Total No. of Questions: 8] [Total No. of Printed Pages: 3

Roll No.....

## EE-304-CBGS B.Tech., III Semester

Examination, December 2020

## Choice Based Grading System (CBGS) Analog Electronics

Time: Three Hours

Maximum Marks: 70

*Note:* i) Attempt any five questions out of eight.

- ii) All questions carry equal marks
- iii)Assume suitable data, if required.
- iv) In case of my doubt or dispute the English version question should be treated as final.
- 1. a) Explain the Depletion layer formation in P N Junction. Explain its working principle.
  - b) Discuss the relation that explains the temperature dependency of Semi conductor diodes.

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2.	a)	Explain the principle working of PIN diode and Schottky diode.
	b)	Explain the working of full wave rectifier.
3.	a)	What do you mean by Transistors? Give its classification and write some applications.
	b)	Write short note on region of operation and load line of transistors.
4.	a)	Draw and explain the circuit diagram of Transistors working as an amplifiers.
	b)	Write any five statements that explain the superiority of
5.	a)	Explain the working of R-C phase shift oscillator.

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b) Explain the working of class-A amplifier.

- 6. a) Draw and explain the circuit with graph that represents the clipping at two independent levels.
  - b) Write short note on Boot strapping technique.
- 7. Discuss the following application of op-amp.
  - a) Differentiator
  - b) Log-antilog amplifier

- 8. Write a short notes on any two.
  - i) Wien bridge
  - ii) Hall effect
  - iii) Transistor as an amplifier

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