

B.Sc Sem.-5 Examination

CC 301

Electronics

Time : 2-30 Hours]

November-2024

[Max. Marks : 70

	Instructions : : (1) Figures to the right indicate marks (2) Symbols have their usual meaning	
Q-1		
A)	Draw the schematic block diagram of an Op-amp and explain differential amplifier with necessary circuit diagram.	07
B)	Write notes on Current mirror.	07
	OR	
Q-1		
A)	Explain Widlar current source with necessary figure	07
B)	Explain level translator in detail with suitable figure	07
Q-2		
A)	Write notes on inverting and non-inverting summing amplifier	07
B)	Explain phase lag and phase lead circuit in detail with suitable figure and graph	07
	OR	
Q-2		
A)	Explain Voltage to current converter with Floating load and grounded load	07
B)	Explain following Op-amp circuit using diode (1) Half wave rectifier (2) Clamper	07
Q-3		
A)	Explain 3-terminal positive voltage regulator with its functional block diagram	07
B)	Explain 3-terminal adjustable voltage regulator with suitable figure	07
	OR	
Q-3		
A)	Write short note on dual tracking and non-tracking regulator	07
B)	Write short note on positive regulator using μA 723	07
Q-4		
A)	Explain various types of circuit scheme with suitable block diagram	07
B)	Explain switching regulator using 3-terminal linear regulator	07
	OR	
Q-4		
A)	Discuss free running switching regulator with necessary circuit diagram	07
B)	Briefly explain positive switching regulator using LM 105	07
Q-5	Answer seven out of twelve	14
1	What is differential mode gain?	
2	What is the full form of CMRR?	
3	What is current repeaters?	
4	State the important features of an instrumentation amplifier	

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5	What is inverting AC amplifier?.	
6	What are the applications of the V-I converter?	
7	Write the full form of SOA	
8	What is error amplifier?	
9	Which IC's are come under monolithic IC multi terminal regulator ?	
10	Which IC's used as positive switching regulator?	
11	Which IC used as positive and negative voltage regulator ?	
12	Which are the important parameters for designing step down switching regulators? And why?	
