

2152509

## Machine Dynamics

18/09/18

- Following Tutorial is to be submitted on 19/10/18
- 241 Tutorial H1A Final Submission
- 241 Tutorial Submit sectional and Assignment 1 and 2
- 241 Tutorial on SCI 20 (PA Internal)

### Tutorial: 1

- Introduction, Static Balancing Example 14.1, 14.2, Unbalanced, Dynamic Balancing, Balancing of several masses in different plane, Example 14.3, 14.7, Unbalanced 2, 3 & 4 masses

### Tutorial: 2

- Examples & Theory of Balancing of Reciprocating masses
- Balancing of Reciprocating mass, Example 14.3 Unbalanced in locomotives
- Balancing of Locomotives, effect of partial balancing 14.20, Balancing of V-Engine Example 14.22
- Example 14.10, Balancing of Radial Engines, Example 14.22

### Tutorial: 3

- Balancing Machine, Static Balancing Machine, Dynamic Balancing Machine, Field Balancing

### Tutorial: 4

- Torsional Vibration: - Free Torsional Vibrations (Single mode)
- Multifilar system, Torsion Suspension, Example 18.21
- Free Torsional Vibration (Two-rotor system), Free Torsional Vibration (Three-rotor system), Torsionally equivalent shaft, Example 18.25, 18.26

18.26

### Tutorial: 5

- Dynamic force Analysis: - D'Alembert's Principle, Dynamic Analysis of Slider-Crank Mechanism, Velocity & Acceleration of piston
- Engine force analysis, Piston effort force along the connecting rod, Example 13.2 & 13.3, Dynamically equivalent system, Reciprocating force in reciprocating engine (Graphical Method)

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