

TEXT BOOKS:

1. **An Introduction to Energy Conversion**, Volume III, Turbo machinery, V. Kadambi and Manohar Prasad, New Age International Publishers, reprint 2008.
2. **Turbines, Compressors & Fans**, S. M. Yahya, Tata McGraw Hill Co. Ltd., 2nd edition, 2002

REFERENCE BOOKS:

1. **Principals of Turbomachines**, D. G. Shepherd, The Macmillan Company (1964).
2. **Fluid Mechanics & Thermodynamics of Turbomachines**, S. L. Dixon, Elsevier (2005).
3. **Turbomachine**, B.K.Venkanna PHI, New Delhi 2009.
4. **Text Book of Turbomachines**, M. S. Govindgouda and A. M. Nagaraj, M. M. Publications, 4th Ed, 2008.

FLUID MECHANICS AND MACHINES LABORATORY

Sub Code	: 10MEL 57	IA Marks	: 25
Hrs/week	: 03	Exam Hours	: 03
Total Lecture Hrs	: 42	Exam Marks	: 50

PART - A

1. Determination of coefficient of friction of flow in a pipe.
2. Determination of minor losses in flow through pipes.
3. Determination of force developed by impact of jets on vanes.
4. Calibration of flow measuring devices
 - a. Orifice Plate meter
 - b. Nozzle
 - c. Venturimeter
 - d. V-notch

18 Hours

H.O.D.

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PART - B

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5. Performance testing of Turbines
 - a. Pelton wheel
 - b. Francis Turbine
 - c. Kaplan Turbines
6. Performance testing of Pumps
 - a. Single stage / Multi stage centrifugal pumps
 - b. Reciprocating pump
7. Performance test of a two stage Reciprocating Air Compressor
8. Performance test on an Air Blower

24 Hours

Scheme for Examination:

One Question from Part A	-	15 Marks (05 Writeup + 10)
One Question from Part B	-	25 Marks (05 Writeup + 20)
Viva-Voce	-	10 Marks
Total		50 Marks

ENERGY CONVERSION ENGINEERING LABORATORY

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Total Lecture Hrs	: 42	Exam Marks	: 50

PART - A

1. Determination of Flash point and Fire point of lubricating oil using Abel Pensky and Marten's (closed) / Cleavland's (Open Cup) Apparatus.
2. Determination of Calorific value of solid, liquid and gaseous fuels.
3. Determination of Viscosity of a lubricating oil using Redwoods, Saybolt and Torsion Viscometers.


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