Total No. of Questions : 8]   [Total No. of Printed Pages :2

Roll No ....

MMTP-104
M.E./M.Tech. I Semester
Examination, December 2016
Advanced Fluid Mechanics

Time : *Three Hours*

Maximum Marks : 70

Note : i)   Answer any five questions.
       ii) All questions carry equal marks.

1. a) Explain concept of continum.
    b) What is difference between control volume and control mass systems?

2. a) Deduce Reynold's transport theorem.
    b) Enlist applications of Reynold's transport theorem.

3. a) Discuss flow net.
    b) Write a brief note on superposition of elementary flows.

4. Deduce Navier-Stroke equation. What are the applications of thin equations?

5. a) What is boundary layer? Discuss the growth of boundary layer on a flat plate.
    b) What is Laminar and turbulent boundary layers? What is separation of boundary layers?

MMTP-104   PTO

6. a) What is mach number, mach cone and zone of silence and zone of action?
    b) Distinguish clearly between drag and lift forces.

7. a) What are stagnation and static properties?
    b) What are critical properties?

8. Write short notes on the followings:
    a) Normal and oblique stokes
    b) Prototype testing of fluid medicines

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MMTP-104