

CLASS XII – COMPUTER SCIENCE
ACADEMIC SESSION 2018-2019
FORTNIGHTLY BREAKUP OF SYLLABUS

S. No	Fortnight	Total no of days	Main Topic	Sub Topics	Pds	Total Pds	Assign. Date	Unit Test
1	19 th March – 28 th March (Block Teaching)	8	Review of class XI Arrays (One dimensional) Structures Arrays (Two Dimensional)	Functions– declaration, definition, call, actual/ Formal arguments, Call by value/ call by reference, Constant arguments/ Default (output questions). 1-D Array – sequential allocation Linear search, Binary Search, Selection Sort, Insertion Sort & Bubble sort, Merging. Structure initialization / assignment Accessing structure elements, passing structures to functions and returning them Typedef, macro, #define, output questions 2-D Array- Sequential allocation formula. Practical and Board Questions	3 3 2 4 4	16		
2	2 nd April – 13 th April	11	OOPs Concepts Communication technologies	Procedural Vs OOP programming, OOP terminology – class, object, Encapsulation, Abstraction, Modularity, Inheritance, Polymorphism Evolution of networking, switching techniques, transmission media, data communication technologies, types of networks, topologies, network devices, comm., protocols, wireless/mobile computing, internetworking terms & concepts, network securities. Practical questions based on arrays and structures	4 8 6	18		

3	16 th April – 27 th April	11	Classes & objects	Definition, data members & member functions, access specifiers – public & private, need for class, Inline & non inline functions, memory allocation of objects Arrays within class, referencing members Array of objects – class student – searching & sorting Practical questions and board questions	6 4 8	18		
4	1 st May – 18 th May	15	Constructors & Destructors Polymorphism Inheritance File handling (Text files)	Declaration, definition & need, Types of constructor – default , parameterized & copy constructor, Constructor overloading, Destructor & examples Implementation of function overloading function's signature, steps to find the exact match Definition – Base/ derived class. Types of inheritance Visibility & Derivation modes Board questions fstream.h header file, stream Creation ,display of a text file (character by character, word by word, line by line),	6 4 6 4 4	24	4.5.18 (upload) 8.5.18 (submit) 10.5.18 (return)	14.5.18 (MT1) Review of class XI , Comm. technologies
5	21 st May- 25 th May (Block Teaching)	5	Text files (Cont.) Binary File handling	Reversing each line in the file Discussion of more text file related programs Review of text file programs (Practicals) Creation & display of a binary file Append using structure / class Practical questions Searching for a record – structure/ class	4 4	8		

Completion of syllabus by 25th May 2018
Summer Vacations from 26th May 2018 to 28th June 2018
First Term exams – 29th June – 9th July 2018
PTM – 28th July 2018

6	10 th July – 31 st July	16	Binary File handling (contd.) Pointers	Random access functions Modification in a binary file Practical questions Insertion, Deletion from a binary file Board questions related to binary files Practical questions Pointers – Introduction Output questions based on pointers (Pointers & arrays, pointers & strings, array of pointers)	2 4 4 4 10	24		
7	1 st August – 18 th August	13	Stacks	Array Stack -Array implementation of stacks using structure/class Infix to postfix expression Evaluation of postfix expression Linked Stack : Linked implementation of stacks using structure/class Practical questions	6 4 6 4	20		
8	20 th August – 31 st August	9	Queues	Array implemented queue, Array implementation of queue using structure/class Circular queue Linked implementation of queue using structure/class Practical questions	4 4 6	14	24.8.18 (upload) 27.8.18 (submit) 31.8.18 (return)	

Completion of syllabus: 31st August 2018
Revision : 4th Sept. -6th Sept'18
Practical Exams – 7th Sept, 8th Sept, 24th Sept, 25th Sept. 2018
Mid Term Exams from 12th Sept to 22nd Sept. 2018
PTM : 13th October 2018

9.	26 th September – 17 th October	15	Databases & SQL	<p>Data base Concepts: Introduction to data base concepts and its need.</p> <p>Relational data model: Concept of domain, tuple, relation, key, primary key, alternate key, candidate key;</p> <p>Relational algebra: Selection, Projection, Union and Cartesian product;</p> <p>Structured Query Language:</p> <p>General Concepts: Advantages of using SQL, Data Definition Language and Data Manipulation Language;</p> <p>Data Types: NUMBER/DECIMAL, CHARACTER/VARCHAR/VARCHAR2, DATE; SQL COMMANDS:CREATE TABLE, DROP TABLE, ALTER TABLE, UPDATESET....., INSERT, DELETE; SELECT, DISTINCT, FROM, WHERE, IN, BETWEEN, GROUPBY, HAVING, ORDERBY;</p> <p>SQL functions: SUM, AVG, COUNT, MAX AND MIN; Obtaining results (SELECT query) from 2 tables using equi-join and Union Practical commands related to SQL</p>	2 2 2 4 6 12	24	10.10.18 (upload) 12.10.18 (submit) 16.10.18 (return)	
Dusshera Break 18th October – 21st October 2018								

10	22 nd October– 3 rd November	10	Boolean Algebra	<p>Role of Logical Operations in Computing. Binary-valued Quantities, Boolean Variable, Boolean Constant and Boolean Operators: AND, OR, NOT;</p> <p>Truth Tables; Closure Property, Commutative Law, Associative Law, Identity law, Inverse Law, Principle of Duality, Idempotent Law, Distributive Law, Absorption Law, Involution Law, DeMorgan's Law and their applications; Obtaining Sum of Product (SOP) and Product of Sum (POS) form from the Truth Table, Reducing</p> <p>Boolean Expression (SOP and POS) to its minimal form, Use of Karnaugh Map for minimization of Boolean expressions (up to 4 variables);</p> <p>Application of Boolean Logic: Digital electronic circuit design using basic Logic Gates (NOT, AND, OR, NAND, NOR), Use of Boolean operators (AND, OR) in search engine queries.</p>	2 6 4 4	16		22.10.18 (MT2) Databases and SQL
Diwali Break : 5th November – 11th November 2018								
11	12 th November – 7 th December	18		Project Work	26	26		
<p>Completion of syllabus : 7th December 2018 Revision : 10th & 11th December 2018 Pre-Board Practical Exams 12th till 15th December 2018 Pre- Board Exam 20th December till 14th January 2019 WINTER BREAK : 31st Dec.'18 - 9th Jan. '19 PTM 28th January 2019</p>								