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Roll No

MMMD/MMPD-302(A)

M.E./M.Tech., III Semester

Examination, December 2015

Fluid Film Lubrication (Elective-II)

Time : Three Hours

Maximum Marks: 70

Note : i) Attempt any five questions, each carrying equal marks.
ii) Draw neat sketch wherever is necessary.

1. a) Write down the classification of Bearings.
b) Describe momentum equation and derive it.
2. Explain Reynold equation for hydrodynamic journal bearings.
 - a) Rayleigh step journal bearing
 - b) Infinite slider bearing
3. Explain following terms of hydrodynamic Journal bearings :
 - a) Load carrying capacity
 - b) Attitude angle
 - c) Eccentricity sommerfeld number and oil flow
4. Describe for Hydrostatic Journal Bearings Boundary conditions and Static Performance characteristics load.

5. Write down the geometry of different types of non-circular bearings and its behavior. Explain with neat sketch.
6. a) What are the differentiate between gas and oil bearings?
b) Write the characteristics of gas bearings.
7. Explain in detail the following numerical methods (Any Two)
 - a) Least square method
 - b) Galerkin's method
 - c) Finite element method
8. a) Write any two factors of rolling element bearings.
b) Write down the characteristics and application of rolling element bearings. **rgpvonline.com**
