Machine to Machine (M2M):

- Machine to Machine is direct communication between devices using any communication channel such as wired or wireless channel.
- For example sensor to communicate the information such as temperature to application software that can use it for further process.
- Ex: Automatic Air Conditioner which adjusts itself according to the surrounding temperature.
- Machine to Machine communication has changed into a system of Networks that transmits data to personal appliances.
- The expansion IP (Internet Protocol) Networks around the world has made machine to machine communication easier and quicker using less power.
- Machine to Machine supports point to point communication between the devices it has connected.
- The Devices don't relay on an internet connection.
- Machine to Machine connection can exchange information between the devices without human intervention.
- Machine to Machine connection is subset of Internet of Things (IOT).
- M2M system can use public networks such as LAN, Ethernet, cellular network which makes cost effective.
- The use of M2M in Embedded systems enables home appliances and other technologies to have real time control of operations and ability to communicate .
- Ex: A Wending machine can send a message to the owner when a particular item is running low to refill.
- M2M connection has the ability to continuously send and receive the data.

- Message communication path must be optimized and must be possible to select an alternate path in case of transmission failure or any delay occurred.

Parallel Processing:

- Parallel Processing in which multiple processors perform multiple small tasks and a whole large complex task.
- Parallel processing saves time and energy.
- Parallel processing is used for complex tasks.
- Each processor performs a independent task and all the processors are communicated by a software tool to synchronize.
- At the end the software put all the tasks together to solve the complex problem.

RTOS (Real Time Operating System):

RTOS performs the following task in an Embedded system:

- RTOS supervises the Application Software of Embedded System.
- RTOS schedules the task or rules for the execution of Application Software in the Embedded system