**INTERNAL ASSESMENT- 2020**
**KANDI RAJ COLLEGE**
**DEPARTMENT OF PHYSICS**

**SEMESTER: 3rd** **STREAM: Program Course (General)**
**PAPER CODE: PHY-GCC-T-03** **Paper: Analog Systems and Applications**

**Full marks: 10**

**Answer Any Five questions of the following:** **5×2=10**

1. Draw the Energy Band Diagram of P-type and N-type Semiconductor.
2. What is Drift velocity of electrons?
3. Draw the circuit diagram of a full wave Bridge rectifier.
4. Why transistor is called current controlled device?
5. Draw the I-V characteristics of a PN- junction diode with proper circuit diagram.
6. Calculate the ripple factor of a half wave rectifier.
7. Define Q-point of a transistor. On what factors Q-point of a transistor depends?
8. Explain the Barkhausen criterion for sustained oscillation in case of an oscillator.

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**SEMESTER: 3rd** **STREAM: Program Course (General)**
**PAPER CODE: PHY-G-SEC-T-01** **Paper: Electrical Circuits and Network Skill**

**Full marks: 5**

**Answer any five questions:** **5×1=5**

1. Which is more dangerous AC or DC?
2. What is a voltmeter? How it works?
3. What is single phase AC?
4. Write down the basic principle of DC motor.
5. What is a circuit breaker and how it works?
6. What are the Star and delta connection?
7. What are the advantages of AC generator over DC generator?