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| 空中交通管制概论 | |
| **EXAM** | |
| Duration | **2h** |
| Nbr of Questions | **38** |
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Part I. Choose the best correct answer. 2 point for each item.

1. The three components of ATM are ( B ).
2. Aerodrome control, Approach control, Area control
3. Airspace management, Air traffic flow management, Air traffic services
4. Strategic management, Pre-tactical management, Tactical management
5. Information management, Traffic management, safety management
6. The three different Air Traffic Service Units are ( A ).
7. Meteorological Information service unit, Aeronautical information service unit, Flight information service unit
8. Flow control unit, Traffic control unit, separation control unit
9. Aerodrome control unit, Approach control unit, Area control unit
10. Departure control unit, En-route control unit, Arrival control unit.
11. Which type of Special Use Airspace can be set up over the high seas by a country? ( D )
12. Reserved airspace
13. Prohibited airspace
14. Restricted airspace
15. Danger airspace
16. Airspace is classified to allow for ( A ).
17. Different degree of control of activities
18. Easy designation of different parts of airspace
19. Segregation of different activities
20. Flight of aircraft of different speed
21. Chinese airspace is currently classified into classes ( C )
22. Managed, unmanaged
23. Intended Traffic Environment, Known Traffic Environment, unknown Traffic Environment
24. A, B, C, D
25. A, B, C, D, E, F, G
26. Which of the following is NOT included in the airspace structure of Flexible Use Airspace? ( D )
27. Conditional Routes,
28. Temporary Reserved Areas,
29. Prior Co-ordination Airspace
30. Restricted airspace
31. Control sector capacity is mainly determined by ( A ).
32. Controller workload
33. Airspace volume
34. Aircraft speeds
35. Separation standards
36. A Pilot will change the altimeter setting to QNH when ( B)
37. His aircraft starts to descend
38. Passing through the Transition Level
39. Passing through the Transition Altitude
40. His aircraft starts to approach
41. Below 12500 m, vertical separation between two adjacent flight levels is ( D )
42. 1000 m
43. 600 m
44. 500 m
45. 300 m
46. The last three legs of an aerodrome traffic circuit are ( D )
47. Upwind, crosswind, downwind
48. Downwind, crosswind, upwind
49. Downwind, Crosswind, final
50. Downwind, Base, Final
51. Information relative to an intended flight or portion of a flight, to be provided to air traffic services units, shall be in the form of a ( B ).
52. Flight Request
53. Flight Plan
54. Flight application
55. Flight briefing
56. An ATC ( B ) shall be obtained prior to operating a controlled flight, or a portion of a flight as a controlled flight.
57. instruction
58. clearance
59. approval
60. permission
61. Which of the following is NOT contained in an air traffic control clearance? ( A )
62. Departure time
63. aircraft identification
64. clearance limit
65. route of flight
66. The Missed Approach Point (Mapt) for precision approaches is ( C)
67. Over the runway threshold
68. on reaching minimum descent altitude
69. on reaching decision altitude
70. Over the runway end
71. At lower altitudes, a standard holding pattern will take ( B ) minutes to complete.
72. 3
73. 4
74. 5
75. 6
76. For design of approach procedures, aircraft are categorized according to their ( D )
77. Weight
78. Size
79. Engine types
80. speeds
81. Where a final approach fix (FAF) is available, the ( C ) segment begins when the aircraft is on the inbound track of the procedure turn, base turn or final inbound leg of the racetrack procedure.
82. arrival
83. initial approach
84. intermediate approach
85. Final approach
86. The initial approach segment provides at least (A ) of obstacle clearance in the primary area, reducing laterally to zero at the outer edge of the secondary area.
87. 300 m
88. 150 m
89. 100 m
90. 50 m
91. Radar separation for approach section is usually ( B) km
92. 10
93. 6
94. 5
95. 3
96. Odd levels are allocated for ( D) flights
97. Northbound
98. Southbound
99. Westbound
100. Eastbound
101. Wake turbulence separation minima is determined by aircraft ( A )
102. Weight
103. Speed
104. Size
105. Engine type
106. According to ICAO general rules of air, when a pilot sees another aircraft coming to him from his left at about the same level, he is supposed to (D ).
107. Turn left
108. Turn right
109. Descend
110. Maintain his heading and level
111. All flights, conducted in accordance with the rules and procedures of ICAO and/or the national civil aviation regulations and legislation，are categorized as ( A ).
112. GAT
113. OAT
114. MET
115. RBT
116. A joint civil/military department, responsible for the day-to-day management and temporary allocation of national or sub-regional airspace, is called ( B )
117. An AIS office
118. An AMC
119. A SWIM
120. An AUP
121. For IFR flight, the minimum flight altitude should provide an obstacle clearance of ( B) metres over high terrain or mountainous areas.
122. 1000
123. 600
124. 300
125. 150
126. The automatic provision of current, routine information to arriving and departing aircraft throughout 24 hours is called ( C).
127. SIGMET
128. AIRMET
129. ATIS
130. VOLMET
131. When an aircraft has been cleared to land and fails to land within 5 minutes of the estimated time of landing and and communication has not been re-established with the aircraft, the situation is in ( D )
132. An emergency phase
133. A distress phase
134. An uncertainty phase
135. An alert phase
136. The design of an instrument departure procedure is, in general, dictated by (A ).
137. the terrain surrounding the aerodrome
138. type of aircraft involved
139. siting of navigational aids
140. ATC requirements
141. Which of the following is NOT a task of the approach controller ? ( C )
142. Merging
143. Sequencing
144. Track keeping
145. Spacing
146. Traffic synchronization is a component of ( B) operational concept
147. US Nextgen
148. ICAO global ATM
149. SESAR
150. Future China ATM

Part II. Answer t he following questions. 5 points for each question.

1. What are the functions of ASM?
2. collection and evaluation of all requests which require temporary airspace allocation;
3. planning and allocation of the required airspace to the users concerned where segregation is necessary;
4. activation or de-activation of such airspace within adequately narrow time tolerances, in close co-operation with ATC units and civil or military units concerned.
5. dissemination of detailed information, both in advance and in real time, to all parties concerned.
6. Why should a control area be sectorized?

Workload of the controller will be accumulated as traffic flow come in, it’s estimated to exceed the time regulation so in order to reduce the workload, the control area should be sectorized.

1. Why should airspace be classified?
2. Different degree of control for different activities
3. Different rules for different activities
4. Different service for different activities
5. Different equipage requirements for different activities
6. What are the tasks for the pre-tactical phase of Air Traffic Flow and Capacity management?
7. certain traffic flows may be re-routed;
8. off-load routes may be coordinated;
9. tactical measures will be decided upon; and
10. details for the ATFM plan for the following day should be published and made available to all concerned.
11. What are the ways to optimize utilization of available en-route capacity?

reduce

1. Reduce Traffic Complexity
2. Increase Capacity Value
3. Adapt the Sector Configuration
4. Adapt the Number of Sectors
5. Civil/Military Coordination
6. What factors have to be considered when reducing the vertical separation minima?
7. Accuracy of altimeters
8. Level keeping capability
9. Vertical current
10. How can wake turbulence separation be reduced?
11. Better secquencing considering the weight of the plane
12. Better categorization
13. Atmosphere condition detection
14. How can an in-flight holding pattern be defined?

