

<b>Name of the Faculty:</b>	Er. F. Max Savio	<b>Desig./Dept.:</b>	Asst. Prof. (OG) / EEE
<b>Sub. Code/Name:</b>	19EE305 Basic Electrical, Electronics and Measurement Engineering	<b>Topic:</b>	Network Theorems

**Topic:** Network Theorems

- Thevenin's theorem
- Maximum power transfer theorem
- Super position theorem

**Overview:**

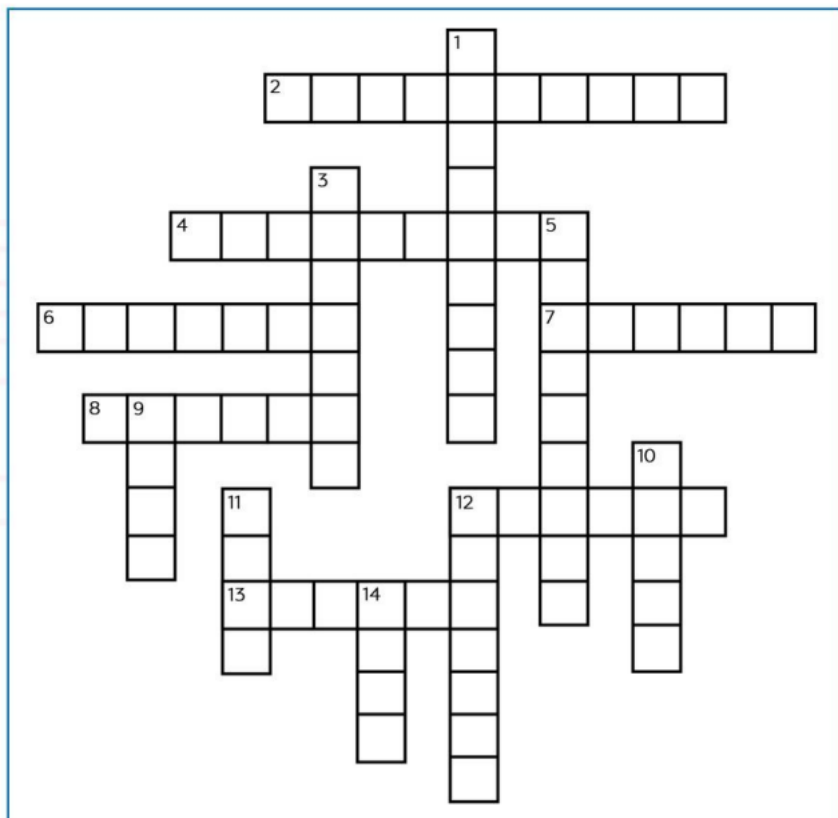
- The topic covers the basic network theorems that can be applied in electrical circuits for finding various parameters like voltage and current.
- The study of these theorems is related to the practical implementations.
- The step-by-step procedures will be explained and the practice problems will be solved.
- The applications of these theorems will be evaluated on different aspects.
- A comparative study will be done on various electrical parameter findings with other basic solving methods.

**Teaching Methods:**

- Video lecture
- Puzzles

**Proof of activity:**

- YouTube link ([Network Theorems | Er. Max Savio Francis - YouTube](#))
- Puzzle questions



## Down

- 1 Rapidly moving charged particles that carry electrical energy
- 3 Source of electric current
- 5 The device prevents the parts of an electronic device from burning
- 9 A type of circuit where there is a discontinuation of the conducting wire
- 10 A good conductor of electricity
- 11 It is used to connect the positive and negative ends of a battery
- 12 A path through which electricity can flow
- 14 Also known as load

## Across

- 2 This protects us from getting electrocuted
- 4 A device that stores and releases energy much faster than a battery.
- 6 The flow of electric charge
- 7 A gap in the conductor where you can close or open the circuit
- 8 Material used for making conductor wires
- 12 A type of circuit where there is no break or discontinuation in the conducting wire
- 13 A bad conductor of electricity

### Feedbacks:

- Easy to understand and solve problems related to the theorems.
- Crosswords is fun way of learning more about electrical circuits.

### Outcomes:

- To understand the basic procedure in solving the problems
- To understand the real time application of the theorems

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<b>Sub. Code/Name:</b>	19EE305 Basic Electrical, Electronics and Measurement Engineering	<b>Topic:</b>	Applications of Diodes

**Topic:** Applications of diodes

- Half wave rectifier
- Full wave rectifier
- Bridge rectifier

**Overview:**

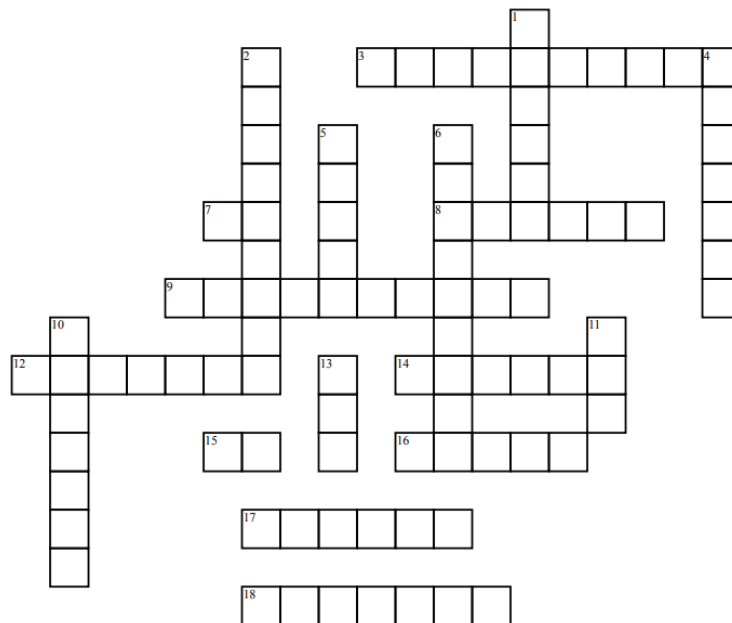
- The topic covers the applications of PN junction diode
- To design the rectifier circuits based on the working principle
- To study the advantages and disadvantages of the rectifier types.
- To compare and relate the types of rectifiers circuits.

**Teaching Methods:**

- Video lecture

**Proof of activity:**

- YouTube link ([Applications of PN diodes | Er. Max Savio - YouTube](#))
- Puzzle questions



**Across**

3. Converts light energy to electric energy
7. Both the voltage gain and current gain are greater than 1 in \_\_\_ configuration
8. BJT acts as OPEN switch in \_\_\_ region
9. BJT acts as ON switch in \_\_\_ region
12. This circuit is also called as limiter

14. AC content in DC output
15. Voltage gain is less than 1 in \_\_\_ configuration
16. \_\_\_ terminal of MOSFET is similar to collector in BJT
17. \_\_\_ terminal of MOSFET is similar to emitter in BJT
18. Output is twice the peak value of input

**Down**

1. Voltage controlled device

2. BJT region having largest area
4. Heavily doped region of BJT
5. Used for voltage regulation
6. Converts AC to pulsating DC
10. Input waveform shifted in positive or negative direction
11. Works on electroluminescence
13. Current controlled device

**Feedbacks:**

- Easy to study the rectifier topics.
- Easy to understand the circuit designs.

**Outcomes:**

- Understand the rectifier circuit design
- Understand the working of the types of rectifier circuits
- Understand the comparison of types of rectifiers