# MGM’S College of Engineering, NANDED.

**Department of Mechanical Engineering**

**QUESTION BANK FOR TEST-** **I**

ACADEMIC YEAR 2013-14, SEM – II

Class: S.E. (Mech.) Subject: FMHM Date:15/02/2014

Duration : 01 Hr. Max. Marks: 20

Q .1 Define the following fluid properties with their units

a) Mass density b) Weight density

c) Specific volume d) Specific gravity

Q .2 Define the term viscosity & explain the significance of the same. Discus the effect of

 temperature & pressure on viscosity.

Q .3 Differentiate between –

 a) Ideal and real fluid. b) Compressible & incompressible fluid.

c) Newtonian fluid & non –Newtonian fluid.

Q.4 Explain the terms: 1) Dynamic viscosity 2) Kinematic viscosity, with their units.

Q .5 Define compressibility & prove the relation between compressibility & Bulk modulus.

Q .6 Define the surface tension with the examples.

Q .7 Explain the phenomenon of Capillarity. Obtain an expression for capillary rise & fall.

Q .8 Derive the expression for torque required and power loss to overcome the viscous

 resistance in Journal bearing.

Q 9. Derive the expression for torque required and power loss to overcome the viscous

 resistance in Foot step bearing.

Q10. Derive the expression for torque required and power loss to overcome the viscous

 resistance in Collar bearing.

Q 11. Define & derive the expression for Pascal’s law.

Q 12. Define & derive the expression for Hydrostatics law.

Q 13. Derive the equation for total pressure & center of pressure for vertical plane surface Submerged in fluid.

Q14. Derive the equation for total pressure & center of pressure for inclined plane surface Submerged in fluid.

Q15. Numerical on Properties of fluid.

Q16. Numerical on Fluid statics.