Academic Year Plan -2017-18

F.Y.J.C. – COMPUTER SCIENCE (Theory)

MONTH	PAPER I	PAPER II
AUG	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	Circuit s Logic Gates : Logic Gates – Study of basic Gates : AND,OR, NOT their truth table. Study of NAND, NOR, EXOR gates. Basic building & Universal building blocks.
SEP	Program Analysis : Analysis of problem, , design steps, Flow Chart s, Algorithms - Structured programming , searching and sorting . Introduction to C++: Introduction to structure of C++ program keywords, Identifiers , basic data types.	Simple Combinational circuits, Half adder, Full Adder. Encoder , Decoders , Multiplexers, Demultiplexers
OCT	User defined data types, derived data types, constants, type compatibility, Declaration of variables Operators in C++.	Sequential Circuits Flip Flop- Types of flip flop RS, , JK Flip Flop.

NOV	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 program in C++.	Study of components- Resistors, and Capacitors Types Of Resistors and Capacitors .
DEC	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,	Semiconductor components- diodes, transistors, Semiconductor components- diodes, transistors Characteristics & application Of Diodes & Transistors
JAN	Control flow statements, loop statements, nesting of loops, use of built in functions , event driven Programming, A simple VB Project – simple calculator .	Functional Hardware Parts of PC: Study of systems board / motherboard layout, study of CPU properties with reference to Pentium chip.
FEB	Introduction to Networking & Internet :Networking Terms and Concepts Centralized	PC memory, Types of memory – conventional, extended and expanded , semiconductor memory and its types. Introduction to PC expansion Features of EISA, PCI And USB Buses. Floppy disk and hard disk

M AR	Collaborative Configurations – server based, Peer to Peer Network, Security, LAN,WAN Network Applications – Email, Voice M ail, FTP,WWW,E-Commerce, Chat , BBS,	Mouse- types, scanner- their use and types Printer – types DOT Matrix , Ink- Jet , Laser Drivers – Floppy drive, CD-ROM Drive
APRIL	REVISION	REVISION

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

MONTH	PAPER I	PAPER II
AUG	1)Study of Win 98 Desktop (a) My 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	3)File operations using Explorer 4)C++ program – study of structure of C++ program involving different data types 5)C++ program –using operators	Study of UNIVERSAL BLOCKS using IC's 7400,7402
OCT	6)C++ program – using control structures. 7) C++ Program – using functions	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

ACADEMIC YEAR PLAN -2017-18
S.Y.J.C. – COMPUTER SCIENCE (Theory)

MONTH	PAPER I	PAPER II
JUN	**HTML**: Introduction to HTML. Its Advantage and drawbacks. Study of <HTML>, <HEAD>,<TITLE>, <BODY>,<P>, , <UL>,<LI>,<PRE>, <MARQUEE> Font styles: <B>,<I>,<U>,<BIG>, <SMALL>, <SUB>,<SUP>,<FONT> IMAGES:<HREF>,<HR>,<IMG>,SRC, ALT, HEIGHT, WIDTH, ALIGN TABLES: <TABLE>,<CAPTION>,<TR>,<TH>,<TD>	**Introduction to microprocessors and organization of 8085:** Evolution of microprocessors, Features of microprocessor. Block diagram of generic microprocessors and study of various blocks in it. Block diagram of 8085 up. Study of various blocks and functions of various pins on it.
JUL	**C++:** Review of C++ Arrays, FUNCTIONS, pointers , reference, strings Principle of object oriented programming Class and object	**Instruction set and programming of 8085:** Addressing modes in 8085, programming model of 8085, study of Instruction set- data transfer , arithmetic, logic, branching.

AUG	Constructor and destructors Operator overloading & type conversion C++programs on the above concepts.	Stack and machine control group instructions. Assembly language programs based on above instructions.
SEP	**Data structures:** Introduction to data structure operations, algorithmic notation, control structures Arrays- representation in memory , traversing, inserting, deleting, sorting, binary search in an array. Pointers arrays, records in memory using array Link list , representation of link list in memory Tress, binary tree, representing binary tree in memory	**Introduction to Microcontroller : study of 8051** architecture and programming model, overview of other microcontroller's in the 8051 family, Application of microcontroller

	Operating system :	Networking Technology:
OCT	Features of O.S. Services in OS, Overview of OS, WINDOWS 98, WINDOWSNT, LINUX Services of O.S. – I.M ., P.M . , M .M . Concept s related to I.M ., P.M .	Study of transmissions Media- cable Media – Types of cables - coaxial, twisted pair , fiber optic, their comparison. Introduction to wireless media. Advantages & Disadvantages of it. Network topologies – access methods, Topologies- BUS, RING, STAR, Ethernet, Token Ring.
NOV	Memory management . Partitioning -fixed & variable partitioning, paging, segmentation, virtual memory. Access and security aspect of OS Security threats, attacks on security, computer worms, computer virus, types of virus etc.	Protocols- internet protocols Introduction to connectivity devices- modem, hubs, repeaters, routers
DEC	GUI: Basic GUI features such as window , task list , drag, resize, close, minimize,	**Study of X- 86 family ,** Features of 8086 , Comparison between microprocessors.
JAN	Revision	Revision

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

MONTH	PAPER I	PAPER II

JUN	HTML: 1)Designing a simple webpage with text 2)Designing a simple webpage using text and graphics	1) study of 8085 1. pin diagram of 8085 2. study of micro friend kit
JUL	VB program – use of IF…Then…Else, For…Next VB Program – Use of Do….Loop, Case…Else	3. Addition of string of bytes 4. Subtraction of two no. 5. To find largest of bytes
AUG	VB Program - use of various tools in toolbox A simple project using Visual Basic	6. To find largest and smallest of string of bytes 7. Count odd no from
SEP	C++ program – using array and pointers	9. Count the occurrence of FFH 10. Find no of 1's in data 11. To transfer string of bytes

OCT	C++ program- using CLASS implementation C++ program – based on constructors and destructors	12. To find no of odds and evens 13. Transfer block in reverse order 14. Exchange content of 2 blocks 15. Separate nibble and add them 16. Separate nibble and multiply 17. Exchange nibble and add
NOV	C++ program – based on operator overloading	18. Multiplication of 2 no 19. Division of 2 no 20. Addition of block using DAD instruction 21. Addition of two 16 bit no. 22. Addition of 32 bit no.
DEC	C++ program – based on type conversion C++ program – based on single	23. Monitor programs 24. Display routine 25. Keyboard routine
JAN	REVISION	REVISION