

CLASS XII – INFORMATICS PRACTICES
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 March (Block Teaching)	8	Programming in Java	<p>Review of Class XI</p> <p>Familiarization of IDE using basic Interface components- Label, Text Field, Text Area, Button, Checkbox, Radio Button.</p> <p>Developing General Application:</p> <p>Getting Familiar with Java Swing User Interface components- Frame, Dialog, OptionPane, Panel, ScrollPane, Label, TextField, PasswordField, TextArea, Button, CheckBox, RadioButton, ComboBox, List</p> <p>Basic Component Methods : setText(),getText(),isSelected(),setSelected()</p> <p>Practical Assignments :</p> <ul style="list-style-type: none"> • To perform simple arithmetic operation (+,-,*,/) and display the result in TextBox using simple GUI application • To perform a simple arithmetic operation (+,-,*,/) and display the result in MessageDialog or TextBox using simple GUI application 	4 4 4	16	6/4/2018 (Upload) 9/4/2018 (Submit) 12/4/2018 (Return)	16/4/2018 (Review of class XI)

				<ul style="list-style-type: none"> To create a simple GUI application to perform an operation based on the criteria input by the user in a CheckBox or a RadioButton. To create a simple GUI application to perform an operation based on the criteria input by the user in a Combo Box Password Field. 					
2	2 nd April – 13 th April	11	Programming Contd.	<p>Programming Fundamentals</p> <p>Data Types: Concept of data types; Built-in data types - byte, short, int, long, float, double, char, string, boolean</p> <p>Using Integer object method: parseInt Double object method: parseDouble, parseFloat</p> <p>Control Structures: Decision Structure – if, if-else, switch; Looping Structure- while, do . . while, for;</p> <p>Practical Assignments :</p> <ul style="list-style-type: none"> To make simple decision making (if statement) solution and display relevant message using GUI application To create a simple GUI application for repeatedly doing a task based on the user To create a simple GUI application to change the property of a swing element based on the selection made by the user <p>(Example 1: To change the background or</p>	4	4	4	6	18

				<p>Foreground color of any of the Swing elements of the form based on the color selected from a list)</p> <p>(Example 2: To change the foreground and background color of a label based on the values input/stored in a combo box)</p> <ul style="list-style-type: none"> To create a simple GUI application to perform both arithmetic and logical operation together (Example- Total, Average and Grade calculation for given marks, Salary Calculation on different criteria) 				
3	16 th April – 27 th April	11	Programming Contd.	<p>Looping Structure- while, do . . while, for;</p> <p>Basic concept of Class ,Object. Concept of Inheritance and Polymorphism</p> <p>Commonly Used Libraries :</p> <ul style="list-style-type: none"> String class and methods: toString(), concat(), length(), toLowerCase(), toUpperCase(), trim(), subString() Math class methods: pow(), round() <p>Practical Assignments :</p> <ul style="list-style-type: none"> To concatenate two text entries and display using simple GUI application To implement various string functions on text entered in a textbox using simple GUI application 	4 4 4 6	18		

			<p>Microwave, Radio Link, Satellite Link;</p> <p><i>Network Devices:</i> Modem, Hub, Switch, Repeater, Gateway – and their functions</p> <p><i>Types of network:</i> LAN, MAN, WAN, PAN;</p> <p><i>Network Topologies:</i> Star, Bus, Tree</p> <p><i>Network Protocols:</i> HTTP, TCP/IP, PPP, Remote access software such as Team Viewer;</p> <p><i>Identifying computers and users over a network:</i> Basic concept of domain name, MAC (Media Access Control), and IP Address, domain name resolution</p> <p><i>Network Security Concepts:</i> Cyber Law, Firewall, Cookies, Hackers and Crackers</p> <p><i>Network security threats:</i> Denial of service, Intrusion problems, Snooping, Eavesdropping</p> <p><i>Internet Applications:</i> SMS, Voice Mail, Electronic Mail, Chat, Video Conferencing</p> <p><i>Wireless/Mobile Communication:</i> GSM, CDMA, WLL, 3G, 4G</p> <p>Open Source Concepts:</p> <p>Open Source Software (OSS), common FOSS/FLOSS examples (GNU/Linux, Firefox, OpenOffice, Java, Netbeans, MySQL). Common open standards (HTML, XML, ODF, TCP/IP, CSS)</p> <p><i>Indian Language Computing:</i> Character encoding, UNICODE, different types of fonts (open type vs true type, static vs dynamic), Entering Indian Language Text – phonetic and key map based, Inscript.</p>	3			
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Completion of syllabus 25 May 2018
Summer Vacations from 26th May 2018 to 28th June 2018
1st Term Exams 29th June - 9th July 2018
PTM on 28th July 2018

6	10 th July - 31 st July	16	Relational Database Management System	<p>Review of RDBMS from Class XI</p> <p>Database Fundamentals : Creating Database and Managing database using DDL and DML commands(Create,Insert,Select,Update,Delete).</p> <p>Functions in MySQL: String Functions: ASCII(), CHAR(), CONCAT(), INSTR(), LCASE(), UCASE(), LEFT(), LOWER(), LENGTH(), LTRIM(), MID(), RIGHT(), RTRIM(), SUBSTR(), TRIM(), UPPER(). Mathematical Functions: - POWER(), ROUND(), TRUNCATE().</p> <p>Date and Time Functions: CURDATE(), DATE(), MONTH(), YEAR(), DAYNAME(), DAYOFMONTH(),DAYOFWEEK(), DAYOFYEAR(), NOW(), SYSDATE().</p> <p>SQL Assignments:</p> <ul style="list-style-type: none"> • <i>Simple SQL queries based on single table.</i> • <i>Queries based on various SQL functions usage.</i> <p>Concept of Database transaction, Committing and revoking a transaction using COMMIT and ROLLBACK AND SAVEPOINT.</p>	6	24	27/7/2018 (UPLOAD)	
					6		30/7/2018 (SUBMIT)	
					6		3/8/2018 (RETURN)	
					4			
					4			
					4			

7	1 st August – 18 th August	13		<p>Grouping Records: GROUP BY, Group functions - MAX(), MIN(), AVG(), SUM(), COUNT(); using COUNT(*), DISTINCT clause with COUNT; Group Functions in case of Null Values.</p> <p>Creating a Table with PRIMARY KEY, Foreign Key, Unique and NOT NULL constraints, Viewing Constraints, Using DESC command to view constraints</p> <p>SQL Assignments:</p> <ul style="list-style-type: none"> • Queries based on various aggregate functions and GROUP by clause. • Queries based on adding constraints to the table 	6 2 4 8	20		
8	20 th August – 31 st August	9		<p>Displaying Data From Multiple Tables: Cartesian product, Union, Intersection and Equi-Join</p> <p>ALTER TABLE for</p> <ul style="list-style-type: none"> • Deleting column(s), modifying data type(s) of column(s), • Adding a constraint, enabling constraint, dropping constraints. • DROP Table for deleting a table or a database. 	8 6	14		

Completion of Syllabus: 31st August 2018
Revision : 4th Sept. -6th Sept'18
Mid Term Exams : 12th Sept. -22nd Sept'18
Practicals : 7th Sept,8th Sept,24th Sept,25th Sept 2018
PTM: 13TH October 2018

Dusshera Break from 18th October – 21st October 2018								
10	22 nd October– 3 rd November	10	IT Applications contd.	<i>Front-End and Database Connectivity:</i> Introduction, requirement and benefits Demonstration and development of appropriate Front-end interface and Back-end Database for e-Governance, e-Business and e-Learning applications <i>Impact of ICT on society:</i> Social, Environmental and Economic benefits. Revision of HTML and XML	8 2 6	16		
Diwali Break : 5th November to 11 November 2018								
11	12 th November – 7 th December	18		Project Work	26	26	15/11/2018 (Upload) 19/11/2018 (Submit) 22/11/2018 (Return)	26/11/2018 (HTML,SQL)
<p align="center"> Completion of syllabus: 7th Dec.' 2018 Revision : 10 Dec. -11 Dec.'18 Pre-Board Practical Exams 12th Dec. , 15th Dec. Pre- Board Exam 20th Dec. '18 – 14th Jan. '19 WINTER BREAK : 31st Dec.'18 – 9th Jan. '19 PTM : 28th January 2019 </p>								