202/203 Radar Take Home Test

General statements regarding separation criteria (see notes in 5-8-3, 5-8-4 etc)

1. When one or both of the departure surfaces is a ______________, use the ______________ of the helicopter as a reference comparable to the runway ______________, and use the helipad center as comparable to a runway ______________

5-8-1. PROCEDURES

2. Use ______________ and ______________ whenever practical to reduce ______________. Do not, however, assign these routes solely to provide for possible ______________ or ______________.

5-8-2. INITIAL HEADING

3. Before departure, assign the ______________ if a departing aircraft is to be vectored ______________. For example, if the aircraft must fly straight ahead after takeoff the controller would say “______________________”

5-8-3. SUCCESSIVE OR SIMULTANEOUS DEPARTURES

4. Separate aircraft departing from the same airport/heliport or adjacent airports/heliports in accordance with the following minima provided ______________ with the aircraft will be established ______________ or helipad and courses will diverge by 15 degrees or more.

5. FAAO 8260.19, Flight ______________ and ______________, establishes guidelines for IFR departure turning procedures which assumes a climb to ____ feet above the airport elevation before a turn is commenced.

6. FAAO 8260.3, United States Standard for Terminal Instrument Procedures (______), the ILS ______________ criteria, requires a _______climb of _______feet be specified where turns greater than 15 degrees are required.
7. Consider known aircraft ________________ when applying initial separation to _______________ departing aircraft.

8. For successive departing aircraft, departing from the same _______/_______ or where parallel runway/helicopter takeoff course is separated by ______________ feet- use a minimum of ______ (nose to tail) separation if courses diverge ___________ after departure. (See Figures 5-8-1, 5-8-2, 5-8-3)

9. The successive departure rule as shown in Figures 5-8-1, -2 and -3 does not apply when a ______________is taking off from an intersection on the ______________ behind a large aircraft or when an aircraft is departing behind a ______________. (See Paragraphs 3-9-7, 3-9-8 and 5-5-4 minima)

10. Between aircraft departing from ______________ runways and the runways don’t intersect (Nonintersecting runways). Authorize simultaneous takeoffs if runways diverge by ______________. (See Figure 5-8-4)

11. Between aircraft departing from ______________, where the aircraft flight path and takeoff courses (for fixed wing aircraft or for rotorcraft) will ______________ by 15 degrees or more after takeoff, authorize the succeeding aircraft (the second aircraft) to takeoff after ______________ has passed the point of ______________ or takeoff ______________. When applicable, apply the procedure in paragraph 3-9-5 ______________. (See Figures 5-8-5, 5-8-6)

12. When the second aircraft is departing behind a _____/_______ do not use procedures provided in Paragraph 5-8-3.

13. Between aircraft departing in the same direction from parallel runways/helicopter takeoff courses, authorize simultaneous takeoffs if the centerlines/takeoff courses are separated by at least ______ and courses diverge by ______________ immediately after ______________. (See Figures 5-8-7, 5-8-8)
5-8-4. DEPARTURE AND ARRIVAL

14. Except as provided in Paragraph 5-8-5, where you are conducting Departures and Arrivals on Parallel or Nonintersecting Diverging Runways, separate a departing aircraft from an aircraft on final approach by________________________ provided separation will increase to a minimum of ____ (or ______if the airport is 40 miles or more from the radar antenna) and the increased separation will occur within _______after takeoff.

15. The procedure specified in paragraph 5-8-4 permits a departing aircraft to be __________when an arriving aircraft is no closer than __________from the runway at the time the departure controller or center controller issues the release. The separation criteria specified in paragraph 5-8-4 is determined at the time the __________aircraft commences ________.

16. Consider the effect surface conditions, such as _____________________________ may have on known aircraft _____________________, and the influence these conditions may have on pilot's ability to commence ______________ in a timely manner.

5-8-5. DEPARTURES AND ARRIVALS ON PARALLEL OR NONINTERSECTING DIVERGING RUNWAYS

17. Authorize ___________________________ between an aircraft departing on a runway and an aircraft on final approach to another parallel or nonintersecting diverging runway if the _______________diverges immediately by at least __________from the missed approach course until separation is applied, provided one of the conditions are met in the following set of FITB statements.

18. Authorize simultaneous operations when ___________________are even (start at the same point relative to a parallel line passing through both runway approach ends) and the runway centerlines (or helicopter departure flight paths) are at least __________________________. See Figure 5-8-9 and 5-8-10
19. Authorize simultaneous operations when parallel runway thresholds are __________ and the arriving aircraft is __________ the nearer runway (of the two runways, the approach is to the runway that is closest to the arriving aircraft):
   a. Where the centerlines are at least __________ apart AND
   b. The centerlines of the runway landing thresholds are staggered at least __________ for each 100 feet less than 2,500 the __________ are separated (centerline to centerline). (See Fig 5-8-11, 5-8-12)

20. During simultaneous operations, in the event of a missed approach by a ________________, apply the procedures in Paragraph 3-9-6 ________________, or Paragraph 3-9-8 ________________ to ensure that the heavy jet does not __________ or __________ of an aircraft departing from the adjacent __________ runway.

21. Authorize simultaneous operations when parallel runway thresholds are __________ and the arriving aircraft is approaching the __________ runway (of the two runways, the approach is to the runway that is farthest from the arriving aircraft), provided the centerline separation (distance from centerline to centerline) exceeds __________ by at least 100 feet for every __________ the runway thresholds are staggered (See Figure 5-8-13). For example, a staggered distance of 600’ up to 1000’ would require adding 100 feet to runway centerline minimum separation distance. (2500’ + ____ = 2600’), a staggered distance from 1000’ up to 1500 feet would add _______ to runway centerline minimum separation distance (2500’+ 200’= ____’) and so on until reaching 3400 feet of runway centerline separation.

22. Authorize simultaneous operations when ________________ runways diverge by 15 degrees or more and runway edges do not ________. See Fig 5-8-14

23. When the aircraft on takeoff is a __________, hold the helicopter until__________ separation is possible or the Controller can apply the ________________ described in the statements above. See paragraph 5-8-4, ________________
Section 9 Radar Arrivals
5-9-1. VECTORS TO FINAL APPROACH COURSE
24. Except as provided in paragraph 7-4-2, Vectors for Visual Approach, vector arriving aircraft to intercept the ______________________

25. Vector arriving aircraft to intercept the final approach course at least 2 miles outside the ___________ unless one of the following exists:
   a. When the reported ceiling is at least 500 feet above the ___________ and
   b. Tthe visibility is at least ___________ (report may be a PIREP if no weather is reported for the airport),
   c. Then, aircraft may be vectored to intercept the final approach course closer than ___________ outside the approach _____ but no closer than the ___________ gate.
26. If specifically requested by the pilot, aircraft may be ___________ to intercept the final ______________________ inside the approach gate but no closer than the ___________ fix.
27. Do not apply the criteria immediately above when vectoring an RNAV aircraft for a ____________ or an ____________ approach.
28. For a precision approach, vector arriving aircraft at an altitude not ___________ the glideslope or glidepath or below the ___________ glideslope intercept altitude specified on the ______________________ chart.
29. For a non-precision approach, vector arriving aircraft at an ____________ which will allow ___________ in accordance with the ____________ procedure.
30. A pilot request for an “___________ approach,” or a “coupled _____________,” or use of a similar term, indicates the ____________ desires to apply the separation criteria in Paragraph ___________ subparagraph a and b.
31. For en route operation, the following provisions are required before an aircraft may be vectored to the final approach course:

a. For en route operation, the approach gate and a solid or broken _______ depicting the final approach _________ starting at or passing through the approach gate and extending away from the airport, be displayed on the radar _________

b. for a precision approach, the line length shall extend at least the maximum range of the _________; for a non-precision approach, the line length shall extend at least ______outside the approach gate; and

c. The maximum range selected on the radar display is _____NM; or

d. An adjacent radar display is set at __________, configured for the approach in use, and used for the vector to the _______________course.

32. If unable to comply with paragraphs regarding the Radar Displays for En Route Control Operations cited in the statements above (for en route vectoring services for vectors to final approach in Paragraph 5-9-1), the Controller shall issue the ___________________in accordance with Para 4-8-1_________________ 

5-9-2. FINAL APPROACH COURSE INTERCEPTION

33. Assign headings that will permit final approach course interception on a________ that does not exceed the following ______________angles (See Table 5-9-1) from the Approach Gate

a. Less than 2 miles – All Aircraft ____________

b. Triple Simultaneous ILS/MLS approaches ____________

c. 2 miles or more – Fixed Wing ____________

d. 2 miles or more – Helicopter ____________

34. If the controller observes ___________ from the final approach course after initial course__________, apply the procedures for vectoring to intercept the final approach course according to Table 5-9-1.
a. Outside the approach gate: apply procedures in accordance with Paragraph 5-9-1 sub-paragraph a, if necessary, vector the aircraft for another ____________.

b. Inside the approach gate: inform the pilot of the aircraft’s ____________ and (ask the pilot’s ____________.

c. If N4567W is 1 mile right of the final approach course, inside the Final Approach Fix, and three miles from the airport, the Controller phraseology would be (1 point for each correct word)
“________________________________________________________
________________________________________________________”

35. For en route control, when using a radar scope range above ______ NM, the controller shall ____________ and ____________ a pilot report that the aircraft is ____________ on the final approach course. If the pilot has not reported established by the ______________, inform the pilot of observed position and ask intentions.

36. Accurately determine small ____________ when using very large range ____________ for the controller radar display is ____________

5-9-3. VECTORS ACROSS FINAL APPROACH COURSE

37. Inform the aircraft whenever a vector will take the aircraft ____________ the final approach course and state the ____________ for vectoring the aircraft across the ____________ course.

38. In the event you are unable to so inform the aircraft, the pilot is not ____________ inbound on the final approach course unless approach clearance has been ____________

39. Inform the aircraft whenever a vector will take the aircraft ____________ the final approach course and state the ____________ for vectoring the aircraft across the final approach course.
40. You are vectoring N5789D to the final approach course and must vector N5789D across the final approach course for traffic spacing. What is the correct phraseology for this instruction to the pilot of N5789D

“_______________________________________________
_______________________________________________”

5-9-4. ARRIVAL INSTRUCTIONS

41. Issue all of the following instructions to an aircraft before the aircraft reaches the approach gate

   a. Position ___________ to a fix on the final approach ___________. If none is portrayed on the radar display or if none is prescribed in the procedure, issue position information ________________ which provides final approach guidance or relative to the ___________.

   b. If required, _________________ the final approach course

   c. Issue an _________________ except when conducting a _________________

42. Issue approach clearance only after the aircraft ________________ on a segment of a published route or ____________________________ (See Figure 5-9-1).

43. Assign an altitude to maintain until the aircraft ________________ on a segment of a published route or ____________________________ procedure.

44. Issue a turn ___________ to ensure the final approach course ________________ angles comply with Table 5-9-1

45. You have been vectoring NWA 23 to the final approach course but withheld the approach clearance. NWA 23 is now at 4,000 feet, 7 miles from EXRAY (FAF), and established on a segment of the ILS RWY 36 instrument approach procedure. The correct phraseology to clear NWA 23 for the ILS RWY 36 approach is “_______________________________________________
_______________________________________________”
46. You have been vectoring SWA 22 to a published segment of the final approach course, 4 miles from LIMA at 2,000 feet. The MVA for this area is 2,000 feet. SWA 22 is at 2,000 feet, 4 miles from EXRAY (FAF), and is not yet established on a segment of the ILS RWY 36 instrument approach procedure and will need a heading of 340° to align with the final approach course sufficiently to ‘capture the course’. The correct phraseology to clear SWA 22 for the ILS RWY 36 approach is (1 point for each correct word)

“__________________________________________________________________

__________________________________________________________________

__________________________________________________________________“

47. You are vectoring AAL 55 to a published segment of the final approach course. AAL 55 is 5 miles from Alpha, an IAF for the approach, is at 5,000 feet, and is not yet established on a segment of the ILS RWY 36 instrument approach procedure. AAL 55 will need to turn to a heading of 320° to align with the final approach course sufficiently to ‘capture the course’. The MVA for this area is 4,000 feet. The correct phraseology to clear AAL 55 for the ILS RWY 36 approach is (1 point for each correct word)

__________________________________________________________________

__________________________________________________________________

__________________________________________________________________

48. You are vectoring DAL 66 and have established DAL on the final approach course beyond the approach segments to a published segment of the final approach course. DAL 66 is 8 miles from Alpha, an IAF for the approach, at 6,000 feet. The correct phraseology to clear DAL 66 for the ILS RWY 36 approach is (1 point for each correct word)

__________________________________________________________________

__________________________________________________________________

__________________________________________________________________

49. You are vectoring ASA 77 to the intermediate fix FORRE for the RNAV RWY 18 approach. ASA 77 is 6 miles from FORRE. The MVA/MIA at FORRE is 4,000 feet. The correct phraseology to clear ASA 77 for the RNAV RWY 18 approach is (1 point for each correct word)

__________________________________________________________________

__________________________________________________________________

__________________________________________________________________

50. Altitude assignments must assure IFR __________________ from the point at which the controller issues the approach clearance until the aircraft is __________ on a segment of a published route or instrument________________ procedure.
51. If the aircraft is on a VFR-on-Top clearance, and the altitude assignment is VFR-on-top, the pilot may elect to __________ until the aircraft arrives over the final approach _____ which may require the pilot to circle to __________ so as to cross the __________________________ at an altitude that would permit __________.

52. Aircraft being vectored to the __________________ for an approach must meet all the provisions described in Paragraph 4-8-1b4.

53. **Communication** Instructions shall include one of the following
   a. Monitor __________ frequency, reporting to the tower when over the __________ fix.
   b. Contact the __________ on local control __________
   c. Contact the __________ controller on the appropriate frequency __________ will be provided on final on a different frequency.

54. You have cleared DAL 66 for the approach, and now will instruct DAL 66 to contact Jackson Tower (Local Control Frequency 119.5) over the FAF (EXRAY). The correct phraseology to instruct the frequency change to occur over the FAF is (1 point for each correct word)

   ________________________________________________________________

55. When radar is used to __________ the final approach fix, inform the ______ that after being advised the pilot is over the fix, the pilot is to contact the tower on ______ control frequency. **(Excellent example of a crappy Passive Voice sentence)**

56. The principal purpose of the communication transfer rules is to ensure that frequency changes occur prior to passing the ________________. However, at times the approach controller may need to retain an aircraft on the approach control frequency to provide a __________ approach or to provide other __________.
57. When the ____________ controller or __________________________ controller retains the aircraft on approach control frequency, the controller will need to coordinate for and relay tower________________________ to the aircraft to preclude having the aircraft change frequencies during the latter portion of the approach or immediately prior to landing (approach termination) a time when the aircrew needs to focus on the transition from approach to landing. ”

58. Air Route Surveillance Radar (ARSR) may be used to establish ___________ approach and ___________ approach fixes only. Airport Surveillance Radar (ASR) must be used to establish the ____________________ fix.

59. Where a __________________________ (TAA) has been established to support an RNAV __________, inform the aircraft of aircraft position relative to the appropriate _____ and issue the approach clearance. (See Figure 5-9-6)

60. You are vectoring ASA 46 to the FAF CENTR for the RNAV RWY 127 approach. ASA 46 is in the Straight-In area of the TAA, and 5 miles from CENTR. The MVA/MIA at FORRE is 4,000 feet. The correct phraseology to clear ASA77 for the RNAV RWY 18 approach is (1 point for each correct word)

___________________________________________________________________
___________________________________________________________________

5-9-5. APPROACH SEPARATION RESPONSIBILITY

61. The radar controller performing the ____________________ function is responsible for separation of _____________ unless visual separation is provided by the ____________, or a ____________ or ____________ authorizes otherwise.

62. Radar final __________ ensure that established__________________ is maintained between aircraft under their control and other aircraft ____________ on the same final approach ____________
63. The radar controller may be a controller in an __________, a ________________,
or a _______________authorized to perform the approach control ___________
in a terminal area.

64. When timed approaches are being conducted, the radar controller shall maintain the
radar ___________ specified in Paragraph ______ - Interval Minima, until the
aircraft is observed to have passed the ________________inbound (non-precision
approaches) or the ___________ or _______________ (precision approaches)
and is within ___________of the runway on the final approach course or until
____________can be provided by the tower.

5-9-6. PARALLEL DEPENDENT ILS/MLS APPROACHES

TERMINAL

65. Apply the following minimum separation when conducting parallel dependent ILS,
MLS, or ILS and MLS approaches:
   a. Provide a minimum of ___________ vertical or a minimum of __________
radar separation between aircraft during turn on.
   b. Provide a minimum of ___________radar separation diagonally between
      ___________aircraft on adjacent localizer/azimuth courses when runway
centerlines are ________________but no more than ___________ apart.
   c. Provide a minimum of ________________diagonally between
      successive aircraft on adjacent localizer/azimuth courses where runway
      ________________but not more than ___________ feet apart.
   d. Provide the ________________radar separation between aircraft
      on the same final approach course.

66. The following conditions are required when applying the minimum radar separation
on adjacent localizer/azimuth courses allowed in Paragraph 5-9-6 a
   a. Apply this separation ___________ only after aircraft are ___________ on
      the parallel final approach course.
   b. Straight-in ___________ will be made.
   c. Missed approach procedures ___________
d. Aircraft are informed that approaches to ____________ are in use.
   Information about approaches to both runways may be provided through the ____________.

   e. Approach control shall have the ________________ for communicating directly with the ________________ at locations where separation responsibility ____________ delegated to the tower.

67. The interphone capability is an integral part of this procedure when ____________ has the sole separation ____________.

68. Consideration should be given to ____________ that may in any way affect the safety of the instrument approach phase of flight, such as ________________ and velocity, ________________, severe weather activity, etc. Closely monitor weather activity that could impact the final approach course. ____________ in the vicinity of the ________________ may dictate change of approach in use.

5-9-7. SIMULTANEOUS INDEPENDENT ILS/MLS APPROACHES- DUAL & TRIPLE TERMINAL

69. Apply the following minimum separation when conducting simultaneous independent ___, MLS, or ___ and ___ approaches:
   a. Provide a minimum of __________ or a minimum of __________ separation between aircraft during turn-on to parallel. __________ During triple parallel approaches, no two aircraft will be assigned the __________ during turn-on. All three aircraft will be assigned altitudes which differ by a minimum of ________. Example: 3,000, 4,000, ___; or 7,000, ___, 9,000.
   b. Communications transfer to the________________________ shall be completed prior to losing vertical __________ between aircraft.
   c. Dual parallel runway centerlines are at least __________ apart.
   d. Triple parallel runway centerlines are at least __________ apart and the airport field elevation is less than __________ MSL.
e. A high-resolution color ____________ with alert algorithms, such as the final ____________ aid or that required in the precision runway ______________ shall be used to monitor approaches where:
   i. Triple parallel runway centerlines are at least ____ but less than ___ feet apart and the airport field elevation is less than ______ MSL.
   ii. Triple parallel approaches to airports where the airport field elevation is __________ MSL or more require the _______________ with alert algorithms and an approved FAA ______________ study.

f. Provide the _________________ radar separation between aircraft on the same final approach course.

70. The following conditions are required when applying the minimum ___________ on adjacent dual or triple ILS/MLS courses allowed in subpara a:
   a. Straight-in _______________ will be made.
   b. _____ , _____ , ____ , and appropriate __________ are operating normally.
   c. Inform aircraft that ________________ are in use prior to aircraft departing an _____________ fix. Simultaneous ILS/MLS approaches information may be provided through the ________
   d. Clear the aircraft to descend to the appropriate glideslope/glidepath intercept altitude ______________ to provide a period of level flight to dissipate excess ___________. Provide at least __________ of straight flight prior to the final approach course ____________

71. Simultaneous ILS/MLS approaches procedures are not applicable to __________ and __________ MLS approaches.
   a. A No Transgression Zone (NTZ) at least __________ is established an equal distance between extended runway ________________ and shall be depicted on the monitor ____________. The primary responsibility for navigation on the final approach course rests with the _______. Control instructions and information are issued only to ensure ___________ between aircraft and to prevent aircraft from penetrating the _____.
b. Monitor all approaches regardless of weather. Monitor _______________ to receive any aircraft transmission. Issue control instructions as necessary to ensure aircraft do not enter the ________.

72. **Section 10 Radar Approaches**
   Terminal

**5-10-1. APPLICATION**

73. Provide radar approaches in accordance with __________or special instrument approach __________ .

73. A radar approach may be given to any aircraft __________and may be __________ to aircraft in distress regardless of __________conditions or to ________________.

74. Acceptance of a __________ by a pilot does not waive the prescribed _______ minima for the airport or for the particular aircraft operator concerned. The _______ is responsible for determining if the approach and landing are authorized under the existing __________________________.

**5-10-2. APPROACH INFORMATION**

75. Current approach information contained in the _________________ may be omitted if the pilot states the appropriate ATIS broadcast __________

76. All items listed below, except for items in Paragraph 5-10-2, a 3 may be __________ after the first approach if repeated approaches __________and no change in the information has __________. Transmissions with aircraft in this phase of the approach should occur approximately every __________.

77. Issue the following information to an aircraft that will conduct a radar approach.
   a. __________________________.
b. If available, _________ and _________ if the ceiling at the airport of intended landing is reported below _________ or is below _________ minimum, whichever is _________, or if the visibility is less than _________

78. Advise pilots when ____________________ is available via the ________________________________ (AWOS)/Automated Surface Observing System (_____ )if requested, issue the appropriate AWOS or ASOS __________

79. Automated weather observing systems may be set to provide ____________________

This one minute data may be useful to the pilot for possible ____________________.

Controllers provide service based solely on ____________________ i.e., hourly and special ________.

80. Issue any ____________ classified as ____________ observations as soon as _________. Special weather observations ____________ after they are included in the ATIS ________ and the pilot states the appropriate ATIS broadcast ________.

81. Pertinent information on known _________________ if information about airport conditions is considered necessary to the ____________ of the aircraft concerned.

82. Lost communication procedures as specified in Para. _____ Lost Communications.

83. Before starting final approach:
   a. For Radar Approaches, inform the aircraft of the ____________, runway, airport, heliport, or other point, as appropriate, to which the ____________.

   Specify the airport name when the approach is to a secondary airport.

84. You are vectoring SWA 22 for a Surveillance Approach to JAN RWY 18. The MAP for the ASR to RWY 18 at Jackson is 1 mile from the Approach End of RWY 18. , the correct phraseology is (1 point for each correct word).
5-10-3. NO-GYRO APPROACH

85. When an aircraft will make a _________surveillance or a PAR approach, Before
issuing a vector, inform the aircraft of the _________________.

86. You are vectoring DAL98 for a NO-GYRO PAR approach to JAN RWY 18. the
   correct phraseology is (1 point for each correct word).
   ______________________________________________________________________

87. For the DAL98 NO-GYRO PAR approach to JAN RWY 18 you direct DAL 98 to You'll
   Instruct the DAL 98 when to start and stop turn. For example, turn right. And then
   you direct DAL to stop the turn. The correct phraseology is (1 point - correct word).
   To start the Turn - ______________________________________________________________________
   To start the Turn - ______________________________________________________________________

88. After turn on to final approach has been made and _________ to the aircraft
   reaching the __________, instruct the aircraft to make ___________rate turns.

89. For the DAL98 NO-GYRO PAR approach to JAN RWY 18 you direct DAL 98 to use
   half standard right turns. The correct phraseology is (1 point for each correct word).
   ______________________________________________________________________

5-10-4. LOST COMMUNICATIONS

90. When weather reports indicate that an aircraft will likely encounter __________
   conditions during the approach, take the following action ______________after
   establishing radar _______________ and _________communications (may be
   omitted after the first approach when successive approaches are made and the
   instructions remain the same):

91. Air traffic control facilities at U.S. _________and U.S. _______installations are
   not required to transmit _______________ instructions to _________________.
   All military facilities will issue specific lost communications _____________ to
   _________________when _________________.

92. If lost communications instructions will require the ___________to fly on an
   unpublished route, issue an appropriate ____________ to the pilot.
93. If the lost communications ______ are the same for both pattern and ____ the pattern/vector controller shall __________.

94. Advise the pilot that if radio communications are lost for a specified time interval (not more than)
   a. In the pattern (or prior to Final) - ______
   b. ASR Final Approach - ______
   c. PAR Final Approach - ______

95. If the aircraft loses contact with ATC during the final phase of a radar approach the pilot should
   a. Attempt contact with ATC on a secondary frequency or on Tower______.
   b. If possible, proceed in accordance with visual______.
   c. IF VFR is not possible, proceed with an _______________ approach, or
   d. Execute the specific lost communications procedure for the ___________ being used.

96. If the pilot states “unable” for lost communications ______ due to weather conditions or other reasons, request the pilot’s ______.

97. The pilot is responsible for determining the ______ of lost communications procedures with respect to ____________, equipment ________, or reported ________

5-10-5. RADAR CONTACT LOST

98. If radar contact is lost during ______ and the aircraft has not started final approach, __________to an appropriate ________for an instrument approach.
5-10-6. LANDING CHECK

99. **USA/USN.** Advise the pilot to perform ______________ while the aircraft is on downwind leg and in time to complete the landing check before turning ________.

100. If an incomplete pattern is used, issue this instruction before _______ the final controller for a ______________, or before starting descent on final approach for ______________.

5-10-7. POSITION INFORMATION

101. Inform the aircraft of its position at least _____ before starting final approach.

5-10-8. FINAL CONTROLLER CHANGEOVER

102. When instructing the aircraft to change frequency for final approach guidance, include the ______________.

5-10-9. COMMUNICATIONS CHECK

103. On initial contact with the final controller, ask the aircraft for a ___________ check.

104. The correct phraseology for COMM Check by the Final Controller to DAL 98 is

   ______________________________________________________
   ______________________________________________________

5-10-10. TRANSMISSION ACKNOWLEDGMENT

105. After contact has been established with the final _______ and while on the final approach course, instruct the aircraft ______________ further transmissions.

106. The correct phraseology for directing to not acknowledge further transmission by the Final Controller who is directing DAL 98 is

   ______________________________________________________
   ______________________________________________________
5-10-11. MISSED APPROACH

107. Before an aircraft starts final descent for a __________ and weather reports indicate that any portion of the final approach will be conducted in __________, issue a specific missed approach procedure __________ for the radar approach being conducted.

5-10-12. LOW APPROACH AND TOUCH-AND-GO

108. Before an aircraft which plans to execute a low approach or touch-and-go begins final descent, issue appropriate ________________ to be followed upon completion of the __________. Climb-out instructions must include a __________ __________ and __________ except when the aircraft will maintain ______ and contact the _______.

5-10-13. TOWER CLEARANCE

109. When an aircraft is on final approach to an airport served by __________, the final controller will obtain a __________ to land, touch-and-go, or make low approach from the Tower. Issue the __________ and the __________ to the aircraft.

5-10-14. FINAL APPROACH ABNORMALITIES

110. Instruct the aircraft if runway environment is not __________, execute a missed approach if previously given; or climb to or maintain a specified altitude and fly a specified course whenever the completion of a __________ is questionable because the aircraft exceeds safe limits for ________, position or aircraft identification is ________, or radar contact is __________________________.