INFRAESTRUCTURES DEL TRANSPORT AERI (ITA)
Final Exam - Fall semester 2019

January 9th 2020

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

CODE 1 - GROUP 00

1. Which of the following pieces of aeronautical information could potentially appear in a NOTAM message?

   (a) "... sectorisation in Barcelona TMA from 10h to 12h is 11 Victor... "

   (b) "... Begur (BGR) VOR unserviceable from Oct 1st to Oct 15th 2019 ..."

   (c) "... visibility more than 10km, clouds few at 3000ft, QNH one zero seven eight, ... "

   (d) All answers are correct.

2. Which of the following pieces of aeronautical information could potentially appear in an ATIS message?

   (a) "... runway 27L closed for maintenance ..."

   (b) "... visibility more than 10km, clouds few at 3000ft, QNH one zero seven eight, ... "

   (c) "... transition level is seven zero, ..."

   (d) All answers are correct.

3. Which air navigation service is the responsible to disseminate the instrument approach charts to the aircraft operators?

   (a) The airspace management (ASM) service.

   (b) The flight inforamtion service (FIS).

   (c) The aeronautical information service (AIS).

   (d) The aerodrome traffic zone (ATZ) service.

4. Which air navigation service is the responsible to disseminate the rules of the air that apply to a specific country?

   (a) The airspace management (ASM) service of the country.

   (b) The flight inforamtion service (FIS) of the country.

   (c) The aeronautical information service (AIS) of the country.

   (d) The aerodrome traffic zone (ATZ) services of the country.

5. In an hypothetical scenario with airborne separation assurance systems (ASAS) operations...

   (a) there is no need for collision avoidance systems.

   (b) the capacity of the ATS sectors will significantly increase.

   (c) free route airspace will be mandatory.

   (d) procedural control will be mandatory.

6. Airspace Management (ASM) is NOT responsible for:

   (a) civil-military coordination.

   (b) designation of airspace types or classes.

   (c) air traffic flow management.

   (d) the design of the ATS route network.

7. North Atlantic oceanic airspace is...

   (a) A free-route area.

   (b) A free-flight area.

   (c) An area with only RNAV airways.

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

8. A pilot is reporting "we are at flight level two zero zero". This means:

   (a) The barometric altimeter of the aircraft indicates 20 000 ft and it is calibrated with respect to the standard pressure at sea level (1013.25 hPa).

   (b) The barometric altimeter of the aircraft indicates 20 000 ft and it is calibrated with respect to the local QNH.

   (c) The barometric altimeter of the aircraft indicates 2 000 ft and it is calibrated with respect to the standard pressure at sea level (1013.25 hPa).

   (d) The barometric altimeter of the aircraft indicates 2 000 ft and it is calibrated with respect to the local QNH.

9. Why TMA sectors are typically smaller than en-route sectors?

   (a) The statement is not true. TMA sectors are typically bigger than en-route sectors.

   (b) In order to reduce the workload for the ATC to acceptable levels and guarantee some airspace capacity.

   (c) Because TMAs cover typically smaller areas if compared with FIRs and UIRs.

   (d) Because radar screens at the airport tower are typically smaller than in the area control centres.

10. The main objective of air traffic flow management (ATFM) is:

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

    (b) keep the forecast demand below estimated capacity in airports and airspace sectors.

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

    (d) all the answers are correct.

11. Which of the following ATFM initiatives is the most widely used in Europe and in the U.S.?

    (a) Ground holding.

    (b) Ground stop.

    (c) Pre-tactical re-routing.

    (d) Miles in trail.

12. A strike (union action) is announced by the ATC staff working in Marseille area control centre, meaning that the ATC capacity of Marseille UIR will be significantly reduced, leading to ATFM regulations. If we ignore those aircraft that were already flying when the regulations are issued, these regulations will affect...

    (a) ... all flights with a flight plan crossing Marseille UIR and arriving/departing from one of its airports below.

    (b) ... all flights with a flight plan crossing Marseille UIR and departing from an airport in a CFMU (Network Manager) member state.

    (c) ... all flights with a flight plan crossing Marseille UIR.

    (d) ... any potential flight arriving/departing from an airport in a CFMU member state, even if the flight plan is not crossing Marseille UIR.

13. If an aircraft loses its ATFM slot while on ground the controller should:

    (a) Clear the aircraft to take-off as soon as possible.

    (b) The controller does not consider the slots allocated to departing aircraft.

    (c) Request the airline to fill a new flight plan in order to obtain an new slot.

    (d) Send a message to the CFMU (Network Manager) informing about the delay and clear the aircraft to take-off as soon as possible.

14. 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]

15. 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

16. 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.

17. Which of the following CFMU (Network Manager) systems deals with the flight plans sent by aircraft operators?

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

18. Air Traffic Control (ATC) services shall be provided to:

    (a) All IFR flights in airspace classes A, B, C, D and E.
    (b) All flights that have filed a flight plan.
    (c) Any aircraft known by the ATC.
    (d) All IFR flights.

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

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

20. Which of the following information items is not typically given by a flight information service?

    (a) Volcanic activity in a certain area.
    (b) Traffic informaiton assisting the pilot to avoid collision conflicts.
    (c) The frequency of a specific radionavigation aid.
    (d) Minimum descent altitudes for a specific approach.

21. 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.

22. 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 pilot non-flying.
    (d) The ATC supervisor.

23. 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).

24. The control dependency in charge of realising most of the the sequencing and merging operations of aircraft arriving at a busy airport is...

    (a) the tower control.
    (b) the en-route control.
    (c) the ground control.
    (d) the approach control.

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

    (a) *L*: Lima
    (b) *S*: Sierra
    (c) *I*: India
    (d) *R*: Roger

26. 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

27. At present, which is the principal communications method in continental Europe to link pilots with air traffic controllers?

    (a) VHF voice communications.
    (b) HF voice communications.
    (c) Data-link communications.
    (d) Satellite based communications.

28. Which of the following statements is true?

    (a) CPDL may make worse the current shortage of available frequencies.
    (b) CPDL may allow reducing the use of voice communication between ATC and pilots.
    (c) CPDL is based on text messages with attached radar images.
    (d) None of the other options is correct.

29. Which of the following options is correct, when talking about an ILS?

    (a) the glideslope is the ground-based system (transmitter) and the localiser is the on-board system (receiver).
    (b) the localiser is the ground-based system (transmitter) and the transponder is the on-board system (receiver).
    (c) the localiser and the glideslope are ground-based systems (transmitters) that send the same redundant navigation signal.
    (d) the localiser and the glideslope are ground-based systems (transmitters) that send different navigation signals for different purposes.

30. Who actually computes a GPS position?

    (a) The receiver, using its own measurements and the information sent by, at least, four GPS satellites.
    (b) At least four GPS satellites, using the information sent by the receiver, which is then dowlinked to the receiver.
    (c) The GPS ground control station, using the information sent by the receiver via the GPS satellites that are visible to the receiver.

(d) The receiver and at least 4 GPS satellites: the receiver computes the 3D coordinates and the satellites compute the different time stamps, which are then dowlinked to the receiver.

31. 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) It is a system commonly composed of multiple ground receiving 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.

32. 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 accuracy for en-route procedures.

(d) Its lack of availability.

33. Which of the following surveillance systems can detect an aircraft that is not willing to "cooperate"?

(a) The primary surveillance radar.

(b) The secondary surveillance radar.

(c) The ADS.

(d) The TCAS

34. Regarding the Instrumental Approach Chart (IAC) **Anchorage ILS RWY 7R ILS**, annexed to this exam, the decision height published is:

(a) there is no decision height for this procedure.

(b) 130 ft.

(c) 600 ft.

(d) 700 ft.

35. 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:

(a) there is no minimum runway visual range for this procedure.

(b) 130 ft.

(c) 600 ft.

(d) 700 ft.

36. Regarding the Instrumental Approach Chart (IAC) **Anchorage ILS RWY 7R ILS**, annexed to this exam and taking into account that the FIX TULLI is an IAF, an aircraft ending the STAR at this point will immediately execute:

(a) a 45/180 reversal procedure.

(b) a base turn reversal procedure.

(c) a racetrack procedure.

(d) a direct approach following the ILS path.

37. 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:

(a) the intersection of two NDB courses.

(b) the intersection of two VOR radials.

(c) the ENA VOR facility.

(d) the ANC VOR facility.

38. Regarding the Instrumental Approach Chart (IAC) **Anchorage ILS RWY 7R ILS**, annexed to this exam, imagine an aircraft is instructed to hold at the end of the missed approach procedure. The aircraft will enter the hold with...

(a) a racetrack entry procedure.

(b) a direct entry procedure.

(c) an offset or a parallel entry procedure.

(d) the entry procedure in a holding after a missed approach is free and the pilot can chose the best way to execute it.

39. Regarding the Instrumental Approach Chart (IAC) **Anchorage ILS RWY 7R ILS**, annexed to this exam, the radionavigation aid labeled as *I-ANC* is a:

(a) Localizer.

(b) VOR/DME.

(c) DME.

(d) NDB.

40. Regarding the Instrumental Approach Chart (IAC) **Anchorage ILS RWY 7R ILS**, annexed to this exam, once the aircraft is stablished in final segment(and assuming no wind conditions) the heading of the aircraft will be approximately:

(a) 089

(b) 269

(c) 069

(d) 249

41. Regarding the Instrumental Approach Chart (IAC) **Anchorage ILS RWY 7R ILS**, annexed to this exam, the missed approach segement ending in BOB is composed by three legs, which are:

(a) a localizer course followed by a VOR radial followed by an NDB course.

(b) a VOR radial followed by a dead reckoning leg followed by an NDB course.

(c) a dead reckoning leg followed by another dead reckoning leg followed by an NDB course.

(d) a dead reckoning leg followed by an NDB course followed by another NDB course.

42. Regarding the Instrumental Approach Chart (IAC) **La Palma NDB**, annexed to this exam, the aircraft operator will publish for their crew...

(a) a decision altitude.

(b) a minimum descent altitude.

(c) an obstacle clearance altitude.

(d) a NDB altitude.

43. Regarding the Instrumental Approach Chart (IAC) **La Palma NDB**, annexed to this exam, the initial approach segment is:

(a) composed by a NDB course followed by three DME arcs.

(b) composed by a NDB course followed by a DME arc.

(c) composed by a VOR radial followed by a DME arc.

(d) composed by a a dead reckoning leg followed by three DME arcs.

44. Regarding the Instrumental Approach Chart (IAC) **La Palma NDB**, annexed to this exam, the missed approach segment is mainly:

(a) a NDB course.

(b) a VOR radial.

(c) a DME arc.

(d) a dead-reckoning segment.

45. 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) a racetrack entry procedure.

(b) a direct entry procedure.

(c) an offset or a parallel entry procedure.

(d) the entry procedure in a holding after a missed approach is free and the pilot can chose the best way to execute it.

46. Regarding the Instrumental Approach Chart (IAC) **La Palma NDB**, annexed to this exam...

(a) it is a CAT-I approach.

(b) it is an APV approach.

(c) it is a precision approach.

(d) it is a circling to approach.

47. Regarding the Instrumental Approach Chart (IAC) **La Palma NDB**, annexed to this exam, the radionavigation aid labeled as BV is a:

(a) VOR/DME.

(b) ILS/DME.

(c) DME.

(d) NDB.

48. Regarding the Instrumental Approach Chart (IAC) **La Palma NDB**, annexed to this exam, the approach starts at:

(a) The intersection of course 214 of BX with the arc of 11.0NM from BV

(b) The intersection of course 238 of BX with the arc of 22.5NM from BV

(c) The intersection of course 214 of BX with the arc of 4.0NM from BV

(d) The intersection of course 214 of BX with the arc of 16.0NM from BV

~~49. Regarding the Instrumental Approach Chart (IAC) **La Palma NDB**, annexed to this exam, which of the following statements is correct?~~

~~(a) the chart is valid only for aircraft of categories A, B and C.~~

~~(b) the chart is valid only for aircraft of category B.~~

~~(c) the chart is valid only for ILS CAT-III-A, CAT-III-B and CAT-III-C systems.~~

~~(d) the chart is valid only for ILS CAT-III-B systems.~~

50. A circling to approach...

(a) is the same than a non precision approach.

(b) is the same than an APV approach.

(c) is an approach that cannot be considered as a straight-in approach.

(d) is only for approaches where the final approach segment has a miss-alignment of 15 degrees or more.

51. An APV is a:

(a) a precision approach with vertical guidance.

(b) an approach with vertical guidance but with navigation performances worse than precision approaches.

(c) an approach procedure where only vertical guidance is provided (but not lateral).

(d) an approach procedure where only lateral guidance is provided (but not vertical).

52. Which is the minimum vertical accuracy required by a GNSS system if we want to execute non-precision approaches with it?

(a) 6 to 4 meters.

(b) 8 meters.

(c) 20 meters.

(d) there are no minimum vertical requirements in this case.

53. The MDA...

(a) is the minimum altitude to start an IFR approach procedure.

(b) is used in VFR operations, while the DA is used in IFR operations.

(c) is the lowest altitude to which descent is authorized on the final approach segment if no sufficient visual references are met.

(d) None of the other answers are correct.

54. The OCA...

(a) is also known as the minima-minima altitude.

(b) is the lowest altitude in the final approach segment regarding obstacle clearance.

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

(d) is a synonym of minimum descent altitude.

55. Which of the following statements if correct?

(a) The DA is the lowest altitude to which descent is authorized on the final approach segment if no sufficient visual references are met.

(b) In the final approach segment, the pilot first descends to the MDA. Then, if no obstacles are found, it can further descend to the DA, where the decision to land or to go-around must be taken.

(c) In the final approach segment, the pilot first descends to the DA. Then, if no obstacles are found, it can further descend to the MDA and execute the landing in visual conditions. Otherwise, a missed approach procedure must be initiated.

(d) None of the other answers are correct.

56. When executing an instrumental approach procedure, the pilot must verify two basic criteria in order to decide whether the landing can be performed safely or not: the so-called landing minima. These two criteria are:

(a) VIS and RVR.

(b) A minimum altitude (MDA or DA) and some minimum visibility conditions (VIS or RVR).

(c) Straight-in approach and circling to approach conditions.

(d) FAP and MAPt.

57. When establishing the laning minima, the operator must take into account:

(a) the dimension and characteristics of the runways (*).

(b) the adequacy and performance of the available visual and non-visual ground aids (*).

(c) Answers marked with (*) are correct.

(d) None of the other answers are correct.

58. Which of the following statements is correct?

(a) The appropriate national administration must approve and certify the MDA computed by the aircraft operators.

(b) The appropriate national administration must compute and publish the MDA in the AIP charts.

(c) The aircraft operator must compute and publish the OCA in the charts used by their pilots.

(d) The aircraft operator must compute and publish the OCA in the AIP charts.

59. In a Localiser approach, the approach minima are given by:

(a) A decision altitude and a minimum visibility.

(b) A minimum descent altitude.

(c) A minimum descent altitude and a minimum obstacle clearance altitude.

(d) A minimum descent altitude and a minimum visibility.

60. For a given runway threshold, which of the following approaches will lead (in general) to the highest MDA or DA?

(a) a NDB straight-in approach procedure.

(b) a NDB circling to approach procedure.

(c) a VOR straight-in approach procedure.

(d) a VOR circling to approach procedure.

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

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

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

(c) a VOR circling to approach approach procedure.

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

62. The missed approach segment...

(a) is an optional segment.

(b) must only be published in precision approaches.

(c) must always be published.

(d) must be designed by the aircraft operator and published in a contingency chart.

63. The IF can be defined...

(a) above a radionavigation facility.
(b) at the intersection between two VOR radials.
(c) at a given time after overflying the IAF.
(d) all answers are correct.

64. A racetrack procedure...

(a) is a type of initial approach segment.
(b) is a type of holding pattern.
(c) could be, for instance, a 45/180 procedure turn.
(d) is when an aircraft uses an active runway to taxi in the opposite direction from which it will take off or land.

65. Imagine an ILS straight-in approach to an airport. The guidance of the intermediate segment...

(a) must always be from a localiser.
(b) must always be from a localiser and an ILS glide path.
(c) must always be from an ILS glide path.
(d) comes from another radionavigation aid (such as a VOR) and at some point within the segment the crew switches to the localiser guidance.

66. In a non-precision approach, the final segment starts at:

(a) the MAPt.
(b) the FAF or FAP.
(c) the FAF or the end of turn of the previous segment.
(d) the FAP or the end of turn of the previous segment.

67. The Visual Flight Rules (VFR) airfield traffic pattern leg by which an aircraft flies perperdicular to the runway and starts descending is called:

(a) upwind.
(b) crosswind.
(c) downwind.
(d) base.

68. Which of the following aircraft instruments are mainly used to perform the *aviate* function in IMC conditions?

(a) the VOR, the ADF (NDB receiver) and the DME.
(b) the artificial horizon and the airspeed indicator.
(c) the *aviate* function is always executed visually and no instruments are required.
(d) all engine related instruments.

69. What is the cruise phase?

(a) The phase of the flight after the whole climb where the aircraft is at a constant altitude.
(b) The phase of the flight that follows the departure procedure.
(c) The phase of the flight that precedes the arrival.
(d) All answers are correct.

70. 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.

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

(a) The outbound leg.
(b) The inbound leg.
(c) The inbound and the outbound legs.
(d) Only the two turns are executed in dead reckoning.

72. A pilot is executing an airfield traffic pattern. How does (s)he knows (s)he is in the downwind leg?

(a) by using an MLS.
(b) by using an ILS
(c) by using radar vectoring.
(d) by using visual references.

73. Visual approaches with prescribed tracks...

(a) are typically used in the US (even at major airports) and for some circling-to-approach procedures.
(b) are only published for VFR flights.
(c) are only used as contingency procedures and must be designed by the operator of the aircraft.
(d) do not longer exist nowadays.

74. How are VFR arrivals typically defined?

(a) It is not possible to define arrivals in VFR, since radionavigation means are required to define arrivals.
(b) Using visual reporting points and dead reckoning indications between these points.
(c) Using contingency charts, especially designed by the operator.
(d) Using STAR charts designed by the ANSP and published in the AIP.

75. When executing an airfield traffic pattern, the aircraft has always instrumental guidance, at least, in...

(a) the downwind leg
(b) the final leg
(c) the downwind, base and final legs
(d) None of the other answers is correct.

76. In the San Francisco airport (SFO), two parallel approaches are executed if visibility meteorological conditions (VMC) are met. Otherwise, only one instrumental approach is executed in one of the runways. Which of the following statements is correct?

(a) In VMC, runway capacity in SFO is increased at the expense of reducing safety.
(b) In VMC, flight efficiency of SFO arrivals is increased at the expense of reducing safety.
(c) In VMC, flight efficiency of SFO arrivals is increased at the expense of reducing capacity.
(d) None of the other answers is correct.

77. Why in Lleida Alguaire airport continuous descent operations (CDOs) are (almost) always possible, while in Barcelona airport they are hardly ever possible?

(a) Because in Lleida Alguaire RNAV approach procedures based on satellite navigation are implemented, increasing dramatically the airport capacity.
(b) Because the capacity in Lleida Alguaire when executing CDOs is still significantly above the incoming traffic demand.
(c) Because the orography surrounding Barcelona makes very difficult to safely execute CDOs due to minimum obstacle clearance altitudes.
(d) Because Barcelona mainly operates with two simultaneous runways (one for departures and the other for arrivals), which makes impracticable the execution of CDOs.

78. What is the airspace flow program (AFP)?

(a) the FAA ATFM program for airspace congestion.
(b) the FAA ASM program for route congestion.
(c) the FAA program to modernise ATM.
(d) the FAA pogram to modernise ATS.

79. Due to bad weather conditions, a given airport goes from 70 landings per hour to only 40 landings per hour. What has been lost?

(a) Capacity.
(b) Efficiency.

(c) Safety.

(d) Inter-operability.

80. How can we measure efficiency in an airport?

(a) Counting, for instance, the number of take-off per unit of time.

(b) Counting, for instance, the fuel burnt in taxi operations.

(c) Counting, for instance, the number of runway incursions.

(d) All the other answers are correct.

81. Which of the following indicators could be representative to measure safety in a Terminal Manoeuvring Area (TMA)?

(a) The number of TCAS resolution advisories (RA) in a given period of time.

(b) The average length of trajectory level-offs in departures and/or arrivals.

(c) The average departure delay due to ATFM measures.

(d) The number of aircraft executing approaches in a given period of time.

82. What separation procedure is mainly used in oceanic airspace?

(a) Radar separation.

(b) Self separation.

(c) Procedural separation.

(d) TCAS-only separation.

83. Typically, the minimum vertical separation between two aircraft in RVSM airspace is:

(a) 10000ft

(b) 1000ft

(c) 100ft

(d) 10ft

84. Which of the following statements is correct?

(a) Tromboning procedures in terminal airspace are mainly designed to improve the efficiency of the flights, if compared with continuous descent operations.

(b) Tromboning procedures in terminal airspace are mainly designed to improve airspace and airport capacity, if compared with holding patterns.

(c) Tromboning procedures in terminal airspace are one of the collision avoidance layers.

(d) All other answers are correct.

85. Which is the main purpose of radar vectoring?

(a) To give fast and simple separation instructions to aircraft crew.

(b) To increase airport capacity when sequencing traffic into final approach.

(c) To increase airspace capacity when merging arrival traffic flows.

(d) All answers are correct.

86. 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 aircraft crew's workload.

87. The TCAS II (Traffic Collision Avoidance System II) uses for its operation:

(a) both the replies from the transponders of other aircraft and the ground based radar echoes.

(b) the echoes of the collision avoidance radar system especially installed on board.

(c) the echoes from the ground air traffic control radar system.

(d) the replies from the transponders of other aircraft.

88. 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.

89. 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 a range of vertical speed at which the aircraft should be flown to avoid the potential collision.

(b) A Resolution Advisory (RA) that includes a range of indicated airspeeds at which the aircraft should be flown to avoid the potential collision.

(c) A Traffic Advisory (TA) that includes a range of vertical speeds at which the aircraft should be flown to avoid the potential collision.

(d) A Traffic Advisory (TA), which is intended to assist the aircraft crew in the visual acquisition of the conflicting aircraft and/or raise their situational awareness.

90. Which of the following statements, regarding the Traffic-alert and Collision Avoiding System (TCAS), is correct?

(a) A TCAS resolution advisory (RA) has a higher priority than any ATC instruction given to avoid a mid-air collision.

(b) A TCAS traffic advisory (TA) has a higher priority than any ATC instruction given to avoid a mid-air collision.

(c) A TCAS traffic advisory (TA) has a higher priority than any pilot action, after visual adqusition of the intruder aircraft, to avoid a mid-air collision.

(d) All answers are correct.

INFRAESTRUCTURES DEL TRANSPORT AERI (ITA)
Final Exam - Fall semester 2019

Correct answers

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

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