

Roll No.

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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(ANE) (Sem.-6)
WIND TUNNEL TECHNIQUES
Subject Code : ANE-326
M.Code : 60535

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

1.
 - a) Name various types of wind tunnels.
 - b) Name special purposes wind tunnels.
 - c) What is wind tunnel balance?
 - d) Define energy ratio.
 - e) Name the fluid used in a manometer.
 - f) Write the relation between total, static and dynamic head.
 - g) What is Boundary layer mouse?
 - h) Name turbulence measurement methods.
 - i) Name wind tunnel balances.
 - j) What is horizontal buoyancy?

SECTION-B

2. What effects are produced by the presence of the lateral boundaries in wind tunnel testing?
3. Discuss any two non-aeronautical uses of wind tunnel.
4. Name various types of wind tunnels. Discuss any one.
5. What is a manometer? Explain the working of multiple manometers.
6. Write briefly about the following with reference to wind tunnels :
 - a) Honey combs
 - b) Entrance cone
 - c) Construction materials

SECTION-C

7. Discuss the four most popular types of wind tunnels balance measuring units.
8. Discuss power losses in the operation of the wind tunnels.
9. Explain the working of a smoke tunnel with the help of a neat sketch.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.