CMR INSTITUTE OF TECHNOLOGY

DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING

Sem VI: A & B /**Faculty**: Revathi /**Course duration:** 13.2.2017 to 03.06.2017

10IS661 –Operations Research

Class #	Chapter Title / Reference Literature	Topic	Percentage of portion covered	
			Reference	Cumulative
1 - 7	**TB1** **(Chp 1.1- 1.3 &2.1 – 2.7 & 3.1 – 3.2)**	**UNIT 1:Introduction, Linear Programming** Introduction: The origin, nature and impact of OR. Defining the problem and gathering data. Formulating a mathematical model Deriving solutions from the model, Testing the model, Preparing to apply the model, Implementation, Introduction to Linear Programming: Prototype example; The linear programming (LP) model.	12%	12%
8 - 15	**TB1** **(Chp 3.3, 3.4 & Chp 4.1-4.5)**	**UNIT 2: LP – 2, Simplex Method – 1** Assumptions of LP, Additional examples The essence of the simplex method, Setting up the simplex method, Algebra of the simplex method, The simplex method in tabular form, Tie breaking in the simplex method.	13%	25%
16 - 22	**TB1** **(Chp 4.6 – 4.8 & Chp 5.1)**	**UNIT 3 Simplex Method – 2** Adapting to other model forms, The two phase method, Post optimality analysis Parametric linear programming, Computer implementation, Foundation of the simplex method, Extensions to the augmented form of the problem.	12%	37%
23 - 30	**TB1** **(Chp 5.2-5.3 & Chp 6.1 – 6.4)**	**UNIT 4: Simplex Method – 2, Duality Theory** The revised simplex method, Simplex method :A fundamental insight, The essence of duality theory, Applications , Economic interpretation of duality, Primal dual relationship, Relationships between complementary basic solutions, Adapting to other primal forms.	13%	50%
31 - 38	**TB1** **(Chp 6.5-6.7 & Chp 7.1 – 7.3)**	**UNIT 5: Duality Theory and Sensitivity Analysis, Other Algorithms for LP** The role of duality in sensitive analysis; The essence of sensitivity analysis, Applying sensitivity analysis, The dual simplex method Parametric linear programming, The upper bound technique.	13%	63%

Class #	Chapter Title / Reference Literature	Topic	Percentage of portion covered	
			Reference	Cumulative
39 - 46	TB1 (Chp 8.1-8.4)	**UNIT 6: Transportation and Assignment Problems** The transportation problem, Using excel to formulate and solve transportation problems Streamlined simplex method for the, transportation problem General procedure for constructing an initial BF solution, The assignment problem The assignment problem- Examples. Solution procedures for assignment problems, A special algorithm for the assignment problem	13%	76%
47 - 54	TB1 (Chp 14.1-14.6 & 15.1 – 15.4)	**UNIT 7: Game Theory, Decision Analysis** Game Theory: The formulation of two persons, zero sum games Solving simple games- a prototype example, Games with mixed strategies ;Graphical solution procedure, Solving by linear programming, Extensions, Decision Analysis: A prototype example, Decision making without experimentation, Decision trees	12%	88%
55 - 61	TB1 (Chp 13.1 – 13.4)	**UNIT 8: Metaheuristics:** The nature of Metaheuristics, An example-Traveling Salesman problem, Tabu Search Minimum spanning tree problem with constraints , Simulated Annealing The nonlinear programming example Genetic Algorithms	12%	100%

Syllabus for Sessionals:

Sessional #	Syllabus
T1	Class # 01 – 23
T2	Class # 24 – 38
T3	Class # 39 - 61

Literature:

Book Type	Code	Author & Title	Publication info	
			Edition & Publisher	ISBN #
Text Book	TB1	Frederick S.Hillier and Gerald J. Lieberman : Introduction to Operations Research	8th Edition, Tata McGraw-Hill, 2005	978-0-07-060092-8
References	RB1	Wayne L. Winston : Operations Research Applications and Algorithms	4th Edition, Thomson Course Technology, 2003	978-0-53-438058-8

References	RB2	Hamdy A Taha: Operations Research: An Introduction	8th Edition, Prentice Hall India, 2007	978-81-317-8594-2

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Session wise – Course Plan

Department of Information Science and Engineering

SEMESTER   : VI –A
BRANCH   : ISE
SUBJECT   : Unix System Programming
SUBJECT CODE : 10CS62
NO OF HRS/WK : 5

NAME OF THE FACULTY   : Shilpa Pande
DATE OF COMMENCEMENT : 13/02/2017
DATE OF CLOSING   : 24/05/2017
CLASS STRENGTH   : 47
TOTAL HRS   : 60

Session No	Chapter no (No of hrs planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chapter	Topics covered As per plan
1	1/1	13-02-2017	**UNIT – 1 Introduction:** UNIX AND ANSI STANDARDS: The ANSI C Standard, The ANSI/ ISO C++ Standards	Chalk & Duster		
2	2/1	14-02-2017	Difference between ANSI C and C++, The POSIX Standards, The POSIX.1FIPS Standard	,,		
3	3/1	15-02-2017	The X/ Open Standards. UNIX and POSIX APIs: The POSIX APIs,	,,		
4	4/1	16-02-2017	The UNIX and POSIX Development Environment,	,,	Assignment- I	
5	5/1	18-02-2017	API Common characteristics, Revision	,,		
6	1/2	20-02-2017	**UNIT – 2 UNIX Files:** File Types	,,		
7	2/2	21-02-2017	The UNIX and POSIX File System, The UNIX and POSIX file attributes,	' '		
8	3/2	22-02-2017	Inodes in UNIX System V, Application Program interface to files	,,		
9	4/2	23-02-2017	Inodes in UNIX System V	,,		
10	5/2	28-02-2017	Application Program interface to files	,,	Assignment -II	

			UNIX , Inodes in UNIX System V			
11	6/2	01-03-2017	Application Program interface to files Hard and Symbolic Links, Revision	,,		
12	1/3	02-03-2017	**UNIT – 3 UNIX File APIs:** General File APIs, File and Record locking	,,		
13	2/3	06-03-2017	Directory file APIs, Device file API	,,		
14	3/3	07-03-2017	, FIFO file APIs,	,,		
15	4/3	09-03-2017	Symbolic Link File APIs ,General File class,	''		
16	5/3	10-03-2017	Dirfile class for directory files	,,		
17	6/3	11-03-2017	FIFO file class, Device file class,	,,	Assignment –III	
18	7/3	13-03-2017	Symbolic Link file class, File listing program ,Revision	,,		
19	1/5	14-03-2017	**UNIT - 5 Process Control:** Introduction, Process identifiers, fork, vfork,	,,		
20	2/5	16-03-2017	exit, wait, waitpid, wait3, wait4 functions	,,		
21	3/5	17-03-2017	Race conditions, exec functions, , Changing User IDs and group IDs,	,,		
22	4/5	18-03-2017	Interpreter files, System function, Process accounting,	,,		
23	5/5	20-03-2017	User identification, Process times, I/O Redirection. Process Relationships: Introduction	''		
24	6/5	21-03-2017	Terminal Logins Network Logins, Process groups, Sessions, Controlling Terminal	,,	Assignment –IV	
25	7/5	23-03-2017	tcgetpgrp and tcsetpgrp functions, job control, Shell execution of programs, Orphaned process groups, Revision	,,		
26	1/6	24-03-2017	**UNIT - 6 Signals and Daemon Processes:** Signals: The UNIX Kernel support for signals,	,,		
27	2/6	31-03-2017	signal, Signal Mask	,,		
28	3/6	01-04-2017	sigaction, The SIGCHLD signal	,,		
29	4/6	03-04-2017	the waitpid function, The setjmp and setlongjmp functions,	,,		
30	5/6	05-04-2017	Kill, alarm, interval timers, POSIX.lb timers.	,,		
31	6/6	06-04-2017	Daemon Processes : Introduction, Daemon characteristics, coding Rules	,,	Assignment -V	

32	7/6	07-04-2017	Error Logging, client-server model, Revision	''		
33	1/7	08-04-2017	**UNIT - 7 Interprocess Communication 1:** Overview of IPC	,,		
34	2/7	10-04-2017	Methods, pipes	,,		
35	3/7	12-04-2017	popen, pclose functions	,,		
36	4/7	13-04-2017	Coprocessors,	,,		
37	5/7	17-04-2017	FIFOs	,,		
38	6/7	18-04-2017	System V IPC, Message queues	,,	Assignment -VI	
39	7/7	19-04-2017	Semaphores, Revision	''		
40	1/4	21-04-2017	**UNIT - 4 UNIX Processes:** The Environment of UNIX process-Introduction,	,,		
41	2/4	22-04-2017	main function, Process Termination	,,		
42	3/4	24-04-2017	Command-line Arguments, Environment list,	,,		
43	4/4	25-04-2017	Memory layout of a C program, Shared Libraries, Memory allocation	,,		
44	5/4	26-04-2017	Environment variables, setjmp and longjmp functions	,,		
45	6/4	28-04-2017	getrlimit, setrlimit functions	,,	Assignment -VII	
46	7/4	02-05-2017	UNIX Kernel support for processes ,Revision	,,		
47	1/8	03-05-2017	**UNIT – 8 Interprocess Communication 2:** Shared Memory,	''		
48	2/8	04-05-2017	Client-Server Properties	,,		
49	3/8	05-05-2017	Stream Pipes Passing File Descriptors,	,,		
50	4/8	12-05-2017	An Open Server-Version 1	,,		
51	5/8	13-05-2017	An Open Server-Version 1	,,		
52	6/8	15-05-2017	Client-Server Connection Functions	,,	Assignment -VIII	
53	7/8	16-05-2017	Client-Server Connection Functions	,,		
54		17-05-2017	Revision	,,		

55		19-05-2017	Revision	''		
56		20-05-2017	Revision	''		
57		22-05-2017	Revision	''		
58		23-05-2017	Revision	''		
59		24-05-2017	Revision	''		
60		24-05-2017	Revision	''		

Syllabus for Internal Assessment Tests (IAT)[*]

IAT #	Syllabus
IAT-1	Class # 01 – 18
IAT-2	Class # 26 – 46

*: See calendar of events for the schedules of IATs.

Literature:

Book Type	Code	Author & Title	Publication information	
			Edition // Publisher	ISBN #
Text Book	TB1	Terrance Chan: UNIX System Programming Using C++ (Chapters 1, 5, 6, 7, 8, 9, 10)	Prentice Hall India, 1999.	9788120314689
Text Book	TB2	W. Richard Stevens: Advanced Programming in the UNIX Environment (Chapters 7, 8, 9, 13, 14, 15)	2nd Edition, Pearson Education, 2005.	9788131700051
Reference	RB1	Marc J. Rochkind: Advanced UNIX Programming.	2nd Edition, Pearson Education, 2005	9780131411548
Reference	RB1	Uresh Vahalia: Unix Internals: The new Frontiers.	Pearson Education, 2001	8178084007

Signature of faculty   Signature of HOD   Signature of Principal

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Department of Information Science and Engineering

SEMESTER   :   VI -A   NAME OF THE FACULTY   :   Mrs
.S.Geetha
BRANCH   :   ISE   DATE OF COMMENCEMENT :   13/02/2017
SUBJECT   :   File Structures   DATE OF CLOSING   :   02/06/2017
SUBJECT CODE :   10IS63   CLASS STRENGTH   :   47
NO OF HRS/WK :   5   TOTAL HRS   :   62

Session No	Chapter no (No of hrs planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chapter	Topics covered As per plan
1	**1/1**	13.02.17 Mon	(UT-1)File Structures: The Heart of the file structure Design, Fundamental.	Chalk & Talk		
2	**2/1**	14.02.17 Tue	AShort History of File Structure Design.A Conceptual Toolkit;	,,		
3	**3/1**	15.02.17 Wed	File Operations: Physical Files and Logical Files Opening Files, Closing Files,Reading and Writing, Seeking.	,,	Assignment- I	
4	**4/1**	16.02.17 Thu	The Unix Directory Structure.Physical devices and Logical Files, File-related Header Files, UNIX file System Commands.	,,		
5	**5/1**	17.02.17 Fri	Secondary Storage and System Software: Disks, Magnetic Tape, Disk versus Tape	,,		
6	**6/1**	18.02.17 Sat	Special Characters,.CD-ROM: Introduction, Physical Organization Strengths and Weaknesses; Storage as Hierarchy, A journey of a Byte Buffer Management, Input /Output in UNIX. Revision	,,		
7	**1/2**	20.02.17 Mon	(UT-2) **UNIT – 2** : Fundamental File Structure Concepts,	''		
8	**2/2**	21.02.17 Tue	Managing Files of Record	,,		
9	**3/2**	22.02.17 Wed	Using Classes to Manipulate Buffers, Using Inheritance for Record Buffer Classes	,,		
10	**4/2**	23.02.17 Thu	Field and Record Organization, ,Managing Fixed Length, Fixed Field Buffers	,,	Assignment -II	
11	**5/2**	27.02.17 Mon	Records ,An Object-Oriented Class for Record Files	,,		

12	**6/2**	28.02.17 Tue	Access More about Record Structures, Encapsulating Record	,,		
13	**7/2**	01.03.17 Wed	File Access and File Organization	,,		
14	**8/2**	02.03.17 Thu	Operations in a Single Class	,,		
15	**1/3**	06.03.17 Mon	(UT-3) Organization of Files for Performance	' '		
16	**2/3**	07.03.17 Tue	IndexingData Compression, Reclaiming Space in files	,,		
17	**3/3**	08.03.17 Wed	Internal Sorting and Binary Searching. Keysorting	,,	Assignment –III	
18	**4/3**	09.03.17 Thu	What is an Index? A Simple Index for Entry-Sequenced File.	,,		
19	**5/3**	10.03.17 Fri	Using Template Classes in C++ for Object I/O, Object-Oriented support for Indexed	,,		
20	**6/3**		Entry-Sequenced Files of Data Objects, Indexes that are too large to hold in Memory	,,		
21	**7/3**	11.03.17 Sat	Selective indexes, Binding.Indexing to provide access by Multiple keys	,,		
22	**8/3**	16.03.17 Thu	Retrieval,Using Combinations of Secondary Keys Improving the Secondary Index structure: Inverted Lists	,,		
23	**1/4**	17.03.17 Fri	(UT-4) Cosequential Processing	' '		
24	**2/4**	20.03.17 Mon	A Model for Implementing Cosequential Processes	,,	Assignment –IV	
25	**3/4**	21.03.17 Tue	Application of the Model to a General Ledger Program	,,		
26	**4/4**	22.03.17 Wed	Extension of the Model to include Mutiway	,,		
27	**5/4**	23.03.17 Thu	Merging,A Second Look at Sorting in Memory	,,		
28	**6/4**	24.03.17 Fri	Merging as a Way of Sorting Large Files on Disk	,,		
29	**7/4**	25.03.17 Sat	Merging as a Way of Sorting Large Files on Disk	,,		
30	**8/4**	29.03.17 Wed	Sorting of Large Files	,,		
31	**9/4**	30.03.17 Thu	Sorting of Files with structure, Revision	,,		
32	**1/7**	31.03.17 Fri	Hashing: Introduction , A Simple Hashing Algorithm	' '		
33	**2/7**	01.04.17 Sat	Hashing Functions	,,	Assignment -V	
34	**3/7**	03.04.17 Mon	Record Distribution	,,		

35	**4/7**	04.04.17 Tue	How much Extra Memory should be used	,,		
36	**5/7**	05.04.17 Wed	Collision resolution by progressive overflow Buckets	,,		
37	**6/7**	06.04.17 Thu	Other collision resolution techniques	,,		
38	**7/7**	07.04.17 Fri	Patterns of record access, Making deletions, Revision	,,		
39	**1/8**	08.04.17 Sat	(UT-8) Extendible Hashing	''		
40	**2/8**	10.04.17 Mon	Extendible Hashing Works	,,		
41	**3/8**	11.04.17 Tue	How Extensible Hashing Works	,,	Assignment -VI	
42	**4/8**	12.04.17 Wed	Implementation	,,		
43	**5/8**	13.04.17 Thu	Extendible Hashing Performance	,,		
44	**6/8**	17.04.17 Mon	Alternative Approaches	,,		
45	**7/8**	18.04.17 Tue	Deletion	,,		
46	**8/8**	19.04.17 Wed	Revision	,,		
47	**1/5**	20.04.17 Thu	(UT-5) Multi-Level Indexing and B-Tree	''		
48	**2/5**	21.04.17 Fri	The invention of B-Tree, Virtual BTrees,	,,		
49	**3/5**	27.04.17 Thu	Statement of the problem, Indexing with Binary Search Trees	,,	Assignment -VII	
50	**4/5**	28.04.17 Fri	Multi-Level Indexing, BTrees, An Object-Oriented Representation of B-Trees	,,		
51	**5/5**	02.05.17 Tue	B-Tree Methods,Nomenclature	,,		
52	**6/5**	03.05.17 Wed	Formal Definition of B-Tree Properties	,,		
53	**7/5**	04.05.17 Thu	Worst-case Search Depth, Deletion, Merging and Redistribution,Redistribution during insertion	,,		
54	**8/5**	05.05.17 Fri	B* Trees, Buffering of pages; Variable-length Records and keys.	,,		
55	**1/6**	11.05.17 Thu	(UT-6) Indexed Sequential File Access and Prefix B + Trees	''		
56	**2/6**	12.05.17 Fri	Indexed Sequential Access, A Variable-order B- Tree, Loading a Simple Prefix B+ Trees	,,	Assignment -VIII	
57	**3/6**	13.05.17 Sat	B-Trees,Maintaining a Sequence Set, Adding a Simple Index to the Sequence Set	,,		
58	**4/6**	15.05.17 Mon 2	The Content of the Index: Separators Instead of Keys, The Simple Prefix B+ Tree and its maintenance	,,		

		. 18.05.17 Thu 19.05.17 Fri				
59	**5/6**	16.05.17 Tue 3	Index Set Block Size, Internal Structure of Index Set Blocks	,,		
60	**6/6**	17.05.17 Wed	B+ Trees and Simple Prefix B+ Trees in Perspective	,,		
61	**7/6**	20.05.17 Sat	Revision	,,		
62	**8/6**	24.05.07 wed	Revision	,,		

Syllabus for Internal Assessment Tests (IAT)[*]

Sessional #	Syllabus
T1	Class # 01 - 31
T2	Class # 31 – 54
T3	Class # 55 - 62

*: See calendar of events for the schedules of IATs.

Literature:

Book Type	Code	Author & Title	Publication info	
			Edition & Publisher	**ISBN #**
Text Book	TB1	Michael J. Folk, Bill Zoellick, Greg Riccardi , "File Structures-An Object Oriented Approach with C++ ". 3rd Edition, Pearson Education, 1998.	3rd Edition, Pearson Education, 1998.	978-81-317-5904-2
Text Book	TB2	K.R. Venugopal, K.G. Srinivas, P.M. Krishnaraj " File Structures Using C++ ".	Tata McGraw-Hill, 2002.	1565920007, 9781565920002
References	RB1	Scot Robert Ladd , " C++ Components and Algorithms".	BPB Publications, 1993.	1449335942

Signature of faculty   Signature of HOD   Signature of Principal

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Department of Information Science & Engineering

LESSON PLAN

SEMESTER   : VI-A   NAME OF THE FACULTY   : SHERLY NOEL
BRANCH   : CSE   DATE OF COMMENCEMENT : 13th Feb. 2017
SUBJECT   :CN-II   DATE OF CLOSING   :02nd Jun 2017
 SUBJECT CODE : 10CS64   CLASS STRENGTH   : 57
NO OF HRS/WK : 5   TOTAL HRS   : 60

Session No	Chapter no (No of hrs planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chapter	Topics covered As per plan
1	1/1	13/2/17	Overview of the unit-1	Chalk & Talk		
2	2/1	15/2/17	Network services and internal operations	,,	Assignment- I	
3	3/1	16/1/17	Packet network topology	"		
4	4/1	17/1/17	Routing in packet networks-Routing algorithm Classification	,,		
5	5/1	18/2/17	Routing tables ,Hierarchical Routing	"		
6	6/1	20/2/17	Flooding ,Deflection Routing	' '		
7	7/1	22/2/17	Shortest-path routing concepts	,,		
8	8/1	23/2/17	Bellman – Ford algorithm	,,		
9	1/2	27/2/17	Dijkstra's Algorithm	,,	Assignment -II	
10	2/2	28/2/17	Link state/Distance vector Routing	,,		
11	3/2	01/3/17	Traffic Management at the Packet level	,,		
12	4/2	06/3/17	FIFO & Priority Queues	,,		
13	5/2	07/3/17	Fair & weighted fair queuing	,,		
14	6/2	08/3/17	Traffic Management at the flow level	' '		
15	7/2	09/3/17	Traffic Management at the aggregate level	,,		

17	1/3	10/3/17	The TCP / IP architecture	,,	Assignment –III	
17	2/3	13/3/17	The Internet Protocol	,,		
18	3/3	14/3/17	IP & Subnet Addressing	,,		
19	4/3	15/3/17	CIDR , RAR , ICMP	,,		
20	5/3	16/3/17	IPV6 Format & addressing	,,		
21	6/3	17/3/17	Differences B/w IPV4 & IPV6 addressing	,,		
22	7/3	20/3/17	User datagram Protocol	''		
23	1/4	21/3/17	Transmission control protocol, TCP SEGMENT,TCP CHECKSUM	,,	Assignment –IV	
24	2/4	22/3/17	TCP Connection establishment , data transmission & termination	,,		
25	3/4	23/3/17	Internet routing protocols	,,		
26	4/4	24/3/17	Open Shortest path first	,,		
27	5/4	1/4/17	Border Gateway Protocol, BGP	,,		
28	6/4	3/4/17	Multicast routing	,,		
29	7/4	4/4/17	IGMP, Reverse Path ,Distance vector Multicasting	,,		
30	8/4	5/4/17	DHCP, NAT,MOBILE IP	,,		
31	1/5	6/4/17	Application layer Overview, DNS	''	Assignment -V	
32	2/5	8/4/17	Remote login protocol-FTP,WWW&HTTP	,,		
33	3/5	10/4/17	Network Management – SNMP,SMI,MIB	,,		
34	4/5	11/4/17	Overview of Security Methods	,,		
35	5/5	12/4/17	Secrete Key encryption protocols	,,		
36	6/5	13/4/17	Public key encryption protocols	,,		
37	7/5	14/4/17	Authentication – SHA-1,MD-5	,,		
38	8/5	18/4/17	Digital Signature , Firewalls	''		
39	1/6	19/4/17	Overview of QOS,	,,	Assignment -VI	
40	2/6	20/4/17	Integrated services QoS	,,		
41	3/6	21/4/17	Differentiated services QoS	,,		

42	4/6	22/4/17	Virtual Private Networks	,,		
43	5/6	25/4/17	Tunneling concepts	,,		
44	5/6	26/4/17	Multiprotocol Label switching	,,		
45	6/6	28/4/17	Overlay networks	,,		
46	1/7	02/5/17	Overview of data compression	''	Assignment - VII	
47	2/7	3/5/17	Digital voice and compression-JPEG,MPEG	,,		
48	3/7	4/5/17	Limits of compression with loss	,,		
49	4/7	5/5/17	Compression methods without loss	,,		
50	5/7	11/5/17	Overview of IP telephony	,,		
51	6/7	12/5/17	VoIP signaling protocols	,,		
52	8/7	13/5/17	Revocation of Access rights Capability based systems	,,		
53	9/7	16/5/17	Real-Time media transport protocols,	,,		
54	1/8	17/5/17	Overview of wireless AdHoc N/Ws & Routing	''	Assignment - VIII	
55	2/8	18/5/17	Routing in Adhoc Networks	,,		
56	3/8	19/5/17	Routing protocols for security of AdHoc N/Ws	,,		
57	4/8	20/5/17	Sensor N/Ws and Protocol Structures.	,,		
58	5/8	23/5/17	Communication energy Model	,,		
59	6/8	24/5/17	Clustering Protocol	,,		
60	7/8	25/5/17	Zigbee technology & IEEE 802.15.4			

Syllabus for Internal Assessment Tests (IAT)[*]

Sessional #	Syllabus
T1	Class # 01 - 26
T2	Class # 27 – 49
T3	Class # 50 – 60

*: See calendar of events for the schedules of IATs.

Literature:

Book Type	Code	Author & Title	Publication info	
			Edition & Publisher	ISBN #
Text Book	TB1	Communication Networks-Fundamental Concepts and Key Architectures	2nd Edition, McGraw-Hill, 2011	0-07-119848-2
Text Book	TB2	Nader F. Mir: Computer and Communication Networks	Pearson Education	9788131715437
References	RB1	Behrouz A. Forouzan: Data communications and Networking	4th Edition, Mc-GrawHill, 2006	0072515848
References	RB2	Willium Stallings: Data and Computer Communication	8th Edition, Pearson Education, 2007.	0132433109
References	RB3	Larry L. Peterson and Bruce S Davie: Computer Networks- A Systems Approach	4th Edition Elsevier 2007	0123705487
References	RB4	Wayne Tomasi: Introduction to Data communications and Networking	Pearson Education, 2007.	978-0-13-128847-8

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Session wise – Course Plan

Department of Information Science and Engineering

SEMESTER : VI –A
BRANCH : ISE
SUBJECT : Software Testing
SUBJECT CODE : 10IS65
NO OF HRS/WK : 5

NAME OF THE FACULTY : Lohith Raj SN
DATE OF COMMENCEMENT : 13-02-2017
DATE OF CLOSING : 02-06-2017
CLASS STRENGTH :
TOTAL HRS : 59

Session No	Chapter no (No of hrs planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chapter
1	**1/1**	13/02/2017	Prerequisites: Software Testing Life Cycle, V&V SDLC Model.	Chalk & Talk	
2	**2/1**	15/02/2017	**UNIT 1 : Perspective on Testing, Examples :** Basic concept of Software Testing, Test cases	,,	
3	**3/1**	15/02/2017	Insights from a Venn diagram, Identifying test cases	,,	
4	**4/1**	16/02/2017	Error and fault taxonomies, Levels of testing.	,,	
5	**5/1**	18/02/2017	Generalized pseudo code, The triangle problem	,,	Assignment-I

6	**6/1**	20/02/2017	The NextDate problem,	,,	
7	**7/1**	22/02/2017	The commission problem	''	
8	**8/1**	22/02/2017	The SATM (Simple Automatic Teller Machine) problem	,,	
9	**9/1**	23/02/2017	The currency converter, Saturn Windshield Wiper Controller. Summary of Unit 1.	,,	
10	**1/2**	28/02/2017	**UNIT 2 :** Boundary value analysis, Test Cases for Triangle Problem.	,,	
11	**2/2**	1/03/2017	Robustness testing, Worst-casetesting, Special value testing, Random testing. Test Cases for Triangle Problem.	,,	Assignment - II
12	**3/2**	6/03/2017	Guidelines and observations of BVA for Next Date Time Problem.	,,	
13	**4/2**	6/03/2017	Guidelines and observations of BVA for Commission Problem.	,,	
14	**5/2**	7/03/2017	Equivalence class Testing.	,,	
15	**6/2**	9/03/2017	Equivalence test cases for the triangle problem	''	
16	**7/2**	10/03/2017	Guidelines and observations of ECP for Next Date Time Problem.	,,	
17	**8/2**	13/03/2017	Guidelines and observations of ECP for Commission Problem.	,,	
18	**9/2**	13/03/2017	Decision table based Testing.	,,	
19	**10/2**	14/03/2017	Decision table based test cases for the next date time problem	,,	
20	**11/2**	16/03/2017	Decision table based test cases for the commission problem	,,	
21	**1/3**	17/03/2017	**UNIT 3**: **Path Testing.**	,,	
22	**2/3**	20/03/2017	DD paths, Test coverage metrics, Basis path testing.	,,	Assignment – III
23	**3/3**	20/03/2017	Path Testing for McCabe's Basis Path Method.	''	
24	**4/3**	21/03/2017	Use testing, Slice-based testing,	,,	
25	**5/3**	23/03/2017	Guidelines and Observations for Binary Search Program.	,,	
26	**6/3**	1/04/2017	Guidelines and Observations for Grading Program.	,,	
27	**1/4**	1/04/2017	**UNIT 4 : Levels of Testing:**	,,	
28	**2/4**	03/04/2017	Integration Testing, SATM system	,,	Assignment – IV
29	**3/4**	05/04/2017	Separating integration and system testing	,,	
30	**4/4**	08/04/2017	A closer look at the SATM system,	,,	
31	**5/4**	08/04/2017	Decomposition-based Integration	,,	

32	**6/4**	10/04/2017	call graph-based, Path-based integrations.	''	
33	**1/5**	12/04/2017	**UNIT 5 : System Testing:** Threads, Basic concepts for requirements specification	,,	
34	**2/5**	13/04/2017	Finding threads, Structural strategies, functional strategies for thread testing	,,	Assignment - V
35	**3/5**	18/04/2017	SATM test threads	,,	
36	**4/5**	18/04/2017	System testing guidelines &ASF	,,	
37	**5/5**	19/04/2017	Context of interaction, A taxonomy of interactions	,,	
38	**6/5**	21/04/2017	Interaction, composition, and determinism	,,	
39	**7/5**	22/04/2017	Client/Server Testing	''	
40	**1/6**	25/04/2017	**UNIT 6: Process Framework :** Validation and verification, Degrees of freedom	,,	
41	**2/6**	25/04/2017	Varieties of software, Basic principles Sensitivity, redundancy, Restriction, partition, visibility, Feedback.	,,	Assignment - VI
42	**3/6**	26/04/2017	The quality process, Planning and monitoring	,,	
43	**4/6**	28/04/2017	,Quality goals, Dependability properties	,,	
44	**5/6**	02/05/2017	Analysis, Testing,	,,	
45	**6/6**	04/05/2017	Improving the process, Organizational factors	,,	
46	**1/7**	04/05/2017	**UNIT 7: Fault-Based Testing, Test Execution :** Overview, Assumptions in fault based testing	,,	
47	**2/7**	05/05/2017	Mutation analysis, Fault-based adequacy criteria	''	Assignment - VII
48	**3/7**	11/05/2017	Variations on mutation analysis, Test Execution: Overview, from test case specifications to test cases	,,	
49	**4/7**	12/05/2017	Scaffolding.	,,	
50	**5/7**	13/05/2017	Generic versus specific scaffolding	,,	
51	**6/7**	16/05/2017	Test oracles, Self-checks as oracles, Capture and replay	,,	
52	**1/8**	16/05/2017	**UNIT 8: Planning and Monitoring the Process**	,,	
53	**2/8**	17/05/2017	Quality and process, Test and analysis strategies and plans	,,	Assignment - VIII
54	**3/8**	18/05/2017	Risk planning	,,	
55	**4/8**	19/05/2017	Monitoring the process, Improving the process	''	

56	**5/8**	20/05/2017	The quality team, Documenting Analysis and test	,,	
57	**6/8**	23/05/2017	Organizing documents, Test strategy document.	,,	
58	**7/8**	23/05/2017	Analysis and test plan Test design specifications documents..	,,	
59	**8/8**	24/05/2017	Test and analysis reports.	,,	

Syllabus for Internal Assessment Tests (IAT)[*]

Sessional #	Syllabus
T1	Class # 01 - 26
T2	Class # 27-45
T3	Class# 46-59

*: See calendar of events for the schedules of IATs.

Literature:

Book Type	Code	Author & Title	Publication info	
			Edition & Publisher	**ISBN #**
Text Book	TB1	Paul C. Jorgensen Software Testing	3rd Edition, Auerbach Publications, 2008.	978-0-8493-7475-3
Text Book	TB2	Mauro Pezze, Michal Young Software Testing and Analysis Process, Principles and Techniques	Wiley India, 2009	978-81-265-1773-2
Reference	RB1	Aditya P Mathur Foundations of Software Testing	Pearson Education, 2008.	*978-81-317-0795-1*

Signature of faculty   Signature of HOD   Signature of Principal