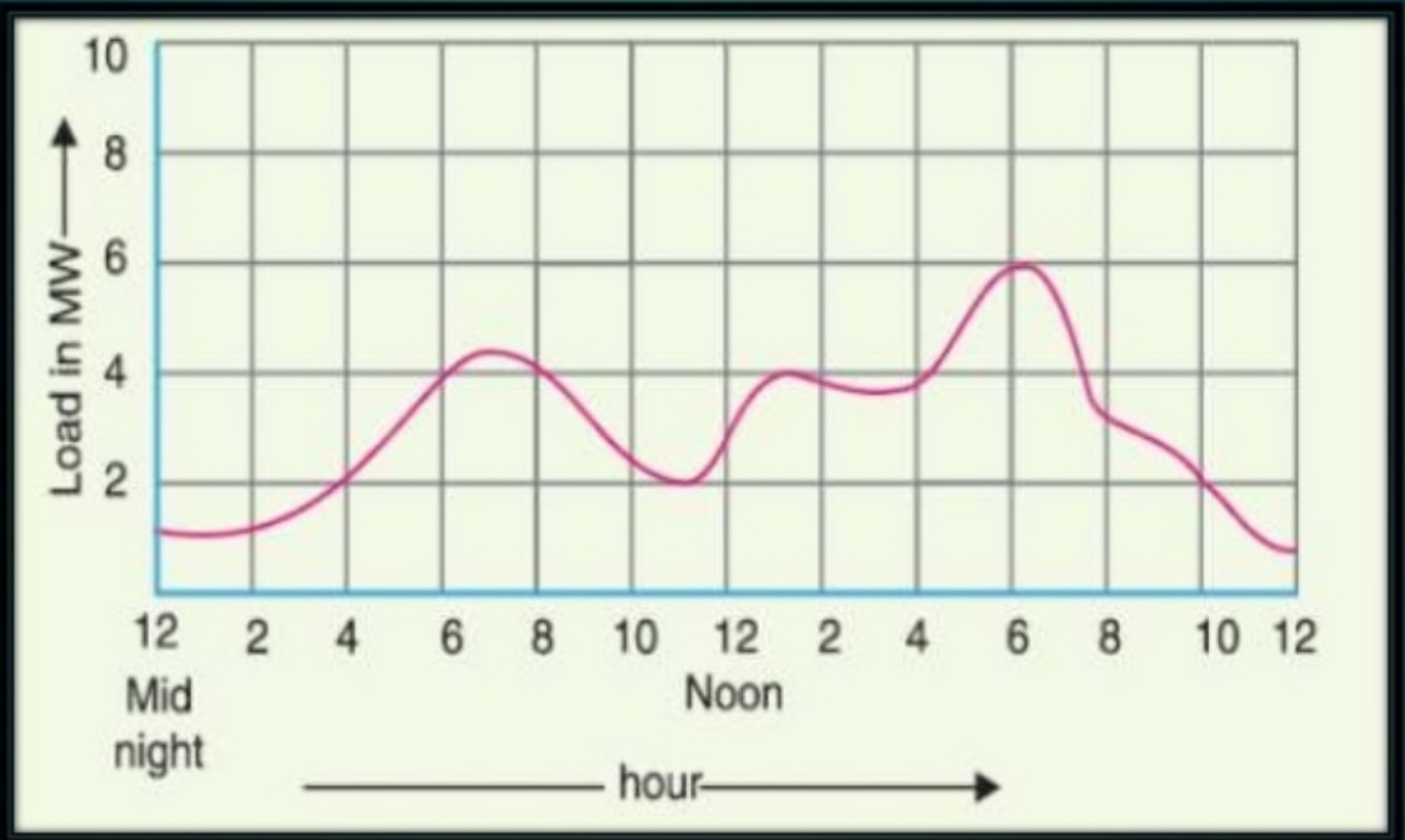


Load Curve:

- ▶ **Definition:** The Load Curve is a Graph, which represents load on the generation station (the load is in kW/MW) recorded at the interval of half hour or hour (time) against the time in chronological order.
(Or)
- ▶ The Load Curve is defined as the curve which is drawn between loads versus time in sequential order. We have to draw the load curve on daily basis data, weekly, monthly basis data. (Or)
- ▶ The curves showing the variation of load on the power station with respect to time is known as load Curves.

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Load Curve Systematic Diagram:



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Plant Capacity Factor:

- ▶ It is the ration of actual energy produced to the maximum possible energy that could have been produced during a given period.

$$\text{Plant Capacity Factor} = \frac{\text{Actual Energy Produced}}{\text{Maximum possible Energy that could have been Produced}}$$

- ▶ The plant capacity factor is an indication of the reserve capacity of the plant.

$$\text{Reserve Capacity} = \text{Plant Capacity Factor} - \text{Maximum Demand}$$

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Plant Use Factor:

- ▶ **Definition:** It is the ratio of kWh generated to the product of plant capacity and the number of hours for which the plant was in operation.

$$\text{Plant Use Factor} = \frac{\text{Actual Energy Produced}}{\text{Plant Capacity} \times \text{Time in Hours}}$$

- ▶ Plant use factor indicated how much is the plant capacity utilized, but it does not indicate the time for which the plant remained idle.
- ▶ **Average load:**

$$\therefore \text{Average load} = \frac{\text{Area under load curve}}{24} = \frac{\text{Energy consumed 24 hrs}}{24}$$

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Load Factor:

- ▶ **Definition:** The ratio of number of units actually generated in a given period to number of units which could have been generated with the same maximum demands is called as load factor for the station. (**OR**)
- ▶ The Ratio of Average Load to the Maximum Demand during a given period is known as load factor.

$$\therefore \text{Load factor} = \frac{\text{Average load}}{\text{Maximum load}}$$

- ▶ It is always less than Unity Consider

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