



Recitation class topics

(weeks of 19 and 26 July 2021)

Short review

- (a) Statics of a rigid body: conditions, center of gravity
- (b) Stress, strain, and elastic moduli; compressive/tensile/bulk
- (c) Elasticity Hooke's law
- (d) Pressure in a fluid: pressure at depth; Pascal's law; absolute pressure and gauge pressure
- (e) Buoyancy and Archimedes's law
- (f) Fluid flow: ideal fluid; viscosity; flow lines and stream lines; laminar and turbulent flow; continuity equation; Bernoulli's equation
- (g) Gravitation: gravitational force, potential energy and potential, motion of satellites

Topics for discussion

Choose some of these:

- (a) Questions: 11.1, 11.2, 11.5, 11.12, 11.16
- (b) Questions: 11.22, 11.25
- (c) Questions: 12.1, 12.5, 12.9, 12.15, 12.24, 12.27, 12.28
- (d) Questions: 13.2, 13.10 (you may combine it with problem 13.57), 13.11, 13.12, 13.16, 13.21

Problems and exercises

Choose some of these:

1. Exercises/Problems: 11.2, 11.70, 11.76, 11.79, 11.82
2. Exercises/Problems: 12.21, 12.31, 12.44, 12.85, 12.89, 12.90, 12.98
3. Exercises/Problems: 13.10, 13.32, 13.33, 13.55, 13.57, 13.66, 13.85