

<b>Course/Branch:</b> B.E/CIVIL	<b>Year / Semester :</b> IV/VII	Format No.	NAC/TLP-07a.13
<b>Subject Code :</b> CE8702	<b>Subject Name:</b> RAILWAYS, AIRPORTS, DOCKS AND HARBOUR ENGINEERING	Rev. No.	02
<b>Unit No :</b> 4	<b>Unit Name :</b> AIRPORT DESIGN	Date	30.09.2020

**OBJECTIVE TYPE QUESTION BANK**

S. No.	Objective Questions (MCQ /True or False / Fill up with Choices )	BTL
1.	ICAO recommends length of runway for “A” type airports as A) 1500 m B) 1800 m C) <b>2100 m</b> D) 2400 m	LT1
2.	For night landing, the thresholds are lighted A) <b>Green</b> B) Red C) White D) Yellow	LT1
3.	In approach areas of runways equipped with instrumental landing facilities any object within 4.5 km distance from runway end shall be considered as an obstruction if its height is more than A) 20 m B) <b>30 m</b> C) 45 m D) 51 m	LT1
4.	The bearing of the runway at threshold is 290°, the runway number is A) N 70° W B) 290° C) <b>29°</b> D) W 20° N	LT1
5.	According to I.C.A.O. all markings on the taxiways are painted A) Black B) Red C) <b>Yellow</b> D) Green	LT1
6.	The runway orientation is made so that landing and takeoff are A) <b>Against the wind direction</b> B) Along the wind direction C) Perpendicular to wind direction D) None of these	LT2
7.	<b>Wind Rose diagram Type-II used for the orientation of runway shows</b> A) direction and intensity of wind	LT1

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	<p>B) direction of wind                  C) direction and duration of wind  <b>D) direction duration and intensity of wind</b></p>	
8.	<p><b>If more than one runways are to be provided, the basic pattern of runway is</b>                  A) parallel                  B) intersecting                  C) non-intersecting  <b>D) any of the above</b></p>	LT2
9.	<p><b>Passengers walking distance in a terminal should not be more than _____ from surface transportation point to the boarding point.</b>                  A) 90 m  <b>B) 180 m</b>                  C) 270 m                  D) 360 m</p>	LT1
10.	<p><b>In aprons aircraft are parked in</b>                  A) angle nose-in                  B) angle nose-out                  C) parallel  <b>D) any of the above pattern</b></p>	L2
11.	<p><b>As far as possible transverse gradient of less than _____ should be avoided in a runway.</b>                  (a) 0.5 %                  (b) 1.0 %                  (c) 1.5 %                  (d) 2.0 %</p>	LT1
12.	<p><b>Clam period is the percentage of time during which intensity is less than</b>                  a) 4.8 kmph  <b>b) 6.4 kmph</b>                  c) 8.0 kmph                  d) 9.6 kmph</p>	LT1
13.	<p><b>The best direction of a runway is along the direction of</b>                  A) Longest line on wind rose diagram                  B) Shortest line on the wind rose diagram                  C) Line clear of wind rose diagram                  D) None of these</p>	LT1

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<b>14.</b>	<p><b>The engine failure case for determining the basic runway length may require</b></p> <p>A) Only clearway                  B) Only stop way                  C) Either a clearway or a stop-way  <b>D) Either a clearway or a stop-way or both</b></p>	LT1
<b>15.</b>	<p><b>Consider the following statements regarding ICAO recommendation for correction to basic runway length of these statements</b></p> <ol style="list-style-type: none"> <li><b>The basic runway length should be increased at the rate of 7 percent per 300 m rise in elevation above the mean sea level.</b></li> <li><b>The basic runway length after having been corrected for elevation should be further increased at the rate of 1 percent for every 1°C rise in airport reference temperature above the standard atmospheric temperature at that elevation.</b></li> <li><b>The runway length after having been corrected for elevation and temperature should be further increased at the rate of 20% for every 1 percent of effective gradient.</b></li> </ol> <p>A) 1 and 2 are correct                  B) 2 and 3 are correct                  C) 1 and 3 are correct  <b>D) 1, 2 and 3 are correct</b></p>	LT1
<b>16.</b>	<p><b>Which of the following factors are taken into account for estimating the runway length required for aircraft landing?</b></p> <ol style="list-style-type: none"> <li><b>Normal maximum temperature</b></li> <li><b>Airport elevation</b></li> <li><b>Maximum landing weight</b></li> <li><b>Effective runway gradient</b></li> </ol> <p><b>Select the correct answer using the codes given below Codes:</b></p> <p>A) 1,2,3 and 4                  B) 1,3, and 4                  C) 2 and 3  <b>D) 1,2 and 4</b></p>	LT1

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17.	<p><b>Pick up the correct statement from the following:</b></p> <p>A) Air screw converts the energy given by the engine into speed</p> <p>B) The propellers which are driven by turbine engines, are technically called turboprops</p> <p>C) The aircrafts which obtain the thrust directly from turbine engine, are called turbo-jets</p> <p>D) <b>All the above</b></p>	LT1
18.	<p><b>As per ICAO all markings on the runway are</b></p> <p>A) White</p> <p>B) Balck</p> <p>C) Red</p> <p>D) yellow</p>	LT2
19.	<p><b>Beaufort scale is used to determine</b></p> <p>A) <b>Strength of winds</b></p> <p>B) Direction of winds</p> <p>C) Height of air-crafts</p> <p>D) None of these</p>	LT1
20.	<p><b>Assertion A : The ratio of arriving and departing aircrafts influences the airport Capacity</b></p> <p><b>Reason R : Landing operation is generally given priority over the taking off operation.</b></p> <p><b>Select your answer based on the coding system given below:</b></p> <p>(A) <b>Both A and R is true and R is the correct explanation of A</b></p> <p>(B) Both A and R is true and R is not the correct explanation of A</p> <p>(C) A is true but R is false</p> <p>(D) A is false but R is true</p>	LT2
21.	<p><b>For the taxiways, the following statement is true</b></p> <p>a. The maximum longitudinal grade is 3%</p> <p>b. The permissible rate of change of grade is 1%</p> <p>c. The permissible transverse grade is 1.5%</p> <p>d. <b>All the above</b></p>	LT1
22.	<p><b>Wind Rose diagram Type-I used for the orientation of runway shows</b></p> <p>A) direction and intensity of wind</p> <p>B) direction of wind</p> <p>C) <b>direction and duration of wind</b></p> <p>D) direction duration and intensity of wind</p>	LT1

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23.	<p><b>Consider the following statements: Wind rose diagram is used for the purposes of</b></p> <ol style="list-style-type: none"> <li>1. Runway orientation</li> <li>2. Estimating the runway capacity</li> <li>3. Geometric design of holding apron of these statements</li> </ol> <p>A) 1 and 2 are correct                  B) 2 and 3 are correct                  C) 1 and 3 are correct  <b>D) 1 alone is correct</b></p>	LT2
24.	<p><b>Pick up the correct statement from the following:</b></p> <p>(A) The centre line of the approach area coincides with that of the runway                  (B) Approach areas are measured in horizontal surfaces                  (C) Obstruction clearance surface and approach surface are same  <b>(D) All the above</b></p>	LT1
25.	<p><b>The lift off distance is the distance along the centre of the runway between the starting point and</b></p> <p>(A) End of the runway                  (B) End of stop-way                  (C) Point where air craft becomes air borne  <b>(D) Point where air craft attains a height of 10.7 m</b></p>	LT1
26.	<p><b>For supersonic transport aircraft, the minimum turning radius of taxiway is</b></p> <p>(A) 60 m                  (B) 120 m  <b>(C) 180 m</b>                  (D) 240 m</p>	LT2
27.	<p><b>The width and interval of transverse centre line bars along the extended centre line of runway, in approach lighting system are</b></p> <p>(A) 3 m and 30 m  <b>(B) 4.2 m and 30 m</b>                  (C) 4.2 m and 50 m                  (D) 3 m and 45 m</p>	LT1
28.	<p><b>An aircraft is flying in an atmosphere of 30°C with a speed of 1260 km ph. Its speed is known as</b></p> <p>(A) Subsonic  <b>(B) Sonic</b>                  (C) Super-sonic                  (D) Mach                  Answer: Option B</p>	LT2

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29.	<b>Conical surface of the approach area rises outwards</b> (A) 1 in 10 (B) 1 in 15 (C) <b>1 in 20</b> (D) 1 in 25	LT1
30.	<b>In Instrumental landing system, the middle markers are located</b> (A) Along the extended centre line of runway end (B) <b>About 1 km. ahead of the runway threshold</b> (C) At the runway threshold (D) About 7 km. ahead of the runway threshold	LT1
31.	<b>An airport has 4 gates. If the weighted average gate occupancy time is 30 minutes and gate utilisation factor is 0.5, then the capacity of the gate will be</b> (A) 1 aircraft per hour (B) 2 aircrafts per hour (C) <b>4 aircrafts per hour</b> (D) 16 aircrafts per hour	LT1
32.	<b>Zero fuel weight of an aircraft is:</b> (A) Equal to empty operating weight (B) Equal to maximum landing weight (C) Less than empty operating weight (D) <b>Equal to sum of empty operating weight and the maximum pay load</b>	LT2
33.	<b>The maximum length and pavement strength of the runway is that of</b> (A) A 1 (B) B 2 (C) B 3 (D) G 7	LT1
34.	<b>Total correction for elevation, temperature and gradient for a runway should not be more than</b> (A) 15 % (B) 20 % (C) 25 % (D) <b>35 %</b>	LT1
35.	<b>In instrument landing system</b> (A) <b>L.O.M. and L.M.M. are installed on one side and Localizer antenna on the other side</b> (B) L.O.M. and Localizer are installed on one side and L.M.M. on the other side (C) Localizer and L.M.M. are installed on one side and L.O.M. on the other side (D) None of these	LT2