SYJC ELECTRONICS PAPER 1 SYLLABUS

Sr no.	Chapter Name	Syllabus	% Marks
1	Instruments	1. Block diagram of CRO & its working,CRT & its working 2. How CRO displays waveform & front panel control its application 3. Block diagram of function generator,DMM & its working	15
2	Power supply	1. Rectifier(HW,FW,Bridge) 2. Types of filter circuits 3. voltage regulator(zener, transistor) 4. 3 pin ICs regulator 5. SMPS working	20
3	Transducers	1. Classification of transducers,selection. 2. Types of transducers,thermistor,LDR, LVDT,capacitive,piezo,loudspeaker,optocoupler,gas sensor	10
4	OPAMP	1. Nscessity of opamp,block diagram & working,its parameters 2. OPAMP as inverting,non inverting,adder,subtractor, voltage follower,differentiator,integrator 3. Schmidt trigger ,comparator	25
5	Modern electronic communication	1. Elements of communication system,types of communication,frequency spectrum 2. Need of modulation,AM,FM & problems 3. Satellite communication,digital communication(internet),mobile block diagram,facsimile working,fibre optic communication,RADAR working	20
6	Study of ICs	1. ICs 555 block diagram,astable & monostable multivibrator. 2. FSK 3. BASIC study of IC 741.IC 317	10

SYJC ELECTRONICS SYLLABUS (PAPER 2)

Sr. No	Name of the chapter	Contents
1	Number systems	a) Conversions of decimal to binary and binary to decimal, decimal to hexa and hexa to decimal, binary to hexa and hexa to binary b) BCD code, ASCII and EBCDIC codes c) 1's & 2's complement subtraction methods
2	Logic Gates	a) Basic gates b)Derived gates c)Universal building blocks d) De Morgan's theorem e)EX OR gate and its use f)Half adder, full adder and binary adder/subtractor g)Boolean Algebra
3	Logic Families	a) Bipolar and unipolar families b) TTL and CMOS circuits and its characteristics
4	Combinational logic circuits	a) Multipliexerss, demultiplexers, encoders, decoders b) Combinational logic designs
5	Flip Flops, counters and registers	a)SR F/F using nand and nor gates ,Concept of clock b) Clocked S-R, D, J-K and T F/F's, master slave concept c)Ripple, parallel and ring counters d) Shift, shift left and shift right registers
6	A/D and D/A converters	a) Circuits of A to D and D to A converters with its working
7	Computer fundamentals	a) Block diagram of computer and its working b) Different types of primary memories c) Types of secondary memories like hard disk, floppy disk, magnetic tape and CD rom d) Different types of input and output devices e) Specifications of computer