

PANIPAT INSTITUTE OF ENGINEERING & TECHNOLOGY

Department of Electronics & Communication Engineering

LESSON PLAN

Subject Name: - Essentials of Information Technology
Year: - 2nd

Subject Code: - ES-219A
Semester: - 3rd

Lecture No	Unit No	Topic	References
1	1	Familiarization with the basics of Python programming	Automate the boring stuff with python by AL Sweigart
2	1	programming, process of writing a program, running it, and print statements	Automate the boring stuff with python by AL Sweigart
3	1	data-types: integer, float, string. The notion of a variable, and methods to manipulate it	Automate the boring stuff with python by AL Sweigart
4	1	Knowledge of data types and operators: accepting input from the console, assignment statement, expressions,	Automate the boring stuff with python by AL Sweigart
5	1	operators and their precedence	Automate the boring stuff with python by AL Sweigart
6	1	Conditional statements: if, if-else, if-elif-else;	Automate the boring stuff with python by AL Sweigart
7	1	Notion of	Automate the boring stuff

		iterative computation and control flow: for, while,	with python by AL Sweigart
8	1	flowcharts, decision trees and pseudo code	Automate the boring stuff with python by AL Sweigart
9	2	errors and exceptions;	Automate the boring stuff with python by AL Sweigart
10	2	debugging: pdb, break points.	Automate the boring stuff with python by AL Sweigart
11	2	Sequence datatype: Lists, tuples and dictionary	Automate the boring stuff with python by AL Sweigart
12	2	Bubble sort	Automate the boring stuff with python by AL Sweigart
13	2	insertion sort	Automate the boring stuff with python by AL Sweigart
14	2	Strings in Python : compare, concat, substring	Automate the boring stuff with python by AL Sweigart
15	2	Data visualization using Pyplot: line chart,	Automate the boring stuff with python by AL Sweigart
16	2	pie chart,	Automate the boring stuff with python by AL Sweigart
17	2	bar chart.	Automate the boring stuff with python by AL Sweigart
18	3	computer system and mobile system,	Computer Fundamentals by P.K.Sinha
19	3	CPU	Computer Fundamentals by P.K.Sinha
20	3	memory, hard disk,	Computer Fundamentals by P.K.Sinha
21	3	I/O	Computer Fundamentals by P.K.Sinha

22	3	battery, power	Computer Fundamentals by P.K.Sinha
23	3	software:Types of Software – System Software, Utility Software and Application Software	Computer Fundamentals by P.K.Sinha
24	3	how an operating system runs a program, operating system as a resource manager.	Computer Fundamentals by P.K.Sinha
25	3	Concept of cloud computers, cloud storage (public/private)	www.techxplod.com
26	3	introduction to parallel computing	www.techxplod.com
27	4	Relational databases: idea of a database and the need for it, relations	Database System concepts,Abraham Silberschatz,Henry F.Korth,S.Sudarshan
28	4	keys, primary key, foreign key	Database System concepts,Abraham Silberschatz,Henry F.Korth,S.Sudarshan
29	4	SQL commands to create a table, foreign keys	Easy SQL Programming & Database Management For Beginners by Felix Alvaro
30	4	insert/delete an entry, delete a table	Easy SQL Programming & Database Management For Beginners by Felix Alvaro
31	4	SQL commands: select, project	Easy SQL Programming & Database Management For Beginners by Felix Alvaro
32	4	join; indexes	Easy SQL Programming & Database Management For Beginners by Felix Alvaro
33	4	Basics of NoSQL databases: Mongo DB	www.techxplod.com

Text Books:

1. Python Programming: A modular approach by Sheetal Taneja and Naveen Kumar Pearson

Reference Books:

1. Automate the boring stuff with python by AL Sweigart
2. Computer Fundamentals by P.K.Sinha
3. Database System concepts, Abraham Silberschatz, Henry F. Korth, S. Sudarshan
4. Database Management System a Practical Approach by Rajiv Chopra by S. Chand
5. Easy SQL Programming & Database Management For Beginners by Felix Alvaro

Reference Websites:

1. www.geeksforgeeks.com
2. www.techxplod.com