

SATHYABAMA UNIVERSITY

(Established under section 3 of UGC Act, 1956)

Course & Branch: B.E – Aeronautical

Title of the paper: Industrial Aerodynamics

Semester: VII

Sub.Code: 526E08

Date: 29-09-2008

Max. Marks: 80

Time: 3 Hours

Session: FN

PART – A

(10 x 2 = 20)

Answer All the Questions

1. Define boundary layer.
2. Mention any two causes of variation of winds.
3. Define betz coefficient.
4. Explain types of horizontal axia machines.
5. Define cut back angle.
6. Define drag coefficient.
7. Mention few effects building aerodynamics.
8. Explain building codes.
9. Define flutter.
10. Define non dimensional numbers.

PART – B
Answer All the Questions

(5 x 12 = 60)

11. Explain briefly about types winds and causes.
(or)
12. Explain briefly about atomospheric and its layers.
13. Compare and explain the industrial gas turbine with gas turbine.
(or)
14. Explain the momentum theory and derive betz coefficient.
15. Derive the power requirements and drag coefficient.
(or)
16. Discuss the aerodynamics effects of hovercraft.
17. Explain briefly the building codes.
(or)
18. Explain briefly about pressure distribution on low rise buildings.
19. Explain briefly about effects Reynolds number.
(or)
20. Explain vortex induced vibrations.