of airspace temporary reserved and allocated for specific use where civil traffic cannot transit under any circumstance.

    (c) a volume of airspace temporary reserved and allocated for specific use where civil traffic might transit under an ATC clearance.

    (d) a volume of airspace temporary reserved for IFR terminal maneuvers where VFR traffic might transit under an ATC clearance

67. Which of the following systems can provide a RNAV functionality?

    (a) DME/DME.

    (b) GNSS.

    (c) VOR/DME.

    (d) all the answers are correct.

68. If the misalignment of the final approach track with respect to the runway centre line exceeds 30 degrees...

    (a) a straight-in approach is possible if the final descent gradient does not exceed some specific limits.

    (b) an instrumental approach cannot be designed in such circumstances.

    (c) only a precision approach is possible

    (d) only a circling to approach is possible.

69. Which is the radio-telephony callsign of a flight labelled as *AZA69* in an ATC radar screen?

    (a) Alpha Zulu Alpha Six Niner

    (b) Europa Six Niner

    (c) Alitalia Six Niner

    (d) Air France Six Niner

70. Regarding the Instrumental Approach Chart (IAC) **Pamplona VOR B**, annexed to this exam, the approach starts at:

    (a) The intersection of radial 210^o with the arc of 10.0NM of PAP VOR/DME.

    (b) The intersection of radial 207^o with the arc of 20.5NM of PPN VOR/DME.

    (c) The intersection of radial 207^o of PPN VOR/DME with the arc of 14.0NM of PAP VOR/DME.

    (d) The intersection of radial 207^o with the arc of 14.0NM of PPN VOR/DME.

71. Who is *responsible* to check that the positioning geometry is good enough to fly an RNAV DME/DME procedure?

    (a) the air traffic controller.

    (b) the pilot in command.

    (c) the DME receiver.

    (d) the procedure designer.

72. Air Navigation Services (ANS) are composed by:

(a) CNS, ATM, Search and Rescue, AIS, and Meteorology services.

(b) ASM, ATFM and ATS.

(c) Alert services, flight information services and air traffic control.

(d) AIP, NOTAM and CIRC.

73. Which of the following institutions is NOT an aircraft operator?

(a) Ryanair.

(b) Grup Airmed.

(c) Airbus.

(d) Lufthansa.

74. Regarding the Instrumental Approach Chart (IAC) **Sevilla ILS Y RWY27**, annexed to this exam, the intermediate approach segment is...

(a) a dead-reckoning heading.

(b) there is no intermediate segment in this procedure.

(c) a NDB course.

(d) a VOR radial.

75. A search and rescue helicopter has arrived to the St. Cyprien beach, at the south-east of Perpignan and must transport urgently a wounded person to the Hospital of Perpignan, which is located in Perpignan city (slightly north-west of the PL facility). This transfer flight is planned at 500 ft above the terrain and in VFR. In these conditions, which of the following statements is correct (check the VFR chart provided in annex to this exam)?

(a) Is not necessary for the pilot to contact the ATC (albeit it is recommended).

(b) The pilot must receive a clearance to enter the CTR of Perpignan.

(c) VFR flights cannot enter the CTR of Perpignan. However, being a search and rescue aircraft this helicopter can proceed with the planned flight.

(d) The pilot must always be in radio-contact with the ATC during the whole flihgt.

76. Fast-time simulation softwares are a key element in...

(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).

77. Regarding the Instrumental Approach Chart (IAC) **Sevilla ILS Y RWY27**, annexed to this exam, the missed approach segment is...

(a) mainly composed by a VOR radial and an arc DME.

(b) mainly composed by two NDB courses.

(c) mainly composed by a dead-reckoning leg and an arc DME.

(d) mainly composed by a NDB course and an arc DME.

78. In which of the following processes, the class of an airspace (A, B, C, D, E, F or G) is determined?

(a) In the provision of Air Traffic Services (ATS).

(b) In the provision of Air Information Services (AIS).

(c) In Air Traffic Flow and Capacity Management (ATFCM).

(d) In AirSpace Management (ASM).

79. What does *broadcast* mean, in the context of ADS-B?

(a) that the ADS-B messages are automatically computed without the active action of the pilot.

(b) that the ADS-B messages are continuously requested by ground ATC facilities.

(c) that all ADS-B messages are automatically stored in a database.

(d) that the ADS-B messages are continuously transmitted.

80. Which of the following statements is true?

(a) CPDL is based in long text messages with attached images.

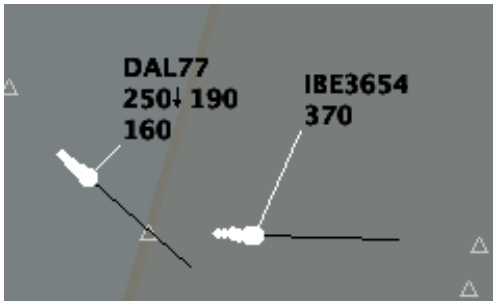
(b) CPDL may make worse the current shortage of available frequencies.

(c) None of the other options is correct.

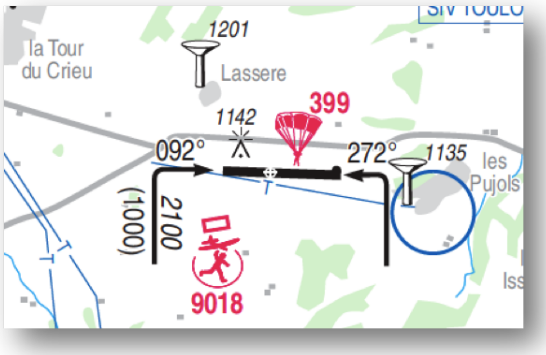
(d) CPDL may allow reducing the use of voice communication between ATC and pilots.

Table 1: Estimated Time Over (ETO) at a given sector for a set of example aircraft

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

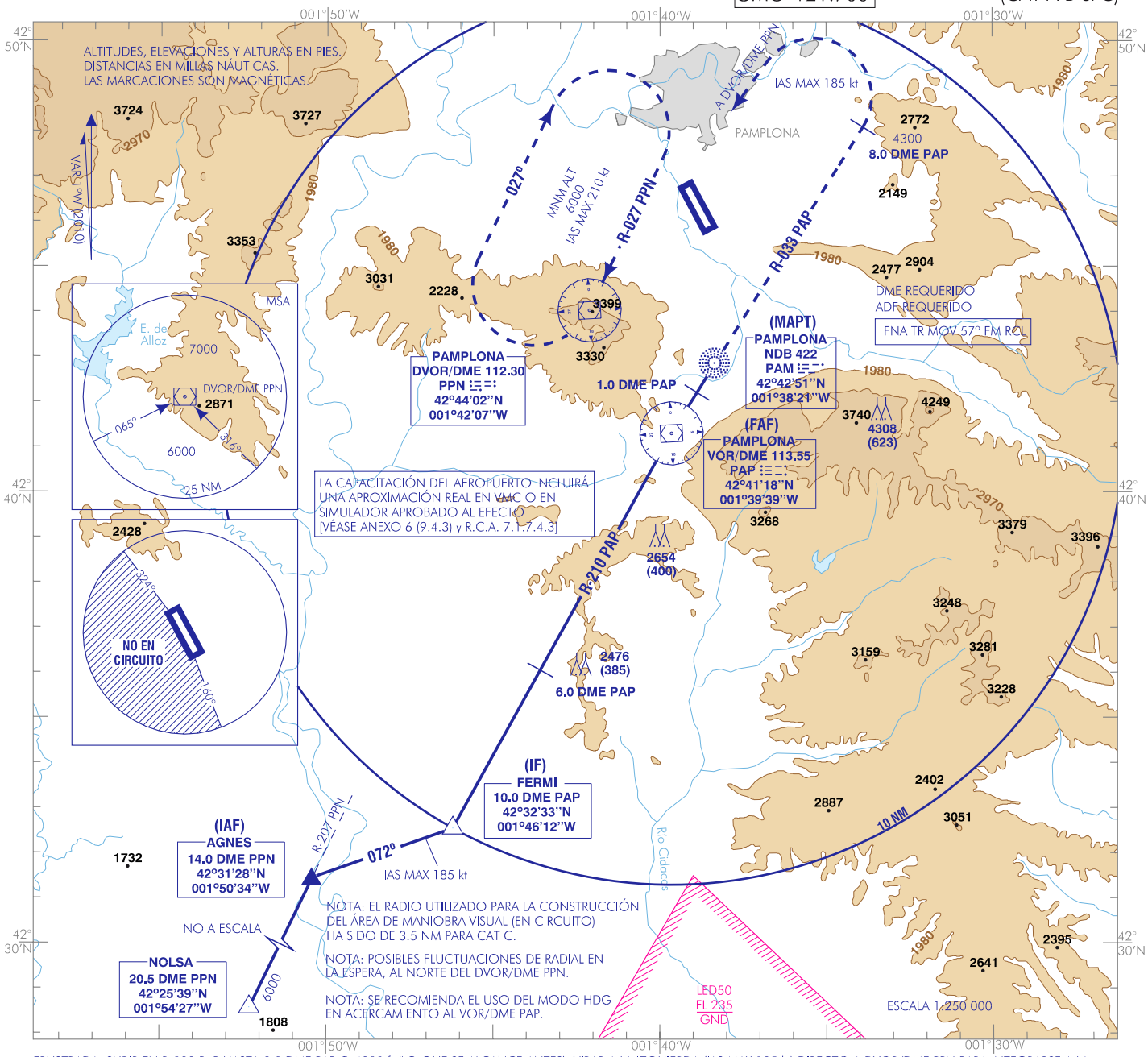


(a) ATC radar screenshot

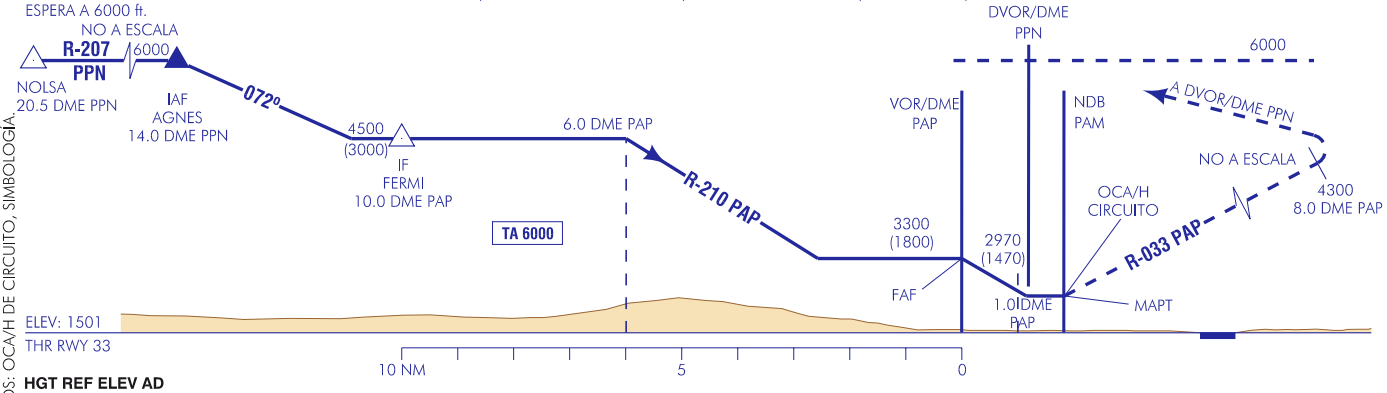


(b) Airfield traffic pattern

Figure 1:



FRUSTRADA: SUBIR EN R-033 PAP HASTA 8.0 DME PAP O 4300 ft (LO QUE SE ALCANCE ANTES). VIRAR A LA IZQUIERDA (IAS MAX 185 kt) DIRECTO A DVOR/DME PPN PARA INTEGRARSE A LA ESPERA A 6000 ft.



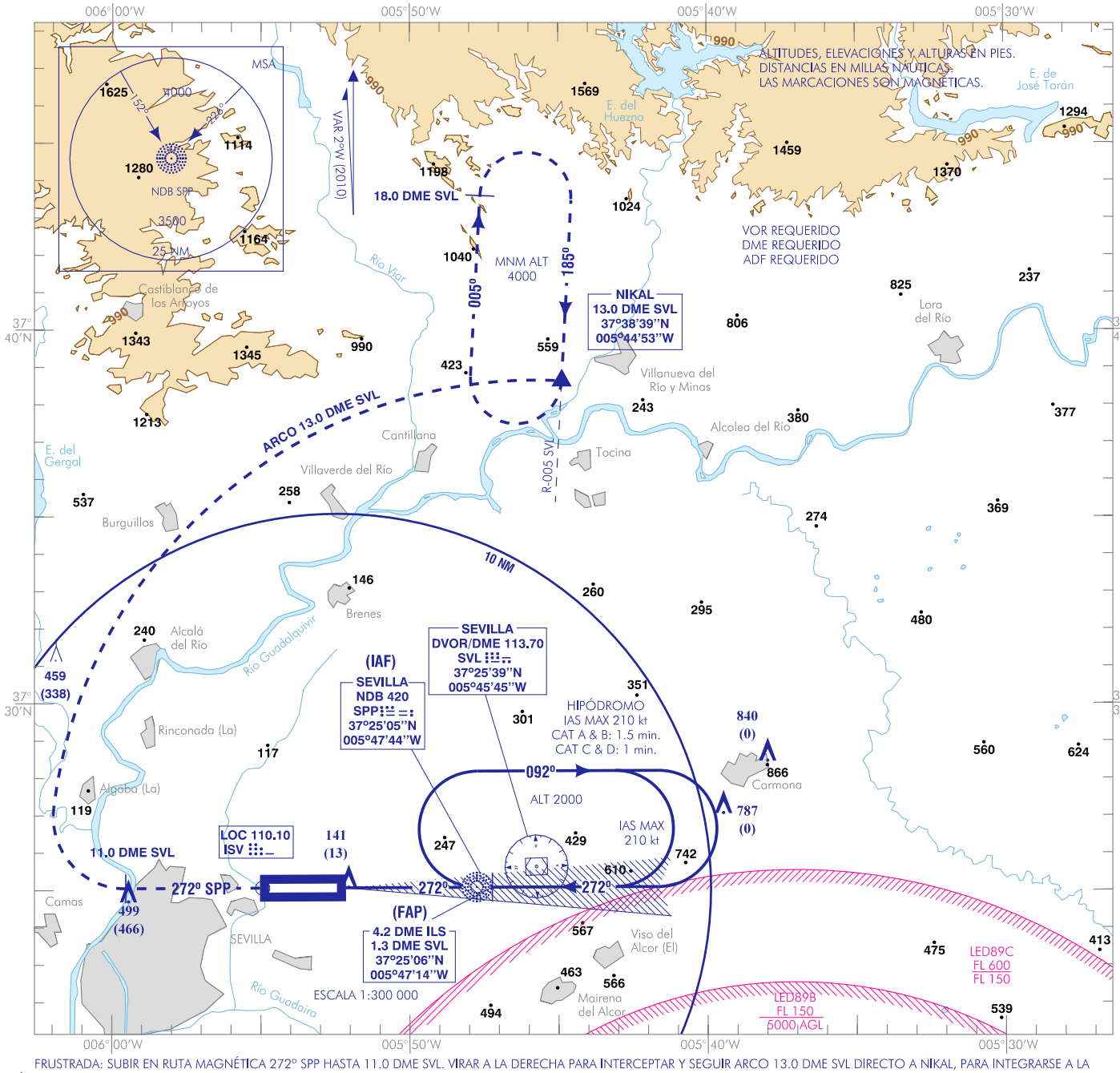
CAMBIOS: OCA/H DE CIRCUITO, SIMBOLOGÍA.

HGT REF ELEV AD

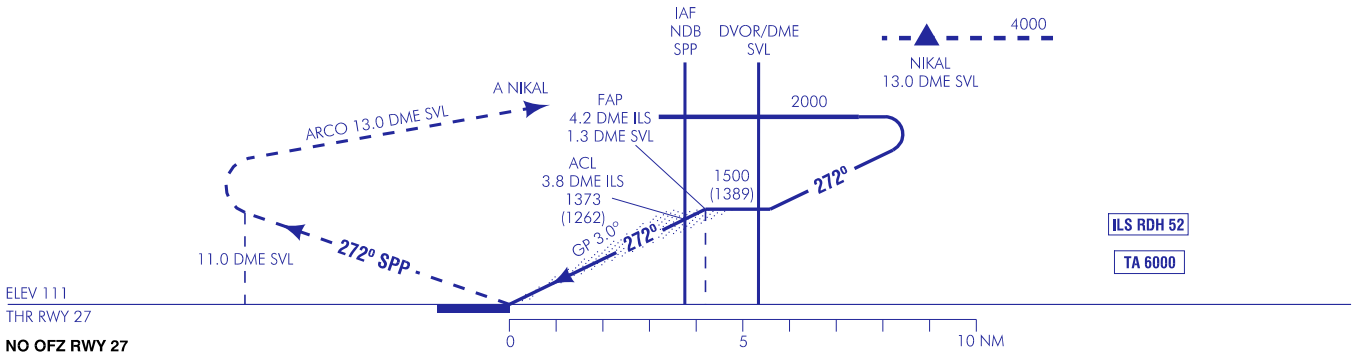
OCA/H		A	B	C	D
STA	2.5%	RESTRINGIDA A OCA/H DE CIRCUITO POR ÁNGULO DE LA DERROTA ENTRE FNA Y RCL EXCESIVO			
	4.5%	RESTRINGIDA A OCA/H DE CIRCUITO POR ÁNGULO DE LA DERROTA ENTRE FNA Y RCL EXCESIVO			
En circuito (H) sobre	2.5%	3300 (1800)			
	4.5%	2500 (1000)	2600 (1100)	3100 (1600)	

GS	kt	80	100	120	140	160	180
FAF-THR: 4.6 NM	min:s	3:29	2:47	2:19	1:59	1:44	1:33
FAF-MAPT: 1.8 NM	min:s	1:22	1:06	0:55	0:47	0:41	0:37
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



FRUSTRADA: SUBIR EN RUTA MAGNÉTICA 272° SPP HASTA 11.0 DME SVL. VIRAR A LA DERECHA PARA INTERCEPTAR Y SEGUIR ARCO 13.0 DME SVL DIRECTO A NIKAL, PARA INTEGRARSE A LA ESPERA A 4000 ft AMSL O SUPERIOR.



CAMBIOS: DISTANCIAS DME FAP, OCA/H EN CIRCUITO.

NO OFZ RWY 27

HGT REF ELEV THR RWY 27

OCA/H		A	B	C	D
STA	CAT I	304 (193)	316 (205)	324 (213)	335 (224)
En circuito (H) sobre 111		630 (520)		990 (880)	1200 (1090)

GS	kt	80	100	120	140	160	180
FAP-THR: 4.2 NM	min:s	3:07	2:29	2:05	1:47	1:33	1:23
FAF-MAPT:	min:s						
ROD: 5.2 %	ft/min	425	531	637	743	849	955

ALT/HGT DME (ILS) 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
									1460 (1350)	1130 (1020)	810 (700)	490 (380)

INFRAESTRUCTURES DEL TRANSPORT AERI (ITA)
Final Exam - Spring semester 2014

Correct answers

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

P 48	b	d	d	a
P 49	a	a	d	d
P 50	a	d	b	b
P 51	d	c	c	b
P 52	a	a	b	a
P 53	a	c	a	b
P 54	a	d	d	d
P 55	a	c	c	d
P 56	a	d	b	c
P 57	c	a	d	b
P 58	c	d	a	b
P 59	a	c	c	c
P 60	b	d	d	c
P 61	c	d	a	c
P 62	c	a	b	c
P 63	a	b	b	c
P 64	a	d	c	c
P 65	d	d	d	b
P 66	b	d	a	b
P 67	d	a	b	d
P 68	d	c	d	a
P 69	c	d	b	c
P 70	d	a	d	b
P 71	d	d	a	d
P 72	a	b	b	d
P 73	c	c	a	b
P 74	c	d	d	d
P 75	b	c	a	a
P 76	a	c	b	b
P 77	d	d	c	b
P 78	d	d	b	c
P 79	d	d	c	a
P 80	d	c	b	a