**GITAM**

**GITAM School of Technology**

**Programme:B.Tech Branch CSE**

**Sub Code :19EEE131**

**Sub Name : Basic Electrical and Electronics Engineering**

**SECTION –A**

**(Short answer questions)**

**Unit-4**

**Category-1(Easy)**

1. Draw the V-I Characteristics of diode.

2. What is meant by zener breakdown?

3. What is avalanche effect?

4. What are the types of MOSFETs?

5. What is meant by depletion region?

**Category-2(Moderate)**

1. What is meant by PIV in a diode?

2. What is meant by ripple factor?

3. What is the rectifier efficiency?

4. What are the applications of MOSFET?

5. What are the differences between PN Junction diode and Zener diode?

**SECTION –B**

**(Essay questions)**

**Unit-4**

**Typical questions**

1. Draw the input and output wave forms of Bridge rectifier and explain its operation

2. Explain VI Characteristics of zener diode .why it is named as voltage regulator.

3. Explain how MOSFET acts as an amplifier and switch.

**Moderate Questions**

1. Draw the input and output wave forms of full wave rectifier and explain its operation.
2. With a neat sketch explain drain and transfer characteristics of MOSFET.
3. Explain How MOSFET can be used as amplifier.
4. List out the applications, advantages and disadvantages of MOSFETs.

**Easy Questions**

**1**. Draw the input and output wave forms of half wave rectifier and explain its operation.

**2.** Explain construction, operation and characteristics of D-MOSFET.

**3.** Explain construction, operation and characteristics of E-MOSFET.

**4.** Describe the structure and operation of a PN Junction diode

**SECTION –A**

**(Short answer questions)**

**Unit-5**

**Category-1(Easy)**

1. What is CMRR?

2. What is a voltage follower?

3. Define slew rate.

4. What is an operational amplifier?

5. What is meant by closed loop gain ?

**Category-2(Moderate)**

1. What are the applications of OP-AMP?

2. What is the formula for non inverting amplifier.

3. What is an inverting amplifier?

4. What is a difference amplifier?

5. What is meant by offset voltage?

**SECTION –B**

**(Essay questions)**

**Unit-5**

**Typical questions**

1. What are the effects of finite open loop gain?

2. Explain the Inverting and Non inverting configurations in operational amplifiers.

3. Construct a single Op-amp difference amplifier.

**Moderate Questions**

1. Mention the ideal characteristics of OP-AMP.

2. Write short notes on voltage follower and difference amplifier.

3. Explain the Non inverting configurations in operational amplifiers.

**Easy Questions**

1. Explain the working principle and operation of OP-AMP.

2. Explain the Inverting configurations in operational amplifiers.

3. List out the characteristics of an Ideal operational amplifier

4. What are the applications of operational amplifiers?