

5. (a) Explain various factors affecting size of Apron. Draw a neat sketch showing the basic parking configurations of aircrafts. 10  
 (b) Determine the capacity of 12 gates that serve three classes of aircraft using the following aircraft mix and average gate occupancy time. 10

Aircraft Class	Mix(%)	Average Occpancy Time (min)
1	50	25
2	35	45
3	50	60

6. The average wind data collected at a particular site is giVen below. Determine the calm period, the pest orientation of runways and the total wind coverage along the direction of EW, and NS by using Wind rose diagram Type IT. Permissible cross wind component is 25 kmph. 20

Wind data			
Wind direction	Duration of wind		
	6.4-25 (kmph)	25-50 (kmph)	50-75 (kmph)
N	7.4	2.7	0.2
NNE	5.7	2.1	0.3
NE	3.4	0.9	0.5
ENE	1.2	0.4	0.2
E	0.8	0.2	0.0
ESE	0.3	0.1	0.0
SE	4.3	3	0.0
SSE	5.5	3.2	0.0
S	9.7	4.6	0.0
SSW	6.3	3.2	0.5
SW	3.6	1.8	0.3
WSW	1.0	0.5	0.1
W	0.4	0.1	0.0
WNW	0.2	0.2	0.0
NW	5.3	1.9	0.0
NNW	4.0	1.3	0.3