TUGAS
MATA KULIAH PRASARANA TRANSPORTASI (3 SKS)
JURUSAN TEKNIK SIPIL FAKULTAS TEKNIK
UNIVERSITAS MUHAMMADIYAH YOGYAKARTA

TUGAS
KOMPETENSI

Soal:

Tabel 1. Karakteristik Pesawat B 747-400

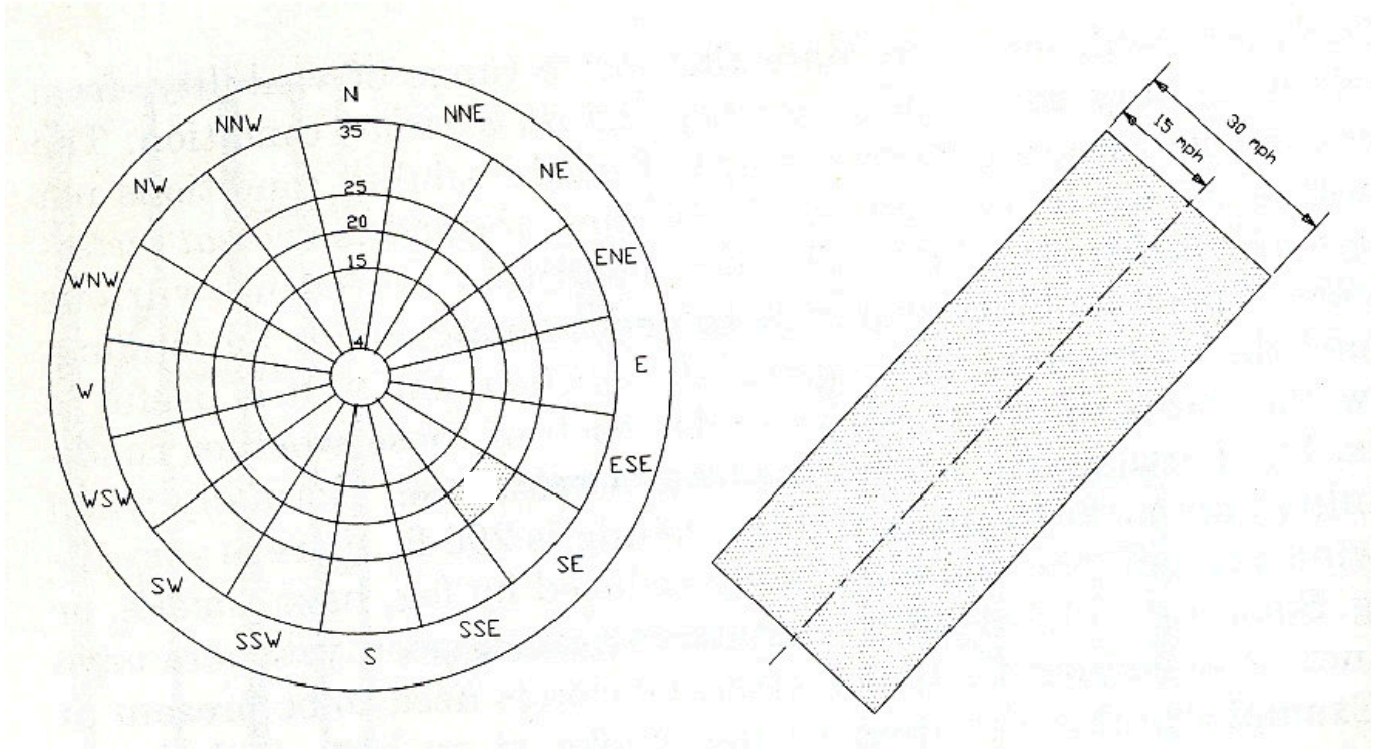| Karakteristik Pesawat	B 747-400
Maximum structural takeoff weight	800,000 lbs.
Maximum landing weight	574,000 lbs.
Operating weight empty	396,142 lbs.
Zero fuel weight	535,000 lbs.
Maximum structural Payload	138,900 lbs.
Liftoff distance (normal takeoff)	8200 ft.
Distance to 35 ft height (normal take off)	8900 ft.
Liftoff distance (engine failure)	10,250 ft.
Distance to 35 ft height (engine failure)	11,300 ft.
Accelerate stop distance	10,700 ft.
Stop distance	5500 ft.

Tabel 2. Data angin untuk kondisi meteorologi secara visual (VMC)

Arah	Kecepatan Angin (mil/jam)							
	0 - 3	4 - 12	13 - 15	16 - 18	19 - 24	25 - 31	32+	Total
N	0.4	3.6	1.0	0.5	0.2	0	0	5.7
NNE	0.3	2.5	0.6	0.2	0.1	0	0	3.7
NE	0.4	3.3	0.6	0.2	0.1	0	0	4.6
ENE	0.3	2.7	0.5	0.2	0.1	0	0	3.8
E	0.5	2.7	0.3	0.1	0	0	0	3.6
ESE	0.3	1.6	0.2	0.1	0	0	0	2.2
SE	0.4	2.3	0.3	0.1	0	0	0	3.1
SSE	0.5	4.9	0.6	0.1	0	0	0	6.1
S	0.7	11.8	1.9	0.7	0.2	0	0	15.3
SSW	0.4	6.0	1.7	1.1	0.6	1.0	1.0	10.0
SW	0.4	3.1	0.5	0.3	0.2	0	0	4.5
WSW	0.3	2.2	0.4	0.2	0.1	0	0	3.2
W	0.3	2.6	0.7	0.4	0.3	0.1	0	4.4
WNW	0.2	3.0	1.4	1.2	1.0	0.4	0	7.2
NW	0.2	4.7	2.5	2.0	1.3	0.3	0	11.0
NNW	0.2	5.2	2.0	1.4	0.7	0.1	0	9.6
Calm	2.0							
Total	7.8	62.2	15.2	8.8	4.9	1.0	0.1	100.0

o Orientasi landasan pacu disyaratkan dengan komponen *cross wind* tidak melebihi 13 mil/jam dan *tail wind* kurang dari 4 mil/jam.

Tentukan:

1. Panjang dasar dan aktual landas pacu (*runway*) dengan kemiringan longitudinal efektif ditentukan sebesar 0.5%, kemiringan *runway strips* sebesar 1 %, dan kemiringan *runway transverse* sebesar 1.5 %.
2. Orientasi landas pacu (*runway*).

[**Good Luck! Semoga Berhasil !**, atmaja.sri@gmail.com]