

SATHYABAMA UNIVERSITY

(Established under section 3 of UGC Act,1956)

Course & Branch :B.E - AERO

Title of the Paper :Aerodynamics – II

Sub. Code :526502/626501

Date :19/04/2010

Max. Marks :80

Time : 3 Hours

Session :AN

PART - A

(10 x 2 = 20)

Answer ALL the Questions

1. Define “Momentum”.
2. Define “Diverging Passages”.
3. Define “Fauno Flow”.
4. What is meant by “Oblique Shocks”?
5. Define “Lift”.
6. What is meant by “Mach Angles”?
7. Define “Mach Number”.
8. What is meant by “Swept Wings”?
9. Define “Flow Visualization”.
10. What is meant by “Hypersonic Tunnels”?

PART – B
Answer All the Questions

(5 x 12 = 60)

11. Write a brief note on “Velocity of Sound” with sketches.
(or)
12. Write a brief note on “Adiabatic steady State flow equations”.
13. Explain in detail with neat sketches about “Pitot Static tube”.
(or)
14. Write a brief note on “Supersonic Flows” with neat sketches.
15. Explain in detail about “Linearised two dimensional supersonic flow theory”.
(or)
16. Write a brief note on “Centre of pressure of Supersonic profiles”
17. Write a brief note on “Transonic area rule”.
(or)
18. Explain in detail about “Lift and drag divergence”.
19. Explain in detail about “Induction tunnel layouts” with sketches.
(or)
20. Write a brief note on “Helium and gun tunnels”.