

B.Sc. Semester-6 Examination

CC 307

Electronics

March-2023

Time : 2-30 Hours]

[Max. Marks : 70

Instructions(1) Symbols used have their usual meaning (2) Figures to the right indicate marks		
Q-1		
A)	Explain log amplifier with suitable circuit diagram	07
B)	Draw the multiplier schematic symbol and explain analog multiplier	07
OR		
Q-1		
A)	Explain how Op-amp working as differentiator? and also explain practical differentiator	07
B)	Explain non-inverting comparator circuit with suitable circuit diagram	07
Q-2		
A)	Draw and explain the schematic block diagram of PLL and also explain lock in range and capture range of PLL	07
B)	Write notes on Digital phase detector	07
OR		
Q-2		
A)	Draw the pin and block diagram of IC PLL 565 and explain it	07
B)	Explain following PLL application (1) Frequency multiplication (2) Frequency translation	07
Q-3		
A)	What is SCR? Explain working of SCR	07
B)	Explain following terms of SCR (1) Breakdown voltage (2) Holding current	07
OR		
Q-3		
A)	Write notes on SCR half wave rectifier	07
B)	Explain following application of SCR (1) SCR as static contactor (2) SCR for power control	07
Q-4		
A)	What is TRIAC? Explain the construction of TRIAC	07
B)	Explain operation of TRIAC in detail with suitable circuit diagram	07
OR		
Q-4		
A)	What is DIAC ? Explain lamp dimmer application of DIAC	07
B)	Write notes on (1) UJT as relaxation oscillator (2) Over Voltage detector	07
Q-5	Attempt any seven out of twelve	14
1	What is Gilbert multiplier cell?	
2	Write the applications of multiplier ICs	
3	What is Zero crossing detector?	
4	Write the full form of VCO	
5	Define "Pull in time" in relation to PLL	
6	How PLL used as AM demodulator	
7	What is SCR?	
8	Define breakdown voltage in SCR	
9	What is the full form of PRV	
10	Write applications of TRIAC	
11	How DIAC used in heat control?	
12	Draw the symbol of DIAC	