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Total number of pages:[2]

**B.Tech. || EE || 3<sup>rd</sup> SEM.**

**Electronic Devices & Circuits**

**Subject Code: BTEE-304**

**Paper ID:**

**Time allowed: 3 Hrs**

**Max Marks: 60**

**Important Instructions:**

- All questions are compulsory
- Assume any missing data
- Additional instructions, if any

**PART A (10x 2marks)**

Q. 1. Short-Answer Questions:

- What do you mean by biasing?
- Give any two advantages of FETs over BJTs.
- How the Tunnel Diode is different from an ordinary diode?
- What do you mean by electronic clipper?
- Why base of transistor is lightly doped?
- What do you mean by IC?
- Give applications of OPAMP.
- Why positive feedback is used in oscillators?
- What do you mean by active filter?
- Why transistor is called a current controlled device?

**PART B (5×8marks)**

Q. 2. Discuss the working of bridge type full wave rectifier.

CO1

OR

Draw and discuss the transfer characteristics and drain characteristics of JFET.

Q. 3. Discuss Schmitt trigger circuit using OPAMP.

CO3

OR

How OPAMP can be used as integrating amplifier explain with suitable circuit diagram.

Q. 4. Discuss the voltage divider bias circuit for transistor biasing.

CO2

OR