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Roll No

MMMD/MMPD-302(A)**M.E./M.Tech., III Semester**

Examination, December 2017

Fluid Film Lubrication**(Elective-II)****Time : Three Hours****Maximum Marks: 70**

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

1. a) How bearings are classified?
 b) Discuss hydrodynamic lubrication concept.
2. a) Discuss Full Sommerfeld conditions, Half Sommerfeld conditions and Reynolds conditions.
 b) For journal bearing explain friction losses, attitude angle, eccentricity.
3. Explain static performance characteristics of hydrostatic journal bearings.
4. What are non circular bearings? Where they are used, write down behavior of non circular bearings.
5. a) Differentiate clearly between gas and oil bearings.
 b) Explain collection method and least square method.

6. a) Enlist applications of rolling contact bearings.
 b) How rolling contact bearings are classified?
7. Discuss followings:
 a) Life prediction of rolling element bearings
 b) Galerkin and Rayleigh-Ritz finite element method.
8. Write short notes on followings.
 a) Finite difference method
 b) Kingsbury analogy

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