INFRAESTRUCTURES DEL TRANSPORT AERI (ITA)
Final Exam - Fall semester 2016

Using the charts given in Annex, write the best IFR route, **as it would be written for an ATS flight plan** for the following flights:
[0.5 exam points] Reus (LERS) to Menorca (LEMH) **Write it to the sheet behind the test answers form**
[0.5 exam points] Menorca (LEMH) to Eivissa (LEIB) **Write it to the sheet behind the test answers form**

Test [9 exam points]
Correct answer: +1 test point – Incorrect answer: -1/3 test points – Blank answer: 0 test points
For each question **only one answer** is correct

You have Permutation A : (Marc CODE = 0 in the test andwers form)

1. Airspace Management (ASM) is responsible for:
   (a) all the answers are correct.
   (b) comunication, navigation and surveillance infrastructure.
   (c) air traffic flow management.
   (d) the design of the ATS route network.

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. Regarding transition level/altitude, which is the correct statement?
   (a) When climbing, pilots must change the altimeter setting from STD to QNH.
   (b) STD = QNH if and only if pressure at sea level equals to 1013.25 hPa at the specific region/airport.
   (c) When descending, pilots must change the altimeter setting from STD to QNH at the specific transition altitude.
   (d) None of the other answers are correct.

4. Regarding future concepts in airspace management, which of the following statements is correct?
   (a) A functional airspace block (FAB) is as an airspace block based on operational requirements and established regardless of State boundaries.
   (b) The flexible use of airspace (FUA) initiative aims at designing airspace sectors regardless State boundaries.
   (c) Europe does not need further airspace initiatives as airspace sovereignty is fully delegated to the European Union.
   (d) The USA have similar problems as Europe regarding the airspace sovereignty and sectorisation issues.

5. Why standard terminal arrival routes contain typically **minimum altitude** restrictions for certain segments?
   (a) To allow visual self-separation procedures.
   (b) To allow continuous descent operations (CDO).
   (c) To strategically de-conflict them with departures crossing from below.
   (d) To strategically de-conflict them with departures crossing from above.

6. Which of these operations can improve significantly the landing capacity of an airport with close parallel runways?
   (a) Parallel self-separation visual approaches.
   (b) Parallel ILS CAT-III approaches with radar control.
   (c) Parallel ILS CAT-III approaches with procedural control.
   (d) Parallel instrumental approaches only with aircraft equipped with TCAS.

7. Which of the following controlled airspace zones is sized to accommodate, approximately, the intermediate and final segments of an instrumental approach procedure?
   (a) The ATZ.
   (b) The CTR.
   (c) The TMA.
   (d) The CTA.

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

9. A secondary objective of air traffic flow management (ATFM) is...
   (a) to monitor the CNS infrastructure.
   (b) to monitor the aeronautical inforamation 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 holding.
    (b) Level capping.
    (c) Call for release.
    (d) Miles in trail.

11. Schedule (or IATA) slots...
    (a) are defined in European airpots 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 strike (union action) from French ATC is expected for the next week...
    (a) ATFM regulations take place.
    (b) IATA regulations take place.
    (c) airspace sectors are redesigned creating new sectorisations capable to handle the maximum amount of traffic demand.
    (d) some airports outside France may be closed.

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) CTOT = EOBT + COBT
    (b) CTOT = EOBT + ground delay
    (c) CTOT = EOBT + ground delay + Taxi Time
    (d) CTOT = EOBT + ground delay + Taxi Time + Trip Time

14. 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 AFR022 according to the computed assisted slot allocation (CASA) algorithm?

Table 1

Flight	ETO	Flight	ETO
RYR66T	10:01	AZA333	10:24
BAW123	10:06	IBE77X	10:40
DAL077	10:07	ICC002	11:02
AFR022	10:11	SIA069	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. 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 SIA069 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. 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 ICC002 according to the computed assisted slot allocation (CASA) algorithm?

    (a) No delay.
    (b) 2 minutes.
    (c) -2 minutes.
    (d) 1h and 2 minutes.

17. 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.

18. 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 rerouterings.

19. Which of the following CFMU systems deals with the flight plans sent by aircraft operators?

    (a) The IFPS
    (b) The ETFMS
    (c) The ENV
    (d) The RCAT

20. Mark the **wrong** statement:

    (a) Alert Services are provided when Air Traffic Control is provided.
    (b) Flight Information Services are provided when Alert Services are provided.
    (c) Alert Services are provided when Flight Information Services are provided.
    (d) Flight Information Services are provided when Air Traffic Control is provided.

21. Which of the following is a clear objective of the flgith information service?

    (a) To expedite and maintain an orderly flow if air traffic.
    (b) To provide advice and information useful for the safe and efficient conduct of flights.
    (c) To notify appropriate organisations regarding aircraft in need of search and rescue aid, and assist such organisations as required.
    (d) All answers are correct.

22. What is the international radiotelephony distress signal for aviation?

    (a) The word *MayDay*.
    (b) The word *MayDay* repeated three times.
    (c) The word *Pan-Pan*.
    (d) The word *Pan-Pan* repeated three times.

23. Which of the following transponder codes indicates a lost of radio communications?

    (a) 1215
    (b) 7500
    (c) 7600
    (d) 7700

24. In which of the follwing situations an air traffic controller shall give traffic information (information regarding collision hazards with other aircraft) to a VFR flight?

    (a) When the aircraft is inside a CTR.
    (b) When the aircraft is inside a TMA.
    (c) When the aircraft is inside any airspace of class D.
    (d) All the answers are correct.

25. A VFR flight is flying inside an airspace of class C. 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 C.

26. A VFR flight is flying inside an airspace of class E. 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 E.

27. When procedural control is given to an approach procedure...:

    (a) the air traffic controller can give vectors to the aircraft to ensure separation.
    (b) the air traffic controller can clear only one aircraft per approach.
    (c) the pilots ensure separation by their own means (visual, ASAS, etc.).
    (d) the pilots must not consider any ACAS advisory.

28. North atlantic oceanic airspace is...

(a) A free-route area.

(b) A free-flight area.

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

(d) An area with only RNAV airways.

29. In the frame of ATS, who is responsible for executing transfers of aircraft between two ATC sectors?

(a) The tactical controller.

(b) The supervisor controller.

(c) The planner controller.

(d) None of the other answers is correct.

30. Which of the following statements is correct with respect to the exit flight level (XFL) of an aircraft inside an ATC sector?

(a) The strategic controller of the following sector defines the XFL and the strategic controller of the current sector ensures it by clearing the aircraft to it.

(b) The ATC supervisor defines the XFL and the strategic controller ensures it by clearing the aircraft to it.

(c) The strategic controller defines and ensures the XFL by clearing the aircraft to it.

(d) The strategic controller defines the XFL and the tactical controller ensures it by clearing the aircraft to it.

31. Which of the following sentences is correct, regarding the Letters of Agreement (LoA) in the context of ATS?

(a) The air traffic controllers must have a comprehensive knowledge of the LoA affecting their sectors.

(b) The aircraft operators must have a comprehensive knowledge of the LoA affecting their flights.

(c) The LoA are published in the AIP.

(d) All answers are correct.

32. In general, in which of the following ATC dependencies radar vectoring (heading instructions) is mostly provided?

(a) In area control (en-route control).

(b) In aerodrome control Tower (TWR).

(c) In ground control (GND).

(d) In approach control (APP).

33. Which is the principal inconvenience of radar vectoring?

(a) It can only be used with procedural control.

(b) It can only be used for area control (en-route).

(c) The pilot loses the situational awareness of the aircraft trajectory in the near future (for example, the remaining distance to the runway threshold).

(d) It increases significantly the workload of the pilot.

34. How the letter B is spelled, according to the ICAO radio-telephony alphabet?

(a) Biktor.

(b) Bravo.

(c) Beta.

(d) Broquil.

35. Which is NOT correct, according to the ICAO radio-telephony spelling alphabet?

(a) L: Lima

(b) S: Sierra

(c) I: India

(d) R: Roger

36. Which is the radio-telephony callsign of a flight labelled as *BAW142* in an ATC radar screen?

(a) Bravo Alpha Whiskey One hundred and forty-two

(b) Brussels One Four Two

(c) Speedbird One Four Two

(d) British Airways One Four Two

37. 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) In order to avoid mutual interference, two distant 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 not used in air navigation due to its bad spectral behaviour.

38. 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.

39. What is the main consequence of not having atomic clocks in GPS receivers?

(a) We need at least a fourth satellite to calculate the position of the receiver.

(b) We need at least a fifth satellite to calculate the position of the receiver.

(c) All GPS receivers, in fact, are equipped with atomic clocks.

(d) None of the other answers is correct.

40. What is the north-american SBAS system?

(a) the WAAS.

(b) the LAAS.

(c) the EGNOS.

(d) the GPS.

41. Which is the main problem of current version of GPS if used for civil aviation?

(a) Its lack of integrity.

(b) Not enough accuracy for terminal procedures.

(c) Not enough vertical accuracy for en-route procedures.

(d) Its lack of availability.

42. Which of the following could be a synonym of **precision**?

(a) accuracy.

(b) integrity.

(c) predictability.

(d) availability.

43. Which of the following surveillance systems transmits at the lowest power?

(a) The primary surveillance radar (PSR).

(b) The controller-pilot data-link communications (CPDLC).

(c) The Global Positioning System (GPS).

(d) The aircraft communications addressing and reporting system (ACARS).

44. Which of the following squawk codes is not correct?

(a) 1234

(b) 7777

(c) 9876

(d) All of them are correct.

45. 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.

46. 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.

47. 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.

48. 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.

49. Regarding the Instrumental Approach Chart (IAC) **Amarillo Intl (AMA) VOR/DME RWY 22** annexed to this exam, an aircraft starting an approach at the DEXBE IAF will execute, as initial approach segment:

    (a) a 45/180 reversal procedure.

    (b) a base turn reversal procedure.

    (c) a racetrack procedure.

    (d) a direct approach following the VOR PNH.

50. Regarding the Instrumental Approach Chart (IAC) **Amarillo Intl (AMA) VOR/DME RWY 22** annexed to this exam, an aircraft starting an approach at the JILPY IAF will execute, as initial approach segment:

    (a) a 45/180 reversal procedure folowed by a DME arc.

    (b) a DME arc.

    (c) a racetrack procedure folowed by a DME arc.

    (d) a direct approach following Radial 176 of PHN VOR.

51. Regarding the Instrumental Approach Chart (IAC) **Amarillo Intl (AMA) VOR/DME RWY 22** annexed to this exam, the final approach segment is

    (a) a NDB course.

    (b) a dead-reckoning leg.

    (c) a VOR radial.

    (d) there is no final segment in this procedure.

52. 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.

53. Regarding the Instrumental Approach Chart (IAC) **Amarillo Intl (AMA) VOR/DME RWY 22** annexed to this exam, the holding fix of the holding procedure defined at the end of the missed approach procedure is defined by:

    (a) the intersection of two NDB courses.

    (b) the intersection of two VOR radials.

    (c) the intersection of a VOR radial and a DME arc.

    (d) the PNH VOR/DME facility.

54. 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:

    (a) approximately 055

    (b) approximately 235

    (c) greater than 235

    (d) smaller than 235

55. 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:

    (a) approximately 055

    (b) approximately 235

    (c) greater than 235

    (d) smaller than 235

56. Consider the Instrumental Approach Chart (IAC) **Amarillo Intl (AMA) VOR/DME RWY 22** annexed to this exam. Imagine an aircraft is instructed to hold at JIKPI after executing the missed approach procedure. The aircraft will enter the hold with...

    (a) a racetrack entry procedure.

    (b) a direct or offset entry procedures.

    (c) an offset or parallel entry procedures.

    (d) a parallel or direct entry procedures

57. Consider the Instrumental Approach Chart (IAC) **Amarillo Intl (AMA) VOR/DME RWY 22** annexed to this exam. How is the MAPt defined?

    (a) in this procedure, there is no MAPt.

    (b) the MAPt is defined over the PNH VOR/DME facility at the MDA.

    (c) the MAPt is defined at the intersection $235^o/0.5$NM of PNH VOR/DME and at the MDA.

    (d) the MAPt is defined by a timing of 0.5 minutes after overflying the FAF and at the MDA.

58. 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) a Dangerous area.

    (b) a Parachuting area.

    (c) a Prohibited area.

    (d) a Restricted area.

59. Regarding the Instrumental Approach Chart (IAC) **Leon ILS RWY23** annexed to this exam, the aircraft operator will publish for their crew a...

    (a) decision altitude.

    (b) minimum descent altitude.

    (c) obstacle clearance altitude.

(d) ILS minimum altitude.

60. Regarding the Instrumental Approach Chart (IAC) **Leon ILS RWY23** annexed to this exam, the initial approach segment that starts at EON VOR/DME is...

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

    (b) a localizer course.

    (c) a ILS course.

    (d) a tear-drop procedure.

61. Regarding the Instrumental Approach Chart (IAC) **Leon ILS RWY23**, annexed to this exam the initial approach segment that starts at JOCOL is...

    (a) mainly composed by VOR radials followed by a DME arc and followed by another VOR radial.

    (b) mainly composed by a racetrack procedure followed by a tear-drop procedure.

    (c) mainly composed by a racetrack procedure followed by a DME arc.

    (d) None of the other answers is correct.

62. Regarding the Instrumental Approach Chart (IAC) **Leon ILS RWY23** annexed to this exam, the intermediate approach segment is...

    (a) a VOR radial.

    (b) a NDB course.

    (c) an ILS glide path segment.

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

63. Regarding the Instrumental Approach Chart (IAC) **Leon ILS RWY23**, annexed to this exam the missed approach segment is...

    (a) mainly composed by two VOR radials.

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

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

    (d) a tear-drop procedure

64. Regarding the Instrumental Approach Chart (IAC) **Leon ILS RWY23** 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.

65. Regarding the Instrumental Approach Chart (IAC) **Leon ILS RWY23**, annexed to this exam, the radionavigation aid labeled as *ILE* is a:

    (a) Localizer.

    (b) VOR/DME.

    (c) DME.

    (d) Locator.

66. Consider the Instrumental Approach Chart (IAC) **Leon ILS RWY23** annexed to this exam. Imagine an aircraft is instructed to hold at EON after executing the missed approach procedure. The aircraft will most probably enter the hold with...

    (a) a tear-drop entry procedure.

    (b) a direct entry procedure.

    (c) an offset entry procedure.

    (d) a parallel entry procedure.

67. Consider the Instrumental Approach Chart (IAC) **Leon ILS RWY23** annexed to this exam. What is the OCH for an aircraft of category C executing an approach to **runway 05**?

    (a) 3269 ft.

    (b) 273 ft.

    (c) 4000 ft.

    (d) 1000 ft.

68. Consider the Instrumental Approach Chart (IAC) **Leon ILS RWY23** annexed to this exam. How is the MAPt defined?

    (a) in this procedure, there is no MAPt.

    (b) the MAPt is defined over the EON VOR/DME facility at the MDA.

    (c) the MAPt is defined at the intersection $228^o/6.1$NM of EON VOR/DME and at the MDA.

    (d) the MAPt is defined over the runway threshold and at the DA.

69. Consider the Instrumental Approach Chart (IAC) **Leon ILS RWY23** annexed to this exam. What is the DA for an aircraft of category C executing an approach to **runway 23**?

    (a) in this procedure, there is no DA.

    (b) None of the other answers is correct.

    (c) 4000 ft.

    (d) 1000 ft.

70. A circling to approach with prescribed tracks...

    (a) consists of a sequence of visual tracks that guide the pilot when flying the circling procedure.

    (b) consists of a sequence of instrumental tracks that guide the pilot when flying the circling procedure.

    (c) consists of a sequence of visual tracks to be avoided by the pilot when flying the circling procedure.

    (d) consists of a sequence of instrumental tracks to be avoided by the pilot when flying the circling procedure.

71. An APV is a:

    (a) an approach with vertical guidance but with navigation performance worse than precision approaches.

    (b) a RNAV non precision approach.

    (c) a circling to approach.

    (d) a visual approach.

72. Which of the following statements is correct?

    (a) APV and PA provide vertical and lateral guidance, while NPA provide only lateral guidance.

    (b) NPA and PA provide vertical and lateral guidance, while APV provide only lateral guidance.

    (c) PA provide vertical and lateral guidance, NPA provide only lateral guidance and APV are non-guided (visual) approaches.

    (d) APV provide vertical and lateral guidance, PA provide only lateral guidance and NPA are non-guided (visual) approaches.

73. Which of the following statements is correct?

    (a) A VOR approach is always a NPA (non precision approach) procedure (*).

    (b) A NPA (non precision approach) is always a VOR procedure (*).

    (c) The answers marked with (*) are correct.

    (d) None of the other answers are correct.

74. The minimum decision height for an ILS CAT-III approach is:

    (a) 300ft.

    (b) 200ft.

    (c) 100ft.

    (d) 0ft.

75. Which type of fix is OLOTI, which appears in the SID chart for RWY20 in Girona airport?

    (a) an intersection.

    (b) a VOR.

    (c) a RNAV waypoint.

(d) none of the other answers is correct.

76. Regarding the legs that compose the GEANT1H SID for RWY20 at Girona airport, which of the following options is correct?

(a) The SID is formed by the succession of three consecutive VOR radials.

(b) The SID is formed by one VOR radial, followed by a dead-reckoning leg, followed by another VOR radial.

(c) The SID is formed by a dead-reckoning leg, followed by a DME arc, followed by two VOR radials.

(d) The SID is formed by a VOR radial, followed by a DME arc, followed by two VOR radials.

77. Regarding the legs that compose the BGR4H SID for RWY20 at Girona airport, which of the following options is correct?

(a) The SID is formed by the succession of three consecutive VOR radials.

(b) The SID is formed by one VOR radial, followed by a dead-reckoning leg, followed by another VOR radial.

(c) The SID is formed by a dead-reckoning leg, followed by a DME arc, followed by a VOR radial.

(d) The SID is formed by a VOR radial, followed by a DME arc, followed by a VOR radial.

78. Imagine an aircraft executing the MAMUK1F arrival procedure (see chart annexed to this exam) for runway 20 at Girona when the ATC instructs the pilot to hold at the IAF. In this case, the aircraft will enter the hold with...

(a) a racetrack entry procedure.

(b) a direct entry procedure.

(c) an offset entry procedure.

(d) a parallel entry procedure.

79. Imagine an aircraft executing the MAMUK1F arrival procedure (see chart annexed to this exam). What defines the IAF for this procedure?

(a) an intersection.

(b) a VOR.

(c) a DME.

(d) an NDB.

80. If the visibility is good enough for visual flight, then...

(a) we are in IMC and must fly according to IFR.

(b) we are in VMC and must fly according to IFR.

(c) we are in VMC and must fly according to VFR.

(d) we are in VMC and can fly according to VFR or IFR.

81. Which of the following statements is **false**?

(a) Not all airports have published STARs.

(b) Not all airports have published SIDs.

(c) In general, all aircraft begin the descent when overflying the first fix of the STAR.

(d) A SID procedure can only be executed in IFR.

82. Who is the responsible to publish a contingency instrumental departure for a given runway?

(a) the ANSP.

(b) the aircraft operator.

(c) the aircraft manufacturer.

(d) The national safety agency.

83. Which of the following sequence is correct for a visual approach procedure following a standard airfield traffic pattern?

(a) base, upwind and final.

(b) base, downwind and final.

(c) upwind, base and final.

(d) downwind, base and final.

84. Imagine that we want to publish RNAV DME/DME STARs at Girona airport. Regarding the STARs chart for runway 20 at Girona airport given in annex to this exam, and imagining that BANOL fix is converted to a RNAV waypoint, which of the following statements is correct?

(a) If SLL and BGR DMEs are out of service the procedure to BANOL can not be flown by a DME/DME RNAV system.

(b) If CLE and GIR DMEs are out of service the procedure to BANOL can not be flown by a DME/DME RNAV system.

(c) If GIR DME is out of service the procedure to BANOL can not be flown by a DME/DME RNAV system.

(d) None of them are correct.

85. 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.

86. What was the sector PON in the ITA ATC laboratory simulations?

(a) an approach sector of Barcelona TMA.

(b) a departures sector of Barcelona TMA.

(c) an en-route sector of Barcelona FIR/UIR.

(d) a sector of Barcelona CTR, for the West plan configuration.

87. Regarding the ITA ATC laboratory simulations, in how many sectors was the Barcelona TMA airspace divided?

(a) Two: CAT-W and CAT-E

(b) Two: BCN and GRN

(c) Four: CAT-N, CAT-S, CAT-W and CAT-E

(d) Three: PON, MED and LLE

88. 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.

89. Which of the following statements is true regarding TCAS?

(a) TCAS provides separation provision between aircraft.

(b) TCAS is a non-cooperative collision avoidance systems.

(c) TCAS is a cooperative collision avoidance system.

(d) None of other answers is correct.

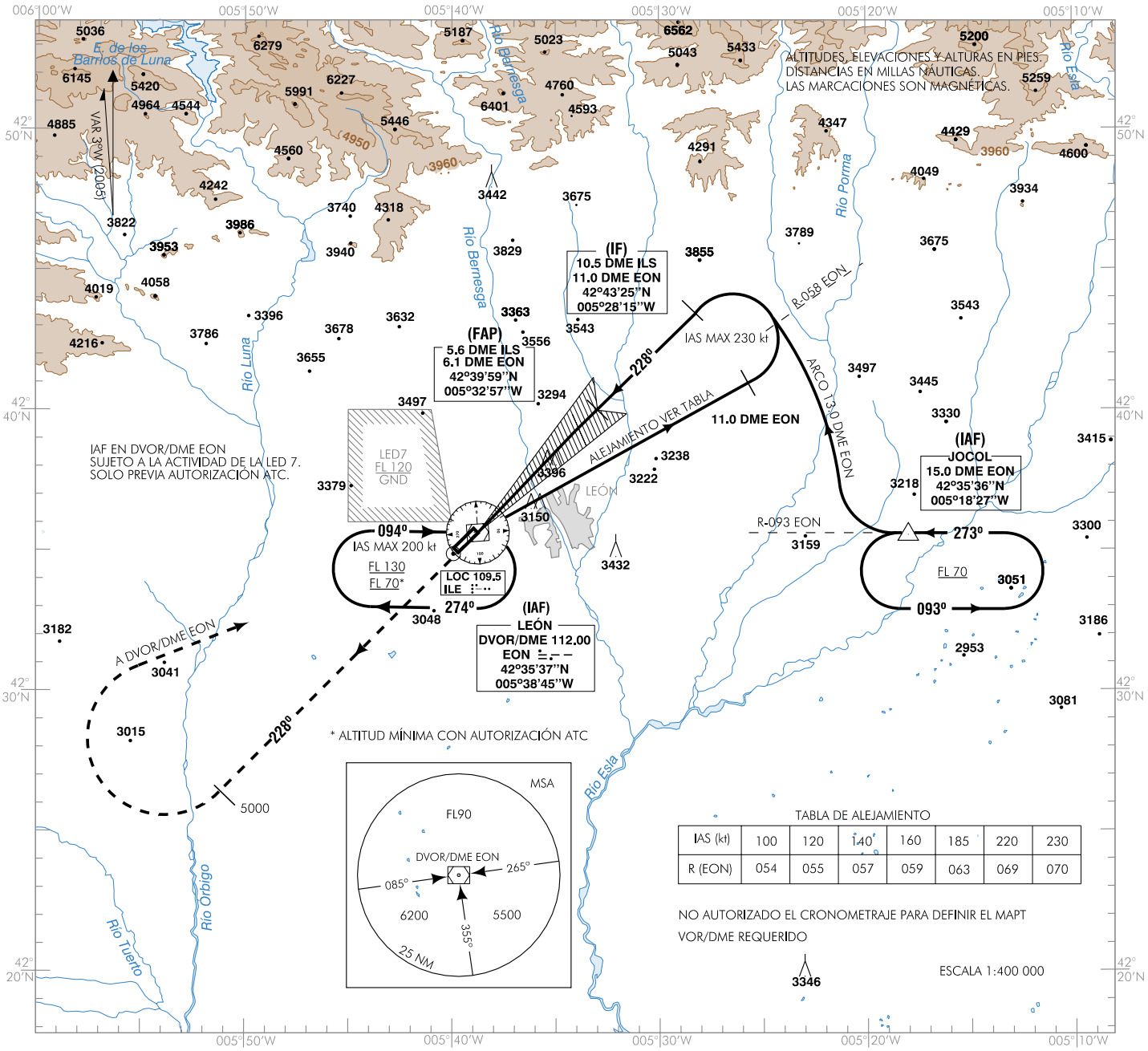
90. If a potential collision conflict is detected by an ACAS II/TCAS system, what type of advisory is triggered first?

(a) A Resolution Advisory (RA) that includes the range of vertical speed at which the aircraft should be flown to avoid the thread aircraft.

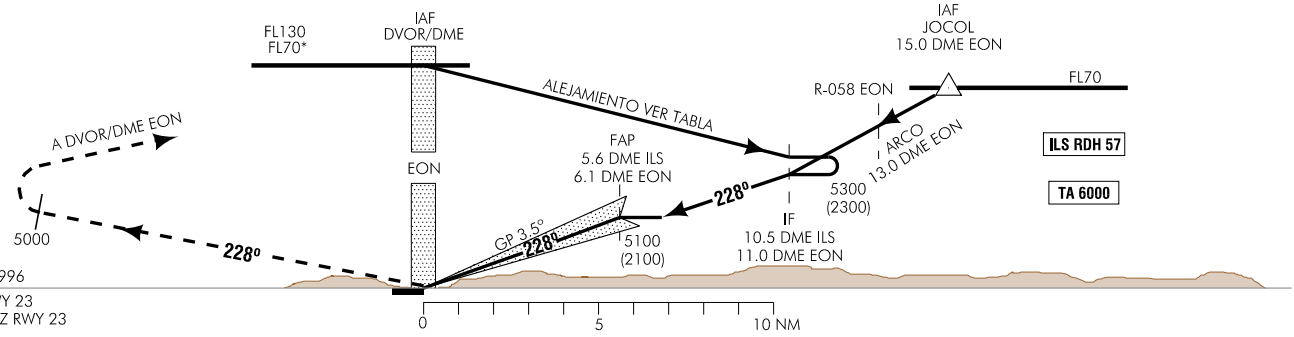
(b) A Resolution Advisory (RA) that includes the range of indicated airspeed at which the aircraft should be flown to avoid the thread aircraft.

(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.



FRUSTRADA: SUBIR EN RUMBO DE PISTA HASTA ALCANZAR 5000 ft, VIRAR A LA DERECHA DIRECTO A DVOR/DME EON SUBIENDO A FL70 PARA INTEGRARSE A LA ESPERA.



CAMBIOS: OFZ.

HGT REF ELEV THR RWY 23

OCA/H		A	B	C	D
STA	CAT I	3250 (254)	3260 (264)	3269 (273)	3279 (283)
En circuito (H) sobre 3006		3700 (700)	3700 (700)	4000 (1000)	4100 (1100)

GS	kt	80	100	120	140	160	180
FAP-THR: 5.6 NM	min:s	4:11	3:21	2:48	2:24	2:06	1:52
FAF-MAPT:	min:s						
ROD: 6.0 %	ft/min	489	611	733	855	977	1099

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
								4890 (1900)	4520 (1530)	4160 (1170)	3790 (800)	3420 (430)

VOR/DME RWY 22

AMARILLO/ RICK HUSBAND AMARILLO INTL (AMA)

VORTAC PNH	APP CRS	Rwy Idg	13502
116.6	235°	TDZE	3603
Chan 113		Apt Elev	3605

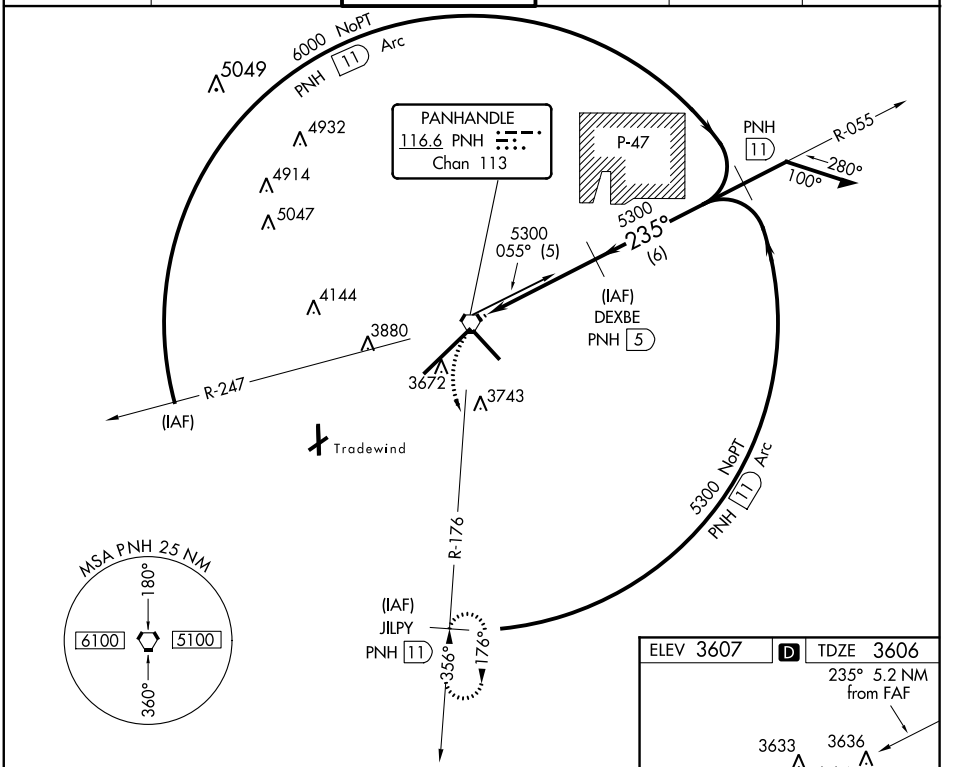
ASR

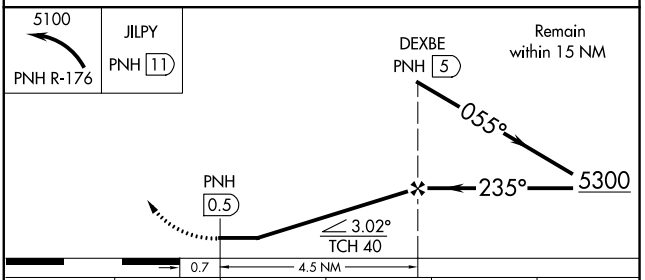
For inop MALSRS, increase S-22 visibility Cat D and E to 1¼.

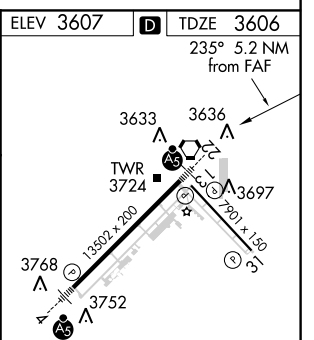
MALSR

MISSED APPROACH: Climbing left turn to 5100 via PNH R-176 to JILPY/11 DME and hold.

ATIS	AMARILLO APP CON ★	AMARILLO TOWER ★	GND CON	CLNC DEL	UNICOM
118.85 350.3	119.5 307.0	118.3 (CTAF) L 257.9	121.9 348.6	121.65	122.95







CATEGORY	A	B	C	D	E
S-22	3960-½ 354 (400-½)			3960-1 354 (400-1)	
CIRCLING	4080-1 473 (500-1)		4080-1½ 473 (500-1½)	4240-2 633 (700-2)	4460-3 853 (900-3)

REIL Rwy 13 L
REIL Rwy 31
HIRL Rwys 4-22 and 13-31

SC-2, 06 MAR 2014 to 03 APR 2014
SC-2, 06 MAR 2014 to 03 APR 2014

INFRAESTRUCTURES DEL TRANSPORT AERI (ITA)
Final Exam - Fall semester 2016

Correct answers

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

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