

(CS113) COMPUTER NETWORKS**COURSE OBJECTIVES:**

1. To introduce the concept, terminologies, and technologies used in modern data communication and computer networking.
2. To identify importance of OSI and TCP/IP models.
3. To make students to get familiarized with different protocols and network components.
4. Able to analyze the concept of local area networks, their topologies, protocols and applications.
5. Be able to evaluate the performance of competing network technologies and protocols.

COURSE OUTCOMES:

- a. Illustrate the working principle of different protocols at different layers.
- b. The student installs and configures workstations, servers and networked printers, internetworking devices such as switches and routers.
- c. Analyze the requirements for a given organizational structure and select the most appropriate networking architecture and technologies.
- d. Practice and building the skills of subnetting and routing mechanisms.
- e. To be familiar with contemporary issues in networking technologies, network tools and network programming.
- f. Allow the student to gain expertise in some specific areas of networking such as the design and maintenance of individual networks.
- g. Analyze, specify and design the topological and routing strategies for an IP based networking infrastructure.
- h. Specify and identify deficiencies in existing protocols, and then go onto formulate new and better protocols.

Unit wise Learning Objectives:

On completion of the units, the student will be able to:

UNIT- I

1. Define computer networks.
2. State the evolution of computer networks.
3. Categorize different types of networks.
4. Specify some of the applications of computer networks.
5. State the requirement of layered architecture.

UNIT-II

1. Understand the need of routing and desirable properties of routing.
2. Understand various routing algorithms.
3. Explain the cause for congestion.
4. Understand various congestion control techniques.
5. Differentiate between flow and congestion control.

UNIT-III

1. Explain the use of client-server model.
2. Explain how UDP allows two applications running in two remote locations can communicate.
3. State the limitations of UDP.
4. Explain fragmentation and reassembly.
5. Explain how TCP incorporates reliability in internet communication.

UNIT-IV

1. Explain how DNS allows the use of symbolic names instead of IP address.
2. State the need of secured communication.
3. State how VPN works.
4. State various services needed for secured communication.
5. What are the possible configurations for firewalls?

UNIT-IV

1. State the need and use of FTP.
2. Explain a remote terminal connection protocol that allows a user at one site to establish a TCP connection at the other site.
3. Illustrate SMTP.
4. State NNTP.
5. Explain the use HTTP for communication on the World Wide Web.

LESSON PLAN**Name of the Faculty:** Srinivas Aluvula**Academic Year:** 2017 - 2018**Course Number** : CS113**Course Name** : Computer Networks**Program** : B.Tech**Branch** : CSE**Year / Semester** : III / I**Section** :

S.No.	Topic	Name of the Activity & Instructional Aids	Schedule Date	Actual Date
UNIT I				
1	NETWORK ARCHITECTURE, PROTOCOL IMPLEMENTATION ISSUES	Chalk & Talk	11-06-2018	
2	QUANTITATIVE PERFORMANCE METRICS - NETWORK DESIGN.	Chalk & Talk	12-06-2018	
3	REFERENCE MODELS- THE OSI REFERENCE MODEL- THE TCP/IP REFERENCE MODEL	Chalk & Talk	13-06-2018	
4	A COMPARISON OF THE OSI AND TCP/IP REFERENCE MODELS	Chalk & Talk	14-06-2018	
5	LOW -LEVEL NETWORK TECHNOLOGIES- ETHERNET TO TOKEN RING TO WIRELESS-ISSUES WITH DATA LINK PROTOCOLS.	Chalk & Talk	18-06-2018	
6	ENCODING FRAMING AND ERROR DETECTION AND CORRECTION.	Think-Aloud Pair Problem Solving	19-06-2018	
7	SLIDING WINDOW PROTOCOL.	Think-Pair-Share	20-06-2018	
8	MEDIUM ACCESS CONTROL SUB LAYER	Think-Pair-Share	21-06-2018	
9	BASIC MODELS OF SWITCHED NETWORKS- DATAGRAMS VERSUS VIRTUAL CIRCUITS.	PPT	22-06-2018	
10	SWITCHING TECHNOLOGIES	Case Study	25-06-2018	
11	SWITCHED ETHERNET AND ATM	Chalk & Talk	27-06-2018	
12	SWITCHED ETHERNET AND ATM	Chalk & Talk	28-06-2018	
13	THE DESIGN OF HARDWARE BASED SWITCHES	Chalk & Talk	2-06-2018	
14	THE DESIGN OF HARDWARE BASED SWITCHES	Chalk & Talk	3-07-2018	
UNIT - II				
15	NETWORK LAYER DESIGN ISSUES	Chalk & Talk	04-07-2018	
16	ROUTING ALGORITHMS	Stump and Partner	05-07-2018	
17	ROUTING ALGORITHMS	Stump and Partner	07-07-2018	
18	CONGESTION CONTROL ALGORITHMS	Chalk & Talk	10-07-2018	

19	CONGESTION CONTROL ALGORITHMS	Chalk & Talk	11-07-2018	
20	CONGESTION CONTROL ALGORITHMS	Chalk & Talk	12-07-2018	
21	INTERNETWORKING	Chalk & Talk	13-07-2018	
22	THE NETWORK LAYER IN THE INTERNET	Chalk & Talk	17-07-2018	
23	THE NETWORK LAYER IN THE INTERNET	Chalk & Talk	18-07-2018	
24	INTERNET PROTOCOL (IP)	Stump and Partner	19-07-2018	
25	INTERNET PROTOCOL (IP)	Stump and Partner	20-07-2018	
26	UNICAST, MULTICAST, AND INTER DOMAIN ROUTING	Stump and Partner	23-07-2018	
27	UNICAST, MULTICAST, AND INTER DOMAIN ROUTING	PPT	24-07-2018	
	UNIT- III			
28	ELEMENTS OF TRANSPORT PROTOCOL	Chalk & Talk	25-07-2018	
29	CONGESTION CONTROL – PERFORMANCE ISSUES	Case Study	26-07-2018	
30	THE INTERNET’S TRANS-MISSION CONTROL PROTOCOL (TCP)	Chalk & Talk	27-07-2018	
31	THE INTERNET’S TRANS-MISSION CONTROL PROTOCOL (TCP)	PPT	30-07-2018	
32	REMOTE PROCEDURE CALL (RPC)	PPT	31-07-2018	
33	IMPLEMENTATION SEMANTICS OF RPC -CLIENT-SERVER APPLICATIONS	PPT	01-08-2018	
34	THE REAL-TIME TRANSPORT PROTOCOL(RTP)	Case Study	2-08-2018	
35	MULTIMEDIA APPLICATIONS	PPT	3-08-2018	
	I - Mid Examinations		07-08-2018 to 09-08-2018	
36	CONGESTION CONTROL AND RESOURCE ALLOCATION	Chalk & Talk	14-08-2018	
37	CONGESTION CONTROL IN TCP –UDP	Chalk & Talk	16-08-2018	
38	CONGESTION CONTROL IN TCP –UDP	Chalk & Talk	17-08-2018	
39	QUALITY OF SERVICE IN IP.	Chalk & Talk	20-08-2018	
40	QUALITY OF SERVICE IN IP.	Chalk & Talk	21-08-2018	
	UNIT- IV			
41	DOMAIN NAME SERVER	PPT	23-08-2018	
42	WORLD WIDE WEB-HYPER TEXT TRANSFER PROTOCOL	PPT	24-08-2018	
43	PRESENTATION FORMATTING AND DATA COMPRESSION	PPT	27-08-2018	
44	PRESENTATION FORMATTING AND DATA COMPRESSION	PPT	28-08-2018	
45	NETWORK SECURITY- CRYPTO GRAPHIC TOOLS	Group Writing	29-08-2018	

46	THE PROBLEMS OF KEY DISTRIBUTION	Chalk & Talk	31-08-2018	
47	THE PROBLEMS OF KEY DISTRIBUTION	Chalk & Talk	01-09-2018	
48	GENERAL AUTHENTICATION TECHNIQUES	Chalk & Talk	4-09-2018	
49	PRETTY GOOD PRIVACY	PPT	5-09-2018	
50	SECURE SHELL (SSH)	Chalk & Talk	6-09-2018	
51	IP SECURITY ARCHITECTURE(IPSEC)	Chalk & Talk	7-09-2018	
52	IP SECURITY ARCHITECTURE(IPSEC)	PPT	8-09-2018	
53	FIREWALLS	Chalk & Talk	11-09-2018	
UNIT- V				
54	FILE TRANSFER PROTOCOL	Chalk & Talk	12-09-2018	
55	EMAIL AND THE WEB	Chalk & Talk	14-09-2018	
56	MULTIMEDIA APPLICATIONS SUCH AS IP TELEPHONY AND VIDEO STREAMING	PPT	15-09-2018	
57	OVERLAY NETWORKS LIKE PEER-TO-PEER FILE SHARING AND CONTENT DISTRIBUTION NETWORKS	PPT	17-09-2018	
58	OVERLAY NETWORKS LIKE PEER-TO-PEER FILE SHARING AND CONTENT DISTRIBUTION NETWORKS	PPT	18-09-2018	
59	WEB SERVICES ARCHITECTURES FOR DEVELOPING NEW APPLICATION PROTOCOLS	Group Writing	19-09-2018	
60	WEB SERVICES ARCHITECTURES FOR DEVELOPING NEW APPLICATION PROTOCOLS	Group Writing	20-09-2018	
61	CASE STUDY ON NETWORKING	Chalk & Talk	22-09-2018	
62	CASE STUDY ON NETWORKING	Chalk & Talk	25-09-2018	
63	CASE STUDY ON NETWORKING	Chalk & Talk	26-09-2018	
64	CASE STUDY ON NETWORKING	Chalk & Talk	27-09-2018	
65	CASE STUDY ON NETWORKING	Chalk & Talk	28-09-2018	
66	CASE STUDY ON NETWORKING SIMULATIONS	PPT	29-09-2018	
68	CASE STUDY ON NETWORKING SIMULATIONS	PPT	01-10-2018	
70	CASE STUDY ON NETWORKING SIMULATIONS	PPT	03-10-2018	
II - Mid Examinations			04-10-2018 to 06-10-2018	

1.Topic Name: Sliding Window Protocol, Medium Access Control.

Name of the Activity :Think-Pair-Share

Description of the Activity: From this activity instructor can poses a question on topic .Students can response within 1-2 minutes of duration to question .Student his /her response can share to the others . other students can raise the question and continue the discussion on the topic . this discussion may be direct towards the key concept of Sliding Window Protocol, Medium Access Control and also enhance the thinking of students about different protocols in the networks related to sliding window protocol, Medium access control protocols.

2. Topic Name: Framing ,Error Detection and Correction

Name of the Activity :Think-Aloud Pair Problem Solving.

Description of the Activity: In this activity students can involve in the way of problem solving .Instructor can form the pairs(two student group) and explain the role of student.One student is Solver can do the reasoning process while solving the problem . Other student is Listener can encourage problem solving and ask for clarification when needs. From this activity student can learns how to detect the errors and correct the error in transmission media. This activity Improve the knowledge of students in developing of algorithms related to detect errors and correct the error in transmission media.

3. Topic Name:Network Security, World Wide Web, Web Services

Name of the Activity :Group Writing:

Description of the Activity: This learning activity allows instructor to give a course related topic for group of student and ask for prepare a optimal documentation . from this activity student can learn by self and gathering of information about Network Security, World Wide Web, Web Services. This activity use as study guide for students on the above topics.

4.Topic Name:Logical Addressing, Routing , address mapping

Name of the Activity :Stump and Partner .

Description of the Activity: From this activity students can create the challenging problems on IP addressing , subnetting ,supernetting and can construct optimal routing path from challenging network. Student created challenging problems can pose to the next student to improve the thinking .These topics are have more scope to create the challenging questions by student .This process improve the student technical knowledge in networking.

5.Topic Name:Switching technologies , Congestion control , Remote Procedure Call

Name of the Activity :Case Study

Description of the Activity: Instructor can create case study on Switching technologies , Congestion control , Remote Procedure Call.Each case study can assign to the group of students ask for analyze it. Every group can share their analysis on case study to other groups .Every case study from the different groups can reach to all students.This analysis improve the knowledge on Switching technologies , Congestion control , Remote Procedure Call.

**Prepared and Submitted by
Srinivas Aluvala**

Lesson Plan

Department: CSE		Date: 7.6.2018
Academic Year: 2018-2019	Year/Semester: III/I	
Name of the Faculty: A.Harshavardhan		
Course Name: DESIGN AND ANALYSIS OF ALGORITHMS		Course Code: CS112
Prerequisite: Recurrence Relations, Algorithms, Flowcharts, Any Programming Language		
Course Outcomes:		
Evaluate and compare different algorithms using worst-, average-, and best-case Analysis.		
Describe the divide-and-conquer paradigm and explain when an algorithmic design situation calls for it. Recite algorithms that employ this paradigm. Synthesize divide-and-conquer algorithms. Derive and solve recurrences describing the performance of divide-and-conquer algorithms.		
Describe the greedy paradigm and explain when an algorithmic design situation calls for it. Recite algorithms that employ this paradigm. Synthesize greedy algorithms, and analyze them.		
Describe the dynamic-programming paradigm and explain when an algorithmic design situation calls for it. Recite algorithms that employ this paradigm. Synthesize dynamic-programming algorithms, and analyze them.		
Describe the backtracking paradigm and explain when an algorithmic design situation calls for it. Recite algorithms that employ this paradigm. Synthesize backtracking algorithms, and analyze them.		
Describe the branch-and-bound paradigm and explain when an algorithmic design situation calls for it. Recite algorithms that employ this paradigm. Synthesize branch-and-bound algorithms, and analyze them.		
Analyze worst-case running times of algorithms using asymptotic analysis.		
Explain the difference between tractable and intractable problems, and identify the basic complexity classes, such as P, NP and NP-complete		

Lecture Schedule:

S.No	Topic of the Lecture	Name of the Activity &	Tentative Date
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		Instructional Aids	
	UNIT – I		
1	Introduction to algorithms	Think-Pair-Share , Demonstration	12/06/2018
2	Algorithm importance, Fundamentals of the analysis of algorithm efficiency	Chalk & Board /PPT	13/06/2018
3	Analysis frame work - Asymptotic notations – Big Oh Notation, Omega Notation, Theta Notation and Little Oh Notation	Chalk & Board /PPT	18/06/2018
4	Sorting algorithms design and analysis	Chalk & Board /PPT	19/06/2018
5	Insertion sort	Chalk & Board /PPT	20/06/2018
6	Selection sort	Chalk & Board /PPT	25/06/2018
	Content beyond the syllabus	Chalk & Board /PPT	26/06/2018
7	Case Study On All Types Of Sorting	Group writing Assignments, PPT	27/06/2018
	UNIT – II		
8	Divide and conquer - General method, applications	Chalk & Board /PPT	3/07/2018
9	Binary search	Chalk & Board /PPT	4/07/2018
10	Quick sort	Chalk & Board /PPT	9/07/2018
11	Merge sort	Chalk & Board /PPT	10/07/2018
12	Stassen’s matrix multiplication.	Chalk & Board /PPT	11/07/2018
13	Greedy method – General method, applications	Chalk & Board /PPT	16/07/2018
14	Job sequencing with deadlines	Chalk & Board /PPT	17/07/2018
15	Knapsack problem	Chalk & Board /PPT	18/07/2018
16	Minimum cost spanning trees	Chalk & Board /PPT	23/07/2018
17	Single source shortest path problem.	Chalk & Board /PPT	24/07/2018
	Content Beyond the Syllabus		25/07/2018
18	Case Study On Minimum Path Between 5 Cities	PPT	30/07/2018
	UNIT – III		
19	Dynamic Programming - General method, applications.	Chalk & Board /PPT	1/08/2018
20	Matrix chain multiplication	Chalk & Board /PPT	6/08/2018
21	Optimal binary search trees	Learning Together, chalk & Board	7/08/2018
22	0/1 knapsack problem,	Chalk & Board /PPT	8/08/2018

23	All pairs shortest path problem	Chalk & Board /PPT	9/08/2018
24	Traveling sales person problem	Chalk & Board /PPT	13/08/2018
25	Reliability design	Chalk & Board /PPT	14/08/2018
	Content Beyond the Syllabus		16/08/2018
26	Case study on dynamic programming application	PPT	20/08/2018
	UNIT – IV		
28	Backtracking – General method, applications	Chalk & Board /PPT	21/08/2018
29	n-queen problem	Chalk & Board /PPT	22/08/2018
30	, sum of subsets problem,	Chalk & Board /PPT	27/08/2018
31	graph coloring, Hamiltonian cycles	Chalk & Board /PPT	28/08/2018
32	Branch and Bound - General method, applications	Chalk & Board /PPT	29/08/2018
33	Travelling salesperson problem	Chalk & Board /PPT	3/09/2018
34	0/1knapsack problem	Chalk & Board /PPT	4/09/2018
35	LC Branch and bound solutions	Chalk & Board /PPT	5/09/2018
36	FIFO branch and bound solutions	Chalk & Board /PPT	10/09/2018
	Content Beyond the Syllabus		11/09/2018
37	Case Study On 8 Queen Problem	PPT Chalk & Board /PPT	12/09/2018
	UNIT – V		
38	String matching		17/09/2018
39	Robin Karp algorithm,	Group problem solving, PPT	18/09/2018
40	Knuth – Morris Pratt algorithm,	Chalk & Board /PPT	19/09/2018
41	Algorithm for parallel computers,	Chalk & Board /PPT	24/09/2018
42	Parallelism,	Chalk & Board /PPT	25/09/2018
43	The PRAM models	Chalk & Board /PPT	26/09/2018
44	Simple PRAM algorithms.	Chalk & Board /PPT	27/09/2018
45	P and NP Class	Chalk & Board /PPT	28/09/2018
46	Some NP – complete problems	Chalk & Board /PPT	29/09/2018
	Content Beyond the Syllabus		1/10/2018
47	Case study Knuth – Morris application	PPT	2/10/2018

This Semester Planning:-**1. Topic Name:** Introduction to algorithms**Name of the Activity:** Think-Pair-Share & Demonstration**Description of the Activity:**

The instructor can use several answers to illustrate important points or facilitate a whole class discussion.

Asking student to remind the algorithm definition and its purpose and tell them to share with their friends.

2. Topic Name: String matching: Robin Karp algorithm

Name of the Activity: Group problem solving

Description of the Activity:

- i. Presenting students with a problem.
- ii. Providing some structure or guidance toward solving the problem. Note, however, that they are all student-centered activities in which the instructor may have a very minimal role.
- iii. Reaching a final outcome or solution.

3. Topic Name: Case Study on All Types of Sorting

Name of the Activity: Group writing Assignments

Description of the Activity:

- i. Students have opportunities to see how other students view the same topic
- ii. An assignment with an authentic purpose and audience can increase students' interest and commitment
- iii. Giving the assignment at the end of each unit to test the student how far he understood the topic, what are the checkpoints where majority of students are lagging.

4. Topic Name: Optimal binary search trees

Name of the Activity: Learning Together

Description of the Activity

The method involves students working on assignment sheets in four- or five-member heterogeneous groups. The groups hand in a single sheet and receive praise and rewards based on the group product.

Course Projects: Develop an algorithm for 8 queens and calculate the time complexity .

**Prepared By:
A.Harshavardhan**

LESSON PLAN

Department: Computer Science and Engineering		Date: 19/06/2018
Academic Year: 2018-19	Year/Semester: III/I	
Name of the Faculty: K. Ravi Chythanya		
Course Name: Scripting Languages (Open Elective)		Course Code: OE114
Prerequisites: HTML		
<p>Course Outcomes:</p> <ol style="list-style-type: none"> 1. Understand the basics of Scripting Languages and PERL 2. Create the Internet ware applications using PERL Language 3. Create the web applications using PHP 4. Send the mails using PHP 5. Design the web applications using Tcl and Tk 6. Design the web applications using Python. 		

Course Schedule:

S. No.	Description	Duration	No. of Periods
1	Introduction to PERL and Scripting, Advance Perl	13-06-2018 to 23-07-2018	18
2	PHP Basics	25-07-2018 to 03-08-2018	6
3	Advanced PHP Programming	13-08-2018 to 31-08-2018	8
4	TCL, Tk	03-09-2018 to 14-09-2018	8

5	Python	17-09-2018 to 03-10-2018	8
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Lecture Schedule:**Unit-I**

Lecture No	Topic of the Lecture	Activity & Instructional Aid	Tentative Date	No. of Periods
1	Introduction to PERL and Scripting: Scripts and Programs	Class Room	13-06-2018	1
2,3	Origin of Scripting, Scripting today, Characteristics of Scripting Languages, Uses for Scripting Languages	Class Room	15-06-2018	2
4	Web Scripting, and the universe of Scripting Languages	Class Room	20-06-2018	1
5,6	PERL- Names and Values, PERL- Names and Values	Class Room	22-06-2018	2
7	Control Structures, Arrays	Projector	27-06-2018	1
8,9	Lists, Hashes, Strings	Class Room	29-06-2018	2
10	pattern and regular expressions	Class Room	04-07-2018	1
11,12	Subroutines, Advance Perl- Finer Points of looping	Team-based Learning	06-07-2018	2
13	Pack and unpack, file system	Projector	11-07-2018	1
14,15	Eval, data structures	Class Room	13-07-2018	2
16	Packages and modules	Class Room	18-07-2018	1
17	Interfacing to the OS	Class Room	20-07-2018	1
18	Creating Internet ware applications, Dirty Hands, Internet Programming, Security Issues	Projector	23-07-2018	1
			Total	18

Topic Name: Finer Points of Looping**Name of the Activity: Team-based learning****Description of the Activity:** Give groups a challenging assignment, such as solving a problem or applying a theory to a real world situation.

Unit-II

Lecture No	Topic of the Lecture	Activity & Instructional Aid	Tentative Date	No. of Periods
19	PHP Basics – Features, Embedding PHP Code in your Web pages, Outputting the data to the browser	Projector	25-07-2018	1
20	Data types, Variables, Constants, expressions, control structures	Class Room	27-07-2018	1
21	string interpolation, Function,	Projector	29-07-2018	1
22	Creating a Function, Function Libraries	Class Room	30-07-2018	1
23	Arrays, strings	Class Room	01-08-2018	1
24	Regular Expressions	Reciprocal Teaching	03-08-2018	1
Total				6
I - Mid Examinations 07/08/2018 – 10/08/2018				

Topic Name: Regular Expressions

Name of the Activity: Reciprocal Teaching

Description of the Activity: The learning activity involves students teaching to one another in groups. Students jointly read a text or work on a task. Students take turns being the teacher for a Segment of the text or task. In their teaching role students lead the discussion, summarize material, ask questions, and clarify material.

Unit-III

Lecture No	Topic of the Lecture	Activity & Instructional Aid	Tentative Date	No. of Periods
25	Advanced PHP Programming PHP and Web Forms	Projector	13-08-2018	1
26	Files, Hard Coded PHP Authentication	Class Room	17-08-2018	1
27	File Based, Database Based, IP Based PHP Authentication,	Projector	20-08-2018	1
28	Login Administration, Uploading Files with PHP, Sending Email using PHP	Projector	22-08-2018	1
29	PHP Encryption Functions, the Mcrypt package	Case Study	24-08-2018	1
30	Building Web sites for the World – Translating Websites- Updating Web sites Scripts	Projector	27-08-2018	1
31	Creating the Localization Repository, Translating Files, text, Generate Binary Files	Class Room	29-08-2018	1
32	Set the desired language within your scripts, Localizing Dates, Numbers and Times.	Class Room	31-08-2018	1
			Total	8

Topic Name: Mcrypt package

Name of the Activity: Case Study

Description of the Activity: Have students work in groups of four or five to work through and analyze their case study.

Unit-IV

Lecture No	Topic of the Lecture	Activity & Instructional Aid	Tentative Date	No. of Periods
33	TCL Structure, syntax, Variables and Data in TCL	Projector	03-09-2018	1
34	Control Flow, Data Structures, input/output, procedures, strings, patterns, files	Projector	05-09-2018	1
35	Advance TCL- eval, source, exec and uplevel commands	Think-Pair-Share	07-09-2018	1
36	Name spaces, trapping errors, event driven programs, making applications internet aware,	Class Room	10-09-2018	1
37	Nuts and Bolts Internet Programming, Security Issues, C Interface, Tk-Visual Tool Kits	Class Room	12-09-2018	1
38	Fundamental Concepts of Tk, Tk by example, Events and Binding, Perl-Tk	Class Room	14-09-2018	1
			Total	6

Topic Name: Advance TCL

Name of the Activity: Think-Pair-Share

Description of the Activity: The instructor poses a question to the class. Students write a response and then share it with a student nearby. Students clarify their positions and discuss points of agreement and disagreement. The instructor can use several answers to illustrate important points or facilitate a whole class discussion.

Unit-V

Lecture No	Topic of the Lecture	Activity & Instructional Aid	Tentative Date	No. of Periods
39	Introduction to Python language	Projector	17-09-2018	1
40	python-syntax, statements	Projector	19-09-2018	1
42	Functions,Built-in-functions and Methods,Modules in python	Jigsaw	24-09-2018	1
43	Exception Handling	Projector	26-09-2018	1
44	Integrated Web Applications in Python – Building Small Python Web Systems	Projector	28-09-2018	1
45	Building Efficient Python Web Systems, Web ApplicationFramework	Projector	01-10-2018	1
Total				6
II-MID Examinations 08-10-2018 to 13-10-2018				

Topic Name: Functions,Built-in-functions and Methods, Modules in python

Name of the Activity: Jigsaw

Description of the Activity: Students are assigned to six member teams to work on academic material that has been broken down into sections.