

Academic Year Plan -2018 -19
F.Y.J.C. – COMPUTER SCIENCE (Theory)

MONTH	PAPER I	PAPER II
AUG	<p>Number Systems & Binary Arithmetic : Binary number, decimal, octal, hexadecimal numbers, BCD ,conversion from one number system to another, Binary Addition, Subtraction by One's and Two's compliment, Binary Multiplication and division</p>	<p>Logic Gates – Study of basic Gates : AND,OR, NOT their truth table. Study of NAND, NOR, EXOR gates.</p> <p>Basic building & Universal building blocks. DeMorgan's Theorem</p>
SEP	<p>Program Analysis : Analysis of problem, , design steps, Flow Charts, Algorithms - Structured programming , searching and sorting . Introduction to C++: Introduction to structure of C++ program keywords, Identifiers , basic data types.</p>	<p>Combinational circuits & Sequential Circuits</p> <p>Half adder, Full Adder. Encoder , Decoders , Multiplexers, Demultiplexers</p>
OCT	<p>User defined data types, derived data types, constants, type compatibility, Declaration of variables Operators in C++.</p>	<p>Sequential Circuits Flip Flop circuits - Types of flip flop - RS, ,JK FlipFlop etc. Study of Counters , Registers</p>

NOV	<p>C++: Control Structures-IF, Switch, do while, while, for functions in C++, Standard C++ library, I/O Functions, prototyping, Call by reference, Return by reference, Unformatted I/O operations simple</p>	<p>Study of components- Resistors, and Capacitors – Constructions, Types & Applications of Resistors and Capacitors .</p>
DEC	<p>Visual Basic : Introduction to Visual Basic, Visual Basic Environment- Menu bar, Tool bars, properties setting, Form Layout Visual Basic programming : Variables, constants, Defining variables, array, relational operators, Control flow statements, loop statements, nesting of loops, use of built in functions, event driven Programming, A simple VB Project – simple calculator</p>	<p>Semiconductor components- Diodes, Transistors, Characteristics & application Of Diodes & Transistors</p>
JAN	<p>Introduction to Networking :Networking Terms and Concepts Centralized Collaborative Configurations – server based, Peer to Peer Network, Security, LAN, WAN</p>	<p>Functional Hardware Parts of PC: Study of systems board / motherboard layout, study of CPU properties with reference to Pentium chip.</p>

FEB	<p>Topology – Types Of Topology. Bus, Ring , Star & Mesh topology / Advantages & disadvantages Network Applications – Email, Voice Mail, FTP, WWW, e-Commerce, Chat , BBS.</p>	<p>PC memory, Types of memory – conventional, extended and expanded , semiconductor memory and its types. Introduction to PC expansion . Bus Structure - Features & types of Buses - EISA, PCI And USB Buses.</p>
MAR	<p>Visual Basic programming : Variables, constants, Defining variables, array, relational operators, Control flow statements, loop</p>	<p>Peripheral Devices – Mouse- types, Scanner- their use and types . Printer – types DOT Matrix , Ink- Jet , Laser . Floppy disk and hard disk Drivers – Floppy drive, CD- ROM Drive</p>
APRIL	REVISION	REVISION

F.Y.J.C. – COMPUTER SCIENCE (Practical)

M ONTH	PAPER I	PAPER II
AUG	1)Study of Win 98 Desktop (a) M y computer (b) Task bar (c) Navigation with help of Mouse (d) Maximize, minimize, close, restore buttons 2)Study of Win 98- start menu, execution of a package like word, etc	Study of BASIC GATES using TTL or CMOS Chips

SEP	<p>3)File operations using Explorer</p> <p>4)C++ program – study of structure of C++ program involving different data types</p> <p>5)C++ program –using operators</p>	Study of UNIVERSAL BLOCKS using IC's 7400,7402
OCT	<p>6)C++ program – using control structures.</p> <p>7) C++ Program – using functions</p>	Study of HALF ADDER using Gates
NOV	8)C++ Program- using unformatted I/ O/ Operations	Study of FULL ADDER using IC 7483
DEC	9)VB program – study of integrated Development Environment and navigation through various windows and menus	Study of decoder chip BCD TO Decimal using IC 7445
JAN	10) VB Program – study of toolbox and property Editor	Study of Multiplexer using IC 7415

FEB	11)VB Program – use of buttons, labels,	Study of Input Devices: keyboard, Mouse
M AR	12) VB Program – program a simple Addition/ subtraction calculator	Study of scanner and printer
APRIL	EXAMINATION	EXAMINATION