Model categories:-

- model can be categoriesed in different ways, some of them are,

* Continuous & Discrete
* Event-oriented models & Differential equation models.
* Concentrated and Distributed
* Static and Dynamic
* Deterministic and stochastic
* Autonomous and Non-autonomus
* Time variant and Time-invariant.

- A range of values is continuous if it covers real numbers or an interval of them. In a discrete range of values, the system variable takes on a value from a finite quantity of values, digital or electronic signals.

- In event oriented model, each change of state of the model is triggered by an event, so that the trajectory of system states proceeds in leaps. In differential equations, the trajectory of system state is continuous. changes are described on basis of the system variables & their rate of change.

* Concentrated are electronic components or the fixed and elastic bodies of the multibody representation of a mechanical system. Distributed parameters should be used in the consideration of a mechanical continuum, for example.

* In case of static, for example in electronics, when determining the operating point of a circuit it is sufficient to represent capacitors as open circuits & coils as short-circuits, where as in the dynamic models, it requires transient simulations.

* In some case a model cannot be described in a purely deterministic manner, meaning that at least one random variable must be included. These variable are classified as stochastic. All others are called deterministic.

* If the model is isolated from the outside world and thus has no inputs and outputs, then it is called autonomous. In the non autonomous model primarily converts value at the inputs into the outputs based upon the current state

* Depends on the dependability of time the model is time-variant, in the latter time-invariant.