DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE
End Semester Examination – Winter 2018

Course: B. Tech in E&TC **Sem:** III
Subject Name: Analog Circuits **Subject Code:** BTEXC302
Date: 03/12/2018 **Max Marks:**60 **Duration:** 3 Hrs.

Instructions to the Students:

1. *Solve **ANY FIVE** questions out of the following.*
2. *The level question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in ( ) in front of the question.*
3. *Use of non-programmable scientific calculators is allowed.*
4. *Assume suitable data wherever necessary and mention it clearly.*

		(Level/CO)	Marks
Q. 1	Solve the following.		
A)	Explain Block diagram of OPAMP	**Understand**	**06**
B)	Write Short note on Current Mirror Circuit	**Remember**	**06**
Q.2	Solve the following.		
A)	Design the OPAMP circuit which can give the output as $V_o=2V_1-3V_2+4V_3-5V_4$	**Evaluate**	**06**
B)	Draw circuit diagram of Instrumentation Amplifier and Derive expression for output voltage	**Synthesize**	**06**
Q. 3	Solve the following.		
A)	Draw and Explain circuit diagram of Full Wave Precision Rectifier with its operation	**Understand**	**06**
B)	Compare Schmitt Trigger and Comparator	**Understand**	**06**
Q.4	Solve Any Two of the following.		
A)	Write short note on I to V Converter	**Remember**	**06**
B)	Draw and Explain R-2R Ladder DAC	**Understand**	**06**
C)	Draw and Explain Dual Slope ADC	**Understand**	**06**
Q. 5	Solve the following.		
A)	Compare RC Phase Shift Oscillator and Wien Bridge Oscillator	**Understand**	**06**
B)	Design Wien Bridge Oscillator circuit to have output frequency of 10KHz	**Evaluate**	**06**
Q. 6	Solve the following.		
A)	Draw and Explain Block Diagram of PLL	**Understand**	**06**
B)	Draw and Explain Band Pass Filter circuit and its Frequency response	**Understand**	**06**

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