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300 level Mechanical Engineering

MEE 312 Assignment

Answer 1:

a) Dry friction is a frictional force that acts by opposing the relative lateral motion of two solid surfaces in contact.  Which is divided into Static friction (stiction) which happens with non-moving surfaces, and kinetic friction which happens between moving surfaces.

Example of Dry friction. when a person is riding a bicycle and presses the brakes, the rough edges on the brake pads rub against the bicycle rim and it ends up slowing down the rim

b) Fluid friction describes the friction between layers of a viscous fluid that are moving relative to each other.

Example of Fluid friction. Air Resistance acting on a vehicle in motion.

Answer 2:

a) A wedge is technically an inclined plane (or two inclined planes put together to form a triangle) that moves. A wedge may be attached to a handle to make it easier to use. Good example of a wedges is axes.

b) A square-threaded screws are square threads in a common screw thread form, used in high load applications such as leadscrews and jackscrews. It gets its name from the square cross-section of the thread. It is the lowest friction and most efficient thread form, but it is difficult to fabricate.

c) Journal bearings also called plain bearings, they consist of a shaft or journal which rotates freely in a supporting metal sleeve or shell. There are no rolling elements in these bearings.