

1. INTRODUCTION

MACHINE:

A machine is combination of stationary and moving components that are governed by mechanisms and transform one form of energy to another, transmits energy, load, or motion for specified purpose. Eg. engine, turbine.

DESIGN:

To design is either to formulate plan for specified purpose or make changes to something which is already existing.

MACHINE DESIGN:

It's designing of a machine which fits purpose without failure.

FAILURE:

A component is said to be failed,

- 1) When it's **completely inoperative**.
- 2) When it's operative, **doesn't satisfy purpose**.
- 3) When serious deterioration causes the component to be **unreliable for safe and continued use**.