CMR INSTITUTE
OF TECHNOLOGY

Session wise – Course Plan

Department of Computer Science and Engineering

SEMESTER   : V -A   NAME OF THE FACULTY   : Dr. R.Krishnan
BRANCH   : ISE   DATE OF COMMENCEMENT : 28/07/2016
SUBJECT   : Software Engineering   DATE OF CLOSING   : 09/11/2016
SUBJECT CODE : 10CS52   CLASS STRENGTH   : 47
NO OF HRS/WK : 5   TOTAL HRS   : 56

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**	28/07/2016	Unit-1: Introduction:	Chalk & Talk, PPT		
2	**2/1**	29/07/2015	FAQ's about software engineering,	,,		
3	**3/1**	30/07/2015	Professional and ethical responsibility.	,,		
4	**4/1**	01/08/2016	Socio-Technical systems: Emergent system properties;	,,		
5	**5/1**	02/08/2016	Systems engineering;	,,		
6	**6/1**	04/08/2016	Organizations, people and computer systems; Legacy systems.	,,		
7	**7/1**	05/08/2016	Revision		Assignment- I	
7	**1/2**	06/08/2016	Unit-2: **Critical Systems, Software Processes:** Critical Systems: A simple safety critical system;	''		
8	**2/2**	08/08/2015	System dependability;	,,		
9	**3/2**	09/08/2016	Availability and reliability.	,,		
10	**4/2**	11/08/2016	Software Processes: Models,	,,		
11	**5/2**	12/08/2016	Process iteration,	,,		
12	**6/2**	16/08/2016	Process activities;	,,		
13	**7/2**	17/08/2016	The Rational Unified Process; Computer Aided Software Engineering.	,,		

14	**8/2**	18/08/2016	Revision	,,	Assignment -II	
15	**1/3**	20/08/2016	**Unit-3: Requirements:** Software Requirements: Functional and Non-functional requirements;	' '		
16	**2/3**	22/08/2016	User requirements; System requirements;	,,		
17	**3/3**	23/08/2016	Interface specification; The software requirements document.	,,		
18	**4/3**	24/08/2016	Requirements Engineering Processes: Feasibility studies;	,,		
19	**5/3**	25/08/2016	Requirements elicitation and analysis	,,		
20	**6/3**	27/08/2016	Requirements elicitation and analysis (contd)	,,		
21	**7/3**	29/08/2016	Requirements validation;	,,		
22	**8/3**	30/08/2016	Requirements management.	,,		
23	**9/3**	31/08/2016	Revision	' '	Assignment –III	
24	**1/4**	01/09/2016	**Unit-4:System models, Project Management:** System Models: Context models;	,,		
25	**2/4**	09/09/2016	Object models;	,,		
26	**3/4**	10/09/2016	Structured methods	,,		
27	**1/5**	13/09/2016	Unit-5: **Software Design:** Architectural Design: Architectural design decisions;	,,		
28	**2/5**	14/09/2016	Modular decomposition styles;	,,		
29	**3/5**	15/09/2016	Control styles.	,,		
30	**4/5**	17/09/2016	Object-Oriented design: Objects and Object Classes;	,,		
31	**5/5**	19/09/2016	An Object-Oriented design process;	,,		
32	**6/5**	20/09/2016	Design evolution.	' '		

33	**7/5**	21/09/2016	Revision	,,	Assignment -IV	
34	**1/6**	22/09/2016	**Unit-6:Development:** Rapid Software Development: Agile methods;	,,		
35	**2/6**	24/09/2016	Extreme programming;	,,		
36	**3/6**	26/09/2016	Rapid application development.	,,		
37	**4/6**	27/09/2016	Software Evolution: Program evolution dynamics;	,,		
38	**5/6**	28/09/2016	Software maintenance; Evolution processes;	,,		
39	**6/6**	29/09/2016	Legacy system evolution.	' '		
40	**7/6**	04/10/2016	Revision	,,		
41	**1/7**	05/10/2016	**Unit-7:Verification and Validation:** Verification and Validation: Planning;			
42	**2/7**	06/10/2016	Software inspections;			
43	**3/7**	07/10/2016	Automated static analysis;			
44	**4/7**	08/10/2016	Verification and formal methods.			
45	**5/7**	14/10/2016	Software testing: System testing;			
46	**6/7**	17/10/2016	Component testing;			
47	**7/7**	18/10/2016	Test case design;			
48	**8/7**	19/10/2016	Test automation.			
49	**9/7**	20/10/2016	Revision		Assignment –V	
50	**1/4**	22/10/2016	Unit-IV: Project Management: Management activities;			
51	**2/4**	02/11/2016	Project planning; Project scheduling;			
52	**3/4**	03/11/2016	Risk management			
53	**1/8**	05/11/2016	**Unit-8: Management:** Managing People: Selecting staff; Motivating people; The People Capability Maturity Model.			
54	**2/8**	07/11/2016	Software Cost Estimation: Productivity; Estimation techniques;			
55	**3/8**	08/11/2016	Algorithmic cost modeling,			
56	**4/8**	09/11/2015	Project duration and staffing.			

Syllabus for Internal Assessment Tests (IAT) [*]

Sessional #	Syllabus
T1	Class # 01 - 23
T2	Class # 24 – 49
T3	

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

Literature:

Book Type	Code	Author & Title	Publication info	
			Edition & Publisher	ISBN #
Text Book	TB1	Ian Sommerville: Software Engineering. (Chapters-: 1, 2, 3, 4, 5, 6, 7, 8, 11, 14, 17, 21, 22, 23, 25, 26)	8th Edition, Pearson Education, 2007.	978-81-317-6457-2
			3rd Edition, Pearson Education, 1997.	978-81-317-6460-2
Reference	RB1	Roger.S.Pressman: Software Engineering-A Practitioners approach.	7th Edition, Tata McGraw Hill, 2007.	978-0-07-337597-7
Reference	RB2	Pankaj Jalote: An Integrated Approach to Software Engineering.	Wiley India, 2009.	978-1-84800-301-9

Signature of faculty   Signature of HOD   Signature of Principal

CMR INSTITUTE
OF TECHNOLOGY

Session wise – Course Plan

Department of Computer Science and Engineering

SEMESTER   : V -B   NAME OF THE FACULTY   : Dr. R. Krishnan
BRANCH   : ISE   DATE OF COMMENCEMENT : 28/07/2016
SUBJECT   : Software Engineering   DATE OF CLOSING   : 09/11/2016
CLASS STRENGTH:53

SUBJECT CODE : 10CS52 CLASS 17	**3/3**	24/08/2016	Interface specification; The software requirements document.	,,		
18	**4/3**	25/08/2016	Requirements Engineering Processes: Feasibility studies;	,,		
19	**5/3**	26/08/2016	Requirements elicitation and analysis	,,		
20	**6/3**	29/08/2016	Requirements elicitation and analysis (contd)	,,		
21	**7/3**	30/08/2016	Requirements validation;	,,		
22	**8/3**	31/08/2016	Requirements management.	,,		
23	**9/3**	01/09/2016	Revision	''	Assignment –III	
24	**1/4**	02/09/2016	**Unit-4:System models, Project Management:** System Models: Context models;	,,		
25	**2/4**	10/09/2016	Object models;	,,		
26	**3/4**	13/09/2016	Structured methods	,,		
27	**1/5**	14/09/2016	Unit-5: **Software Design:** Architectural Design: Architectural design decisions;	,,		
28	**2/5**	15/09/2016	Modular decomposition styles;	,,		

29	**3/5**	16/09/2016	Control styles.	,,		
30	**4/5**	19/09/2016	Object-Oriented design: Objects and Object Classes;	,,		
31	**5/5**	20/09/2016	An Object-Oriented design process;	,,		
32	**6/5**	21/09/2016	Design evolution.	''		
33	**7/5**	22/09/2016	Revision	,,	Assignm ent -IV	
34	**1/6**	23/09/2016	**Unit-6:Development:** Rapid Software Development: Agile methods;	,,		
35	**2/6**	26/09/2016	Extreme programming;	,,		
36	**3/6**	27/09/2016	Rapid application development.	,,		
37	**4/6**	28/09/2016	Software Evolution: Program evolution dynamics;	,,		
38	**5/6**	29/09/2016	Software maintenance; Evolution processes;	,,		
39	**6/6**	03/10/2016	Legacy system evolution.	''		
40	**7/6**	05/10/2016	Revision	,,		
41	**1/7**	06/10/2016	**Unit-7:Verification and Validation:** Verification and Validation: Planning;			
42	**2/7**	07/10/2016	Software inspections;			
43	**3/7**	08/10/2016	Automated static analysis;			
44	**4/7**	13/10/2016	Verification and formal methods.			
45	**5/7**	17/10/2016	Software testing: System testing;			
46	**6/7**	18/10/2016	Component testing;			
47	**7/7**	19/10/2016	Test case design;			
48	**8/7**	20/10/2016	Test automation.			
49	**9/7**	21/10/2016	Revision		Assignm ent –V	
50	**1/8**	02/11/2016	Unit-IV: Project Management: Management activities;			
51	**2/8**	03/11/2016	Project planning; Project scheduling;			

52	**3/8**	04/11/2016	Risk management			
53	**4/8**	07/11/2016	**Unit-8: Management:** Managing People: Selecting staff; Motivating people; The People Capability Maturity Model.			
54	**5/8**	08/11/2016	Software Cost Estimation: Productivity; Estimation techniques;			
55	**6/8**	09/11/2015	Algorithmic cost modeling, Project duration and staffing.			

Syllabus for Internal Assessment Tests (IAT)[*]

Sessional #	Syllabus
T1	Class # 01 - 23
T2	Class # 24 – 49
T3	

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

Literature:

Book Type	Code	Author & Title	Publication info	
			Edition & Publisher	ISBN #
Text Book	TB1	Ian Sommerville: Software Engineering. (Chapters-: 1, 2, 3, 4, 5, 6, 7, 8, 11, 14, 17, 21, 22, 23, 25, 26)	8th Edition, Pearson Education, 2007. 3_{rd} Edition, Pearson Education, 1997.	978-81-317-6457-2 978-81-317-6460-2
Reference	RB1	Roger.S.Pressman: Software Engineering-A Practitioners approach.	7_{th} Edition, Tata McGraw Hill, 2007.	978-0-07-337597-7
Reference	RB2	Pankaj Jalote: An Integrated Approach to Software Engineering.	Wiley India, 2009.	978-1-84800-301-9

Signature of faculty   Signature of HOD   Signature of Principal

CMR INSTITUTE
OF TECHNOLOGY

Session wise – Course Plan

Department of Information Science and Engineering

SEMESTER   : V -A
BRANCH   : ISE
SUBJECT   : System Software
SUBJECT CODE : 10CS52
NO OF HRS/WK : 5

NAME OF THE FACULTY   : Mrs.D.sudha
DATE OF COMMENCEMENT : 25.07.2016
DATE OF CLOSING   : 19.11.2016
CLASS STRENGTH   : 57
TOTAL HRS   : 60

Sessi on No	Chapter no (No of hrs planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignm ents/ Tests planned for the chapter	Topics covered As per plan
1	**1/1**	**27/7/2016**	(UT-1) Machine architecture :Introduction	Board, chalk, duster		
2	**2/1**	**29/7/2016**	System Software and Machine Architecture	,,		
3	**3/1**	**30/7/2016**	Simplified Instructional Computer (SIC)-SIC Machine Architecture	,,	Assignm ent- I	
4	**4/1**	**30/7/2016**	Simplified Instructional Computer (SIC)-SIC Machine Architecture	,,		
5	**5/1**	**01/08/2016**	SIC/XE Machine Architecture	,,		
6	**6/1**	**03/08/2016**	SIC Programming Examples	,,		
7	**1/7**	**05/08/2016**	(UT-7) Lex And Yacc – 1: Lex and a yacc – the simplest Lex Program	Board, chalk, duster		
8	**2/7**	**06/08/2016**	Recognizing Words With LEX , Symbol Tables, Grammars	,,		
9	**3/7**	**06/08/2016**	Parser-Lexer Communication	,,		
10	**4/7**	**08/08/2016**	The Parts of Speech Lexer, A YACC Parser The Rules Section	,,	Assignm ent -II	
11	**5/7**	**10/08/2016**	Running LEX and YACC, LEX and Hand- Written Lexers	,,		
12	**6/7**	**12/08/2016**	Using LEX – Regular Expression	,,		
13	**7/7**	**16/08/2016**	Examples of Regular Expressions, A Word Counting Program	,,		
14	**8/7**	**16/08/2016**	Parsing a Command Line	,,		

15	1/8	17/08/2016	(UT-8) Lex And Yacc-2: Using YACC - Grammars	Board, chalk, duster		
16	2/8	19/08/2016	Recursive Rules ,Shift/Reduce Parsing	,,		
17	3/8	22/08/2016	What YACC Cannot Parse,	,,	Assignment –III	
18	4/8	23/08/2016	A YACC parser – The Definition Section	,,		
19	5/8	23/08/2016	The Rules Section, Symbol Values and Actions	,,		
20	6/8	24/08/2016	The LEXER	,,		
21	7/8	26/08/2016	Compiling and Running a Simple Parser	,,		
22	8/8	29/08/2016	Arithmetic Expressions And Ambiguity , Variables and Typed Tokens	,,		
23	1/2	30/08/2016	(UT-2) Assemblers-1 :Basic Assembler Function – A Simple SIC Assembler	Board, chalk, duster		
24	2/2	30/08/2016	Basic Assembler Function – A Simple SIC Assembler	,,	Assignment –IV	
25	3/2	31/08/2016	Assembler Algorithm and Data Structures	,,		
26	4/2	02/09/2016	Assembler Algorithm and Data Structures	,,		
27	5/2	10/09/2016	Machine Dependent Assembler Features – Instruction Formats & Addressing modes	,,		
28	6/2	13/09/2016	Machine Dependent Assembler Features – Instruction Formats & Addressing modes	,,		
29	7/2	13/09/2016	Instruction Formats & Addressing modes	,,		
30	8/2	14/09/2016	Instruction Formats & Addressing modes	,,		
31	9/2	16/09/2016	Program Relocation	,,		
32	1/3	19/09/2016	(UT-3) Assemblers – 2 :Machine Independent Assembler Features – Literals	Board, chalk, duster,		
33	2/3	20/09/2016	Symbol-Definition Statements	,,	Assignment -V	
34	3/3	20/09/2016	Expression, Program Blocks	,,		

35	4/3	21/09/2016	Control sections and Programming Linking	,,		
36	5/3	23/09/2016	Control sections and Programming Linking	,,		
37	6/3	26/09/2016	Assembler Design Operations – One – Pass Assembler, Multi-pass Assembler	,,		
38	7/3	27/09/2016	Implementation Examples – MASM Assembler	,,		
39	1/5	27/09/2016	(UT-5)Macro Processor: Basic Macro Processor Functions – Macro Definitions and Expansion	Board, chalk, duster		
40	2/5	28/09/2016	Macro processor Algorithm and Data Structures	,,		
41	3/5	03/10/2016	Machine- Independent Macro Processor Features – Concatenation of Macro Parameters	,,	Assignm ent -VI	
42	4/5	05/10/2016	Generation of Unique Labels, Conditional Macro Expansion	,,		
43	5/5	06/10/2016	Keyword Macro Parameters	,,		
44	6/5	06/10/2016	Macro Processor Design Options – Recursive Macro Expansion	,,		
45	7/5	07/10/2016	General-Purpose Macro Processors, Macro Processing Within Language Translators	,,		
46	8/5	13/10/2016	Implementation Examples – MASM Macro Processor ANSIC Macro Processor	,,		
47	1/4	17/10/2016	(UT-4)Loaders And Linkers: Basic Loader Functions - Design of an Absolute Loader	Board, chalk, duster		
48	2/4	18/10/2016	A Simple Boots strap Loader	,,		
49	3/4	18/10/2016	Machine- Dependent Loader Features – Relocation	,,	Assignm ent -VII	
50	4/4	19/10/2016	Algorithm and Data Structures for a Linking Loader	,,		
51	5/4	21/10/2016	Machine-Independent Loader Features – Automatic Library Search	,,		
52	6/4	27/10/2016	Loader Options Loader Design Options – Linkage Editor	,,		
53	7/4	28/10/2016	Dynamic Linkage, Bootstrap Loaders	,,		
54	8/4	28/10/2016	Implementation Examples – MS-DOS Linker	,,		
55	1/6	02/11/2016	(UT-6) Editors and Debugging Systems: Text Editors – Overview of Editing	Board, chalk, duster		

			Process			
56	**2/6**	**04/11/2016**	User Interface	,,	Assignm ent -VIII	
57	**3/6**	**07/11/2016**	Editor Structure	,,		
58	**4/6**	**08/11/2016**	Interactive Debugging Systems – Debugging Functions and Capabilities	,,		
59	**5/6**	**08/11/2016**	Relationship With Other Parts Of The System	,,		
60	**6/6**	**09/11/2016**	User- Interface Criteria	,,		

Syllabus for Internal Assessment Tests (IAT)[*]

Sessional #	Syllabus
T1	Class # 01 - 22
T2	Class # 23 - 46

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

Literature:

Book Type	Code	Author & Title	Publication info	
			Edition & Publisher	**ISBN #**
Text Book	TB1	Leland.L.Beck: System Software,	3rd Edition, Pearson Education, 1997.	978-81-317-6460-2
Text Book	TB2	John.R.Levine, Tony Mason and Doug Brown: Lex and Yacc,	O'Reilly, SPD, 1998.	1565920007, 9781565920002
References	RB1	D.M.Dhamdhere: System Programming and Operating Systems	2ndEdition, Tata McGraw - Hill, 1999.	1449335942

Signature of faculty   Signature of HOD   Signature of Principal

CMR INSTITUTE
OF TECHNOLOGY

Session wise – Lesson Plan

Department of Information Science and Engineering

SEMESTER : V -A
BRANCH : ISE
SUBJECT :Operating Systems
SUBJECT CODE :10CS53
NO OF HRS/WK : 5

NAME OF THE FACULTY : Manjima R L
DATE OF COMMENCEMENT : 26/7/2016
DATE OF CLOSING : 19/11/2016
CLASS STRENGTH : 61
TOTAL HRS : 60

Sessi on No	Chapter no (No of hrs planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignm ents/ Tests planned for the chapter	Topics covered As per plan
1	1/1	28/7/16	**UNIT 1: INTRODUCTION TO OPERATING SYSTEMS,SYSTEM STRUCTURES**:What operating systems do, Computer system organization	Chalk & Talk		
2	2/1	29/7/16	Computer System architecture; Operating System structure; Operating System operations	,,		
3	3/1	1/8/16	Process management, memory management, Storage management	,,		
4	4/1	2/8/16	Protection and security, Distributed system, Special purpose system	,,		
5	5/2	3/8/16	Computing environments, Operating system services, User operating system interface	,,		
6	6/2	4/8/16	System calls, Types of system calls, System programs	,,		
7	7/2	5/8/16	Operating system design and implementation,Operating system structure	''		
8	8/2	8/8/16	Virtual machines, Operating system generations, System boot	,,	Assignm ent- I	
9	1/3	9/8/16	**UNIT 2: PROCESS MANAGEMENT** Process concept; process scheduling	,,		
10	2/3	10/8/16	Operations on processes;interprocess communication	,,		
			Multi threaded			

11	3/4	11/8/16	programming:overview;multi thread in models			
12	4/4	12/8/16	Thread libraries; Threading issues			
13	5/5	17/8/16	Process scheduling; Basic concepts; Scheduling criteria	,,		
14	6/5	18/8/16	Scheduling algorithms	,,		
15	7/5	19/8/16	Multiple-processor scheduling; thread scheduling	,,	Assignment -II	
16	1/6	20/8/16	**UNIT 3: PROCESS SYNCHRONIZATION** Synchronization: The critical section problem	,,		
17	2/6	22/8/16	Peterson's solution	''		
18	3/6	24/8/16	Synchronization hardware	,,		
19	4/6	25/8/16	Test 1	,,		
20	5/6	26/8/16	Semaphores	''		
21	6/6	27/8/16	Classical problems of synchronization	,,		
22	7/6	29/8/16	Classical problems of synchronization			
23	8/6	31/8/16	Monitors		Assignment –III	
24	1/7	1/9/16	**UNIT 4: DEADLOCKS** Deadlocks, system model	,,		
25	2/7	2/9/16	Deadlock characterization	,,		
26	3/7	3/9/16	Methods of handling deadlocks	,,		
27	4/7	9/9/16	Methods of handling deadlocks contd..	''		
28	5/7	10/9/16	Deadlock prevention	,,		
29	6/7	14/9/16	Deadlock prevention contd..	,,		
30	7/7	15/9/16	Deadlock avoidance	,,		
31	8/7	16/9/16	Deadlock detection and recovery from deadlock	,,	Assignment –IV	
32	1/8	17/9/16	**UNIT 5: MEMORY MANAGEMENT** Background; swapping; contiguous memory allocation	,,		
33	2/8	19/9/16	Paging; structure of page table			
34	3/8	21/9/16	Segmentation			
35	4/9	22/9/16	Virtual memory management; Background	,,		
36	5/9	23/9/16	Demand paging; copy-on-write	,,		

37	6/9	24/9/16	Page replacement	,,		
38	7/9	26/9/16	Allocation of frames; Thrashing	''	Assignment –V	
39	1/10	28/9/16	**UNIT 6: FILE SYSTEM,IMPLIMENTATION OF FILE SYSTEM**	,,		
40	2/10	29/9/16	File concept; access methods; Directory structure	,,		
41	3/10	3/10/16	File system mounting; File sharing	,,		
42	4/10	4/10/16	Protection	,,		
43	5/10	5/10/16	File system structure	''		
44	6/11	7/10/16	File system implementation			
45	7/11	13/10/16	Directory implementation			
46	8/11	8/10/16	Allocation methods, Free space management	,,	Assignment –VI	
47	1/12	13/10/16	**UNIT 7: SECONDARY STORAGE STRUCTURES,PROTECTION** Mass storage structures; disk structure	''		
48	2/12	14/10/16	Disk attachment; Disk scheduling; Disk management	,,		
49	3/12	17/10/16	Swap space management. Protection:Goals of protection	,,		
50	4/14	19/10/16	Principles of protection, Domain of protection, Access matrix	,,		
51	5/14	20/10/16	Implementation of access matrix	,,		
52	6/14	21/10/16	Access control	,,		
53	7/14	22/10/16	Revocation of access rights	,,		
54	8/14	27/10/16	Capability-Based systems	,,	Assignment -VII	
55	1/21	2/11/16	**UNIT 8: CASE STUDY:THE LINUX OPERATING SYSTEM** Linux history; Design principles	''		

56	2/21	3/11/16	Kernel modules, Process management, Scheduling			
57	3/21	4/11/16	Memory management			
58	4/21	5/11/16	File systems, Input and Output			
59	5/21	7/11/16	Inter process communication			
60	6/21	9/11/16	Test			

Syllabus for Internal Assessment Tests (IAT) *

Sessional #	Syllabus
T1	Class # 01 – 23
T2	Class # 24 – 38
T3	Class # 39 - 60
Improvement Test	

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

Literature:

Book Type	Code	Author & Title	Publication info	
			Edition & Publisher	ISBN #
Text Book	TB1	Abraham Silberchatz,Peter Baer Galvin,Greg Gagne:Operating System Principles	8th Edition, Wiley India, 2007.	978-81-265-2051-0
References	RB1	D.M. Dhamdhere:Operating Systems-A concept based Approach	2nd Edition, Tata McGraw-Hill, 2002	0-07-061194-7
References	RB2	P.C.P.Bhatt:Introduction to Operating Systems: Concepts and Practice	2nd Edition, PHI,2008	978-81-203-32584 978-81-203-32584
References	RB3	Harvey M Deital: Operating Systems	3rd Edition, Pearson Education, 1990	10: 0131828274

Signature of faculty   Signature of HOD   Signature of Principal

Department of Information Science and Engineering

SEMESTER : V -B
BRANCH : ISE
SUBJECT :Operating Systems
SUBJECT CODE :10CS53
NO OF HRS/WK : 5

NAME OF THE FACULTY : Manjima R L
DATE OF COMMENCEMENT : 26/7/2016
DATE OF CLOSING : 19/11/2016
CLASS STRENGTH : 57
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	28/7/16	**UNIT 1: INTRODUCTION TO OPERATING SYSTEMS,SYSTEM STRUCTURES**:What operating systems do, Computer system organization	Chalk & Talk		
2	2/1	29/7/16	Computer System architecture; Operating System structure; Operating System operations	,,		
3	3/1	1/8/16	Process management, memory management, Storage management	,,		
4	4/1	2/8/16	Protection and security, Distributed system, Special purpose system	,,		
5	5/2	3/8/16	Computing environments, Operating system services, User operating system interface	,,		
6	6/2	4/8/16	System calls, Types of system calls, System programs	,,		
7	7/2	5/8/16	Operating system design and implementation,Operating system structure	''		
8	8/2	8/8/16	Virtual machines, Operating system generations, System boot	,,	Assignment- I	
9	1/3	9/8/16	**UNIT 2: PROCESS MANAGEMENT** Process concept; process scheduling	,,		
10	2/3	10/8/16	Operations on processes;interprocess communication	,,		
11	3/4	11/8/16	Multi threaded programming:overview;multi thread in models			

12	4/4	12/8/16	Thread libraries; Threading issues			
13	5/5	17/8/16	Process scheduling; Basic concepts; Scheduling criteria	,,		
14	6/5	18/8/16	Scheduling algorithms	,,		
15	7/5	19/8/16	Multiple-processor scheduling; thread scheduling	,,	Assignment -II	
16	1/6	20/8/16	**UNIT 3: PROCESS SYNCHRONIZATION** Synchronization: The critical section problem	,,		
17	2/6	22/8/16	Peterson's solution	''		
18	3/6	24/8/16	Synchronization hardware	,,		
19	4/6	25/8/16	Test 1	,,		
20	5/6	26/8/16	Semaphores	,,		
21	6/6	27/8/16	Classical problems of synchronization	,,		
22	7/6	29/8/16	Classical problems of synchronization			
23	8/6	31/8/16	Monitors		Assignment –III	
24	1/7	1/9/16	**UNIT 4: DEADLOCKS** Deadlocks, system model	,,		
25	2/7	2/9/16	Deadlock characterization	,,		
26	3/7	3/9/16	Methods of handling deadlocks	,,		
27	4/7	9/9/16	Methods of handling deadlocks contd..	''		
28	5/7	10/9/16	Deadlock prevention	,,		
29	6/7	14/9/16	Deadlock prevention contd..	,,		
30	7/7	15/9/16	Deadlock avoidance	,,		
31	8/7	16/9/16	Deadlock detection and recovery from deadlock	,,	Assignment –IV	
32	1/8	17/9/16	**UNIT 5: MEMORY MANAGEMENT** Background; swapping; contiguous memory allocation	,,		
33	2/8	19/9/16	Paging; structure of page table			
34	3/8	21/9/16	Segmentation			
35	4/9	22/9/16	Virtual memory management; Background	,,		
36	5/9	23/9/16	Demand paging; copy-on-write	,,		

37	6/9	24/9/16	Page replacement	,,		
38	7/9	26/9/16	Allocation of frames; Thrashing	''	Assignment –V	
39	1/10	28/9/16	**UNIT 6: FILE SYSTEM, IMPLIMENTATION OF FILE SYSTEM**	,,		
40	2/10	29/9/16	File concept; access methods; Directory structure	,,		
41	3/10	3/10/16	File system mounting; File sharing	,,		
42	4/10	4/10/16	Protection	,,		
43	5/10	5/10/16	File system structure	''		
44	6/11	7/10/16	File system implementation			
45	7/11	13/10/16	Directory implementation			
46	8/11	8/10/16	Allocation methods, Free space management	,,	Assignment –VI	
47	1/12	13/10/16	**UNIT 7: SECONDARY STORAGE STRUCTURES,PROTECTION** Mass storage structures; disk structure	''		
48	2/12	14/10/16	Disk attachment; Disk scheduling; Disk management	,,		
49	3/12	17/10/16	Swap space management. Protection:Goals of protection	,,		
50	4/14	19/10/16	Principles of protection, Domain of protection, Access matrix	,,		
51	5/14	20/10/16	Implementation of access matrix	,,		
52	6/14	21/10/16	Access control	,,		
53	7/14	22/10/16	Revocation of access rights	,,		
54	8/14	27/10/16	Capability-Based systems	,,	Assignment -VII	
55	1/21	2/11/16	**UNIT 8: CASE STUDY:THE LINUX OPERATING SYSTEM** Linux history; Design principles	''		
56	2/21	3/11/16	Kernel modules, Process management, Scheduling			
57	3/21	4/11/16	Memory management			
58	4/21	5/11/16	File systems, Input and Output			

59	5/21	7/11/16	Inter process communication			
60	6/21	9/11/16	Test			

Syllabus for Internal Assessment Tests (IAT) *

Sessional #	Syllabus
T1	Class # 01 – 23
T2	Class # 24 – 38
T3	Class # 39 - 60
Improvement Test	

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

Literature:

Book Type	Code	Author & Title	Publication info	
			Edition & Publisher	ISBN #
Text Book	TB1	Abraham Silberchatz,Peter Baer Galvin,Greg Gagne:Operating System Principles	8th Edition, Wiley India, 2007.	978-81-265-2051-0
References	RB1	D.M. Dhamdhere:Operating Systems-A concept based Approach	2nd Edition, Tata McGraw-Hill, 2002	0-07-061194-7
References	RB2	P.C.P.Bhatt:Introduction to Operating Systems: Concepts and Practice	2nd Edition, PHI,2008	978-81-203-32584 978-81-203-32584
References	RB3	Harvey M Deital: Operating Systems	3rd Edition, Pearson Education, 1990	10: 0131828274

Signature of faculty   Signature of HOD   Signature of Principal

Department of Information Science and Engineering

SEMESTER   **:V-A**   NAME OF THE FACULTY   **: FEBIN.A.VAHAB**
BRANCH   **: ISE**   DATE OF COMMENCEMENT **: 25/07/2016**
SUBJECT   **: Database Management System**   DATE OF CLOSING   **: 19/11/2016**
SUBJECT CODE **: 10CS54**   CLASS STRENGTH   **: 57**
NO OF HRS/WK **: 6**   TOTAL HRS   **: 69**

LESSON PLAN

Session Plan	(No of hrs planed for the chapter/ Unit No	Date	Topics	Teaching Aids	Assignments/ Tests planned for the chapter
1	1/1	27/7/2016	**UNIT – 1 Introduction:** Introduction	Chalk & Talk	
2	2/1	27/7/2016	An example	,,	
3	3/1	28/7/2016	Characteristics of Database approach	,,	
4	1/2	29/7/2016	**UNIT – 2 Entity-Relationship Model:** Using High-Level Conceptual Data Models for Database Design	,,	
5	2/2	30/7/2016	An Example Database Application	,,	
6	3/2	1/8/2016	Entity Types, Entity Sets, Attributes and Keys	,,	
7	4/2	3/8/2016	Relationship types, Relationship Sets	,,	
8	5/2	3/8/2016	Roles and Structural Constraints	,,	
9	6/2	4/8/2016	Weak Entity Types	,,	Assignment I
10		5/8/2016	**CLASS TEST on UNIT 1 and 2**		
11	1/3	6/8/2016	**UNIT – 3 Relational Model and Relational Algebra :** Relational Model Concepts;	,,	
12	2/3	8/8/2016	Relational Model Constraints	,,	
13	3/3	10/8/2016	Relational Database Schemas	,,	
14	4/3	10/8/2016	Update Operations, Transactions and dealing with constraint violations	,,	
15	5/3	11/08/2016	Unary Relational Operations: SELECT and PROJECT	,,	
16	6/3	12/08/2016	Relational Algebra Operations from Set Theory	,,	
17	7/3	16/08/2016	Relational Algebra Operations from Set Theory	,,	
18	8/3	17/08/2016	Binary Relational Operations : JOIN	,,	
19	9/3	19/08/2016	Binary Relational Operations : DIVISION	,,	
20		19/08/2016	**CLASS TEST on UNIT 3**		
21	1/4	20/08/2016	**UNIT - 4 SQL – 1:** SQL Data Definition and Data Types;	,,	
22	2/4	22/08/2016	Specifying basic constraints in SQL	,,	
	3/4	23/08/2016	Schema change statements in SQL	,,	
23	4/4	24/08/2016	Basic queries in SQL	,,	

24	5/4	26/08/2016	Basic queries in SQL	,,	
25	6/4	26/08/2016	More complex SQL Queries.	,,	
26	7/4	27/08/2016	More complex SQL Queries.	,,	
27		29/08/2016	**CLASS TEST on UNIT 4**		Assignment II
28	1/5	30/08/2016	**UNIT - 5 SQL – 2 :** Insert, Delete and Update statements in SQL	,,	
29	2/5	31/08/2016	Specifying constraints as Assertion	,,	
	3/5	02/09/2016	Specifying constraints as Trigger	,,	
30	4/5	02/09/2016	Views (Virtual Tables) in SQL	,,	
31	5/5	09/09/2016	Additional features of SQL	,,	
32	6/5	10/09/2016	Database programming issues and techniques;	,,	
33	7/5	13/09/2016	Embedded SQL	,,	
34	8/5	14/09/2016	Dynamic SQL	,,	
35	7/2	16/09/2016	Database stored procedures and SQL / PSM.	,,	
36	8/2	16/09/2016	**UNIT -2** Refining the ER Design; ER Diagrams	,,	
37	9/2	17/09/2016	Case studies on ER diagram		
38	10/2	19/09/2016	Naming Conventions and Design Issues	,,	
39	10/3	20/09/2016	Relationship types of degree higher than two.	,,	
40	11/3	21/09/2016	**UNIT 3-** Additional Relational Operations;	,,	
41	12/3	23/09/2016	Examples of Queries in Relational Algebra;	,,	
42		23/09/2016	Relational Database Design Using ER- to-Relational Mapping.	,,	
43	4/1	24/09/2016	**CLASS TEST on UNIT 5 ,2 and 3**		Assignment III
44	5/1	26/09/2016	**UNIT 1-** Actors on the screen; Workers behind the scene	,,	
45	6/1	27/09/2016	Advantages of using DBMS approach;	,,	
46	7/1	28/09/2016	A brief history of database applications; when not to use a DBMS.	,,	
47	8/1	3/10/2016	Data models, schemas and instances;	,,	
48	9/1	3/10/2016	Three-schema architecture and data independence;	,,	
49	10/1	4/10/2016	Database languages and interfaces;	,,	
50	11/1	5/10/2016	The database system environment, Centralized and client-server architectures	,,	
51	1/6	6/10/2016	Classification of Database Management systems	,,	
52	2/6	7/10/2016	**UNIT - 6 Database Design – 1:** Informal Design Guidelines for Relation Schemas	,,	
53	3/6	13/10/2016	Functional Dependencies	,,	
54	4/6	13/10/2016	Normal Forms Based on Primary Keys	,,	
55	5/6	14/10/2016	General Definitions of Second and Third Normal Forms	,,	
56	1/7	17/10/2016	Boyce-Codd Normal Form	,,	
57	2/7	18/10/2016	**UNIT - 7 Database Design -2:** Properties of Relational Decompositions	,,	

58	3/7	19/10/2016	Algorithms for Relational Database Schema Design	,,	
59	4/7	21/10/2016	Multivalued Dependencies and Fourth Normal Form	,,	
60	5/7	21/10/2016	Join Dependencies and Fifth Normal Form	,,	
61	6/7	27/10/2016	Inclusion Dependencies	,,	
62	1/8	28/10/2016	Other Dependencies and Normal Forms	,,	
63	2/8	2/11/2016	**UNIT – 8 Transaction Management:** The ACID Properties; Transactions and Schedules , Concurrent Execution of Transactions; Lock- Based Concurrency Control	,,	
64	3/8	4/11/2016	Performance of locking, Transaction support in SQL, Introduction to crash recovery; 2PL	,,	
65	4/8	4/11/2016	Serializability and Recoverability, Lock Management	,,	
66	5/8	5/11/2016	Introduction to ARIES; The log	,,	
67	6/8	7/11/2016	Other recovery-related structures; The write-ahead log protocol, Check pointing	,,	
68	7/8	8/11/2016	Recovering from a System Crash;	,,	
69	8/8	9/11/2016	Media Recovery; Other approaches and interaction with concurrency control	,,	

Syllabus for Internal Assessment Tests (IAT)[*]

IAT #	Syllabus
IAT-1	Class # 01-27
IAT-2	Class # 28-56
IAT-3	Class # 58-69

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

Literature:

| Book Type | Code | Author & Title | Publication information | |
			Edition // Publisher	ISBN #
Text Book	TB1	Elmasri and Navathe: Fundamentals of Database Systems. (Chapters 1, 2, 3 except 3.8, 5, 6.1 to 6.5, 7.1, 8, 9.1, 9.2 except SQLJ, 9.4, 10)	5th Edition, Pearson Education, 2007.	9788177584769
Text Book	TB2	Raghu Ramakrishnan and Johannes Gehrke: Database Management Systems. (Chapters 16, 17.1, 17.2, 18)	3rd Edition, McGraw-Hill, 2003.	9780072465631
Reference	RB1	Silberschatz, Korth and Sudharshan: Data base System Concepts.	6th Edition, Mc-Graw-Hill, 2010	9780071325226
Reference	RB1	C.J. Date, A. Kannan, S. Swamynatham: An Introduction to Database Systems.	8th Edition, Pearson Education, 2006	9788177585568

CMR INSTITUTE OF TECHNOLOGY

Session wise – Course Plan

Department of Information Science and Engineering

SEMESTER **:V-B** NAME OF THE FACULTY **: FEBIN.A.VAHAB**
BRANCH **: ISE** DATE OF COMMENCEMENT **: 25/07/2016**
SUBJECT **: Database Management System** DATE OF CLOSING **: 19/11/2016**
SUBJECT CODE **: 10CS54** CLASS STRENGTH **: 48**
NO OF HRS/WK **: 6** TOTAL HRS **: 68**

LESSON PLAN

Session Plan	(No of hrs planed for the chapter/ Unit No	Date	Topics	Teaching Aids	Assignments/ Tests planned for the chapter
1	1/1	27/7/2016	**UNIT – 1 Introduction:** Introduction	Chalk & Talk	
2	2/1	28/7/2016	An example	,,	
3	3/1	29/7/2016	Characteristics of Database approach	,,	
4	1/2	30/7/2016	**UNIT – 2 Entity-Relationship Model:** Using High-Level Conceptual Data Models for Database Design	,,	
5	2/2	1/8/2016	An Example Database Application	,,	
6	3/2	2/8/2016	Entity Types, Entity Sets, Attributes and Keys	,,	
7	4/2	3/8/2016	Relationship types, Relationship Sets	,,	
8	5/2	4/8/2016	Roles and Structural Constraints	,,	
9	6/2	5/8/2016	Weak Entity Types	,,	Assignment I
10		6/8/2016	**CLASS TEST on UNIT 1 and 2**		
11	1/3	8/8/2016	**UNIT – 3 Relational Model and Relational Algebra :** Relational Model Concepts;	,,	
12	2/3	09/8/2016	Relational Model Constraints	,,	
13	3/3	10/8/2016	Relational Database Schemas	,,	
14	4/3	11/08/2016	Update Operations, Transactions and dealing with constraint violations	,,	
15	5/3	12/08/2016	Unary Relational Operations: SELECT and PROJECT	,,	
16	6/3	16/08/2016	Relational Algebra Operations from Set Theory	,,	
17	7/3	17/08/2016	Relational Algebra Operations from Set Theory	,,	
18	8/3	18/08/2016	Binary Relational Operations : JOIN	,,	
19	9/3	19/08/2016	Binary Relational Operations : DIVISION	,,	
20		20/08/2016	**CLASS TEST on UNIT 3**		
21	1/4	22/08/2016	**UNIT - 4 SQL – 1:** SQL Data Definition and Data Types;	,,	
22	2/4	23/08/2016	Specifying basic constraints in SQL	,,	

	3/4	24/08/2016	Schema change statements in SQL	,,	
23	4/4	25/08/2016	Basic queries in SQL	,,	
24	5/4	26/08/2016	Basic queries in SQL	,,	
25	6/4	27/08/2016	More complex SQL Queries.	,,	
26	7/4	29/08/2016	More complex SQL Queries.	,,	
27		30/08/2016	**CLASS TEST on UNIT 4**		Assignment II
28	1/5	31/08/2016	**UNIT - 5 SQL – 2 :** Insert, Delete and Update statements in SQL	,,	
29	2/5	01/09/2016	Specifying constraints as Assertion	,,	
	3/5	02/09/2016	Specifying constraints as Trigger	,,	
30	4/5	09/09/2016	Views (Virtual Tables) in SQL	,,	
31	5/5	10/09/2016	Additional features of SQL	,,	
32	6/5	13/09/2016	Database programming issues and techniques;	,,	
33	7/5	14/09/2016	Embedded SQL	,,	
34	8/5	15/09/2016	Dynamic SQL	,,	
35	7/2	16/09/2016	Database stored procedures and SQL / PSM.	,,	
36	8/2	17/09/2016	**UNIT -2** Refining the ER Design; ER Diagrams	,,	
37	9/2	19/09/2016	Case studies on ER diagram		
38	10/2	20/09/2016	Naming Conventions and Design Issues	,,	
39	10/3	21/09/2016	Relationship types of degree higher than two.	,,	
40	11/3	22/09/2016	**UNIT 3-** Additional Relational Operations;	,,	
41	12/3	23/09/2016	Examples of Queries in Relational Algebra;	,,	
42		24/09/2016	Relational Database Design Using ER- to-Relational Mapping.	,,	
43	4/1	26/09/2016	**CLASS TEST on UNIT 5 ,2 and 3**		Assignment III
44	5/1	27/09/2016	**UNIT 1-** Actors on the screen; Workers behind the scene	,,	
45	6/1	28/09/2016	Advantages of using DBMS approach;	,,	
46	7/1	29/09/2016	A brief history of database applications; when not to use a DBMS.	,,	
47	8/1	3/10/2016	Data models, schemas and instances;	,,	
48	9/1	4/10/2016	Three-schema architecture and data independence;	,,	
49	10/1	5/10/2016	Database languages and interfaces;	,,	
50	11/1	6/10/2016	The database system environment, Centralized and client-server architectures	,,	
51	1/6	7/10/2016	Classification of Database Management systems	,,	
52	2/6	08/10/2016	**UNIT - 6 Database Design – 1:** Informal Design Guidelines for Relation Schemas	,,	
53	3/6	13/10/2016	Functional Dependencies	,,	
54	4/6	14/10/2016	Normal Forms Based on Primary Keys	,,	
55	5/6	17/10/2016	General Definitions of Second and Third Normal Forms	,,	

56	1/7	18/10/2016	Boyce-Codd Normal Form	,,	
57	2/7	19/10/2016	**UNIT - 7 Database Design -2:** Properties of Relational Decompositions	,,	
58	3/7	20/10/2016	Algorithms for Relational Database Schema Design	,,	
59	4/7	21/10/2016	Multivalued Dependencies and Fourth Normal Form	,,	
60	5/7	27/10/2016	Join Dependencies and Fifth Normal Form	,,	
61	6/7	28/10/2016	Inclusion Dependencies	,,	
62	1/8	2/11/2016	Other Dependencies and Normal Forms	,,	
63	2/8	3/11/2016	**UNIT – 8 Transaction Management:** The ACID Properties; Transactions and Schedules , Concurrent Execution of Transactions; Lock- Based Concurrency Control	,,	
64	3/8	4/11/2016	Performance of locking, Transaction support in SQL, Introduction to crash recovery; 2PL	,,	
65	4/8	5/11/2016	Serializability and Recoverability, Lock Management	,,	
66	5/8	7/11/2016	Introduction to ARIES; The log	,,	
67	6/8	8/11/2016	Other recovery-related structures; The write-ahead log protocol, Check pointing	,,	
68	7/8	9/11/2016	Recovering from a System Crash; Media Recovery; Other approaches and interaction with concurrency control	,,	

Syllabus for Internal Assessment Tests (IAT)[*]

IAT #	Syllabus
IAT-1	Class # 01-27
IAT-2	Class # 28-56
IAT-3	Class # 58-68

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

Literature:

Book Type	Code	Author & Title	Publication information	
			Edition // Publisher	ISBN #
Text Book	TB1	Elmasri and Navathe: Fundamentals of Database Systems. (Chapters 1, 2, 3 except 3.8, 5, 6.1 to 6.5, 7.1, 8, 9.1, 9.2 except SQLJ, 9.4, 10)	5th Edition, Pearson Education, 2007.	9788177584769
Text Book	TB2	Raghu Ramakrishnan and Johannes Gehrke: Database Management Systems. (Chapters 16, 17.1, 17.2, 18)	3rd Edition, McGraw-Hill, 2003.	9780072465631
Reference	RB1	Silberschatz, Korth and Sudharshan: Data base System Concepts.	6th Edition, Mc-Graw-Hill, 2010	9780071325226
Reference	RB1	C.J. Date, A. Kannan, S. Swamynatham: An Introduction to Database Systems.	8th Edition, Pearson Education, 2006	9788177585568

**CMR INSTITUTE
OF TECHNOLOGY**

Session wise – Course Plan

Department of Computer Science and Engineering

SEMESTER   : V -A   NAME OF THE FACULTY   : Priya L
 BRANCH   : ISE   DATE OF COMMENCEMENT : 25.7.2016
 SUBJECT   : Computer Network 1   DATE OF CLOSING   :
 SUBJECT CODE :   10CS55   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
			UNIT 1: INTRODUCTION			
1	1/1	29/7	Data Communications, Networks	Board, chalk, duster		
2	2/1	29/7	The Internet	,,		
3	3/1	30/7	Protocols and Standards	,,		
4	4/1	2/8	Layered tasks	,,		
5	5/1	3/8	The OSI Model and the layers in the OSI model	,,		
6	6/1	5/8	The OSI Model and the layers in the OSI model	,,		
7	7/1	5/8	TCP / IP Protocol Suite	,,		
8	8/1	6/8	Addressing	,,		
			UNIT 2: Physical Layer-1			
9	1/2	9/8	Analog & Digital Signals, Transmission Impairment	,,		
10	2/2	10/8	Data Rate limits, Performance,	,,	Assignment 1	
11	3/2	12/8	Digital-digital conversion (Only Line coding: Polar)	,,		
12	4/2	12/8	Bipolar and Manchester coding	,,		
13	5/2	16/8	Analog-to-digital conversion (only PCM)	,,		
14	6/2	18/8	Transmission Modes	,,		
15	7/2	19/8	Digital-to-analog conversion	,,		
16	8/2	22/8	Revision Unit 2	Board, chalk, duster		
			UNIT 3: Physical Layer-2 and Switching			

17	1/3	22/8	Multiplexing, Spread Spectrum	,,		
18	2/3	23/8	Introduction to switching	,,	Assignment 2	
19	3/3	25/8	Circuit Switched Networks	,,		
20	4/3	26/8	Datagram Networks	,,		
21	5/3	29/8	Datagram Networks	,,		
22	6/3	29/8	Virtual Circuit Networks	,,		
23	7/3	30/8	Virtual Circuit Networks	,,		
24	8/3	1/9	Revision Unit 3	,,		
			UNIT 4: Data Link Layer-1:			
25	1/4	10/9	Error Detection	,,		
26	2/4	10/9	Error Correction	,,	Assignment 3	
27	3/4	13/9	Block coding	,,		
28	4/4	15/9	Linear block codes	,,		
29	5/4	16/9	Cyclic codes	,,		
30	6/4	19/9	Cyclic codes,	,,		
31	7/4	19/9	Checksum	,,		
32	8/4	20/9	Problems on checksum	,,		
33	9/4	22/9	Revision Unit 4	,,		
			UNIT 5: Data Link Layer-2			
34	1/5	23/9	Framing	,,		
35	2/5	26/9	Flow and Error Control	,,		
36	3/5	26/9	Protocols	,,		
37	4/5	27/9	Noiseless Channels	,,		
38	5/5	29/9	Noisy channels	,,		
39	6/5	3/10	HDLC	,,		
40	7/5	2/10	PPP (Framing, Transition phases only)	,,		
41	8/5	5/10	Revision Unit 5	,,		
			UNIT 6: Multiple Access & Ethernet:	,,		
42	1/6	6/10	Random access	,,		
43	2/6	8/10	Controlled Access	,,		
44	3/6	13/10	Channelization	,,		
45	4/6	17/10	Ethernet: IEEE standards,	,,		
46	5/6	17/10	Standard Ethernet	,,		
	6/6	18/10	Changes in the standard	,,		
47	7/6	20/10	Fast Ethernet	,,	Assignment 4	
48	8/6	21/10	Gigabit Ethernet	,,		
49	9/6	27/10	Revision Unit 6	,,		
			UNIT 7: Wireless LANs and Cellular Networks:			
50	1/7	27/10	Introduction, IEEE 802.11	Board, chalk, duster		
51			IEEE 802.11	,,		
52	2/7	28/10	Bluetooth	,,		
53	3/7		Bluetooth	,,		
54	4/7	3/11	Connecting devices	,,		
55	5/7		Connecting devices	,,		
56	6/7		Cellular Telephony	,,		
57	7/7		Cellular Telephony	,,		

58	9/7		Revision Unit 7	,,		
			UNIT 8: Network Layer			
59	1/8	27/11	Introduction, Logical addressing	,,		
60	2/8	28/11	IPv4 addresses	,,		
61	3/8	3/11	IPv6 addresses	,,		
62	4/8	5/11	Internetworking basics,	,,		
63	5/8	5/11	IPv4,IPv6	,,		
64	6/8	6/11	IPv6	,,	Assignment 5	
65	7/8	7/11	Comparison of IPv4 and IPv6 Headers	,,		
66	8/8	7/11	Comparison of IPv4 and IPv6 Headers	,,		
67	9/8	7/11	Revision Unit 8	,,		
68			Revision Problems-1,2	,,		
69			Revision Problems-3,4	,,		
70			Revision Problems-5,6	,,		
71			Revision Problems-7,8	,,		
72			Revision Question Bank 2014	,,		
73			Revision Question Bank 2013	,,		

Syllabus for Internal Assessment Tests (IAT)[*]

IAT #	Syllabus
IAT-1	Class # 01 – 24
IAT-2	Class # 25–49
IAT-3	Class # 50–67

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

Literature:

Book Type	Code	Author & Title	Publication info		
			Edition & Publisher	ISBN #	
Text Book	TB1	Behrouz A. Forouzan,: Data Communication and Networking,	4th Edition Tata McGraw-Hill, 2006..	978-0-07-063414-5	
References	RB1	Alberto Leon-Garcia and Indra Widjaja: Communication Networks - Fundamental Concepts and Key architectures,	2nd Edition Tata McGraw-Hill, 2004..	978-0070228399	
References	RB2	William Stallings: Data and Computer Communication	8th Edition, Pearson Education, 2007..	9780132433105	
References	RB3	Larry L. Peterson and Bruce S. Davie: Computer Networks – A Systems Approach	4th Edition, Elsevier, 2007	978-0123705488	
References	RB4	Nader F. Mir: Computer and Communication Networks,	Pearson Education, 2007.	978-0131389106	

Signature of faculty   Signature of HOD   Signature of Principal

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Session wise – Course Plan

Department of Computer Science and Engineering

SEMESTER   : V -B   NAME OF THE FACULTY   : Priya L
BRANCH   : ISE   DATE OF COMMENCEMENT : 25.7.2016
SUBJECT   : Computer Network 1   DATE OF CLOSING   :
SUBJECT CODE : 10CS55   CLASS STRENGTH   : 53
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
			UNIT 1: INTRODUCTION			
1	1/1	27/7	Data Communications, Networks	Board, chalk, duster		
2	2/1	28/7	The Internet	,,		
3	3/1	30/7	Protocols and Standards	,,		
4	4/1	1/8	Layered tasks	,,		
5	5/1	1/8	The OSI Model and the layers in the OSI model	,,		
6	6/1	3/8	The OSI Model and the layers in the OSI model	,,		
7	7/1	4/8	TCP / IP Protocol Suite	,,		
8	8/1	6/8	Addressing	,,		
			UNIT 2: Physical Layer-1			
9	1/2	8/8	Analog & Digital Signals, Transmission Impairment	,,		
10	2/2	8/8	Data Rate limits, Performance,	,,	Assignment 1	
11	3/2	10/8	Digital-digital conversion (Only Line coding: Polar)	,,		
12	4/2	11/8	Bipolar and Manchester coding	,,		
13	5/2	16/8	Analog-to-digital conversion (only PCM)	,,		
14	6/2	17/8	Transmission Modes	,,		
15	7/2	17/8	Digital-to-analog conversion	,,		
16	8/2	19/8	Revision Unit 2	Board, chalk, duster		
			UNIT 3: Physical Layer-2 and Switching			

17	1/3	20/8	Multiplexing, Spread Spectrum	,,		
18	2/3	23/8	Introduction to switching	,,	Assignment 2	
19	3/3	24/8	Circuit Switched Networks	,,		
20	4/3	24/8	Datagram Networks	,,		
21	5/3	26/8	Datagram Networks	,,		
22	6/3	27/8	Virtual Circuit Networks	,,		
23	7/3	30/8	Virtual Circuit Networks	,,		
24	8/3	31/9	Revision Unit 3	,,		
			UNIT 4: Data Link Layer-1:			
25	1/4	31/9	Error Detection	,,		
26	2/4	2/9	Error Correction	,,	Assignment 3	
27	3/4	9/9	Block coding	,,		
28	4/4	13/9	Linear block codes	,,		
29	5/4	14/9	Cyclic codes	,,		
30	6/4	14/9	Cyclic codes,	,,		
31	7/4	16/9	Checksum	,,		
32	8/4	17/9	Problems on checksum	,,		
33	9/4	20/9	Revision Unit 4	,,		
			UNIT 5: Data Link Layer-2			
34	1/5	21/9	Framing	,,		
35	2/5	21/9	Flow and Error Control	,,		
36	3/5	23/9	Protocols	,,		
37	4/5	24/9	Noiseless Channels	,,		
38	5/5	27/9	Noisy channels	,,		
39	6/5	28/9	HDLC	,,		
40	7/5	28/9	PPP (Framing, Transition phases only)	,,		
41	8/5	3/10	Revision Unit 5	,,		
			UNIT 6: Multiple Access & Ethernet:	,,		
42	1/6	4/10	Random access	,,		
43	2/6	5/10	Controlled Access	,,		
44	3/6	6/10	Channelization	,,		
45	4/6	7/10	Ethernet: IEEE standards,	,,		
46	5/6	7/10	Standard Ethernet	,,		
	6/6	13/10	Changes in the standard	,,		
47	7/6	14/10	Fast Ethernet	,,	Assignment 4	
48	8/6	17/10	Gigabit Ethernet	,,		
49	9/6	18/10	Revision Unit 6	,,		
			UNIT 7: Wireless LANs and Cellular Networks:			
50	1/7	1/11	Introduction, IEEE 802.11	Board, chalk, duster		
51			IEEE 802.11	,,		
52	2/7	1/11	Bluetooth	,,		
53	3/7		Bluetooth	,,		
54	4/7	3/11	Connecting devices	,,		
55	5/7		Connecting devices	,,		
56	6/7		Cellular Telephony	,,		
57	7/7		Cellular Telephony	,,		

58	9/7		Revision Unit 7	,,		
			UNIT 8: Network Layer			
59	1/8	27/11	Introduction, Logical addressing	,,		
60	2/8	28/11	IPv4 addresses	,,		
61	3/8	3/11	IPv6 addresses	,,		
62	4/8	5/11	Internetworking basics,	,,		
63	5/8	5/11	IPv4,IPv6	,,		
64	6/8	6/11	IPv6	,,	Assignment 5	
65	7/8	7/11	Comparison of IPv4 and IPv6 Headers	,,		
66	8/8	7/11	Comparison of IPv4 and IPv6 Headers	,,		
67	9/8	7/11	Revision Unit 8	,,		
68			Revision Problems-1,2	,,		
69			Revision Problems-3,4	,,		
70			Revision Problems-5,6	,,		
71			Revision Problems-7,8	,,		
72			Revision Question Bank 2014	,,		
73			Revision Question Bank 2013	,,		

Syllabus for Internal Assessment Tests (IAT)[*]

IAT #	Syllabus
IAT-1	Class # 01 – 24
IAT-2	Class # 25–49
IAT-3	Class # 50–67

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

Literature:

Book Type	Code	Author & Title	Publication info	
			Edition & Publisher	ISBN #
Text Book	TB1	Behrouz A. Forouzan,: Data Communication and Networking,	4th Edition Tata McGraw-Hill, 2006..	978-0-07-063414-5
References	RB1	Alberto Leon-Garcia and Indra Widjaja: Communication Networks - Fundamental Concepts and Key architectures,	2nd Edition Tata McGraw-Hill, 2004..	978-0070228399
References	RB2	William Stallings: Data and Computer Communication	8th Edition, Pearson Education, 2007..	9780132433105
References	RB3	Larry L. Peterson and Bruce S. Davie: Computer Networks – A Systems Approach	4th Edition, Elsevier, 2007	978-0123705488
References	RB4	Nader F. Mir: Computer and Communication Networks,	Pearson Education, 2007.	978-0131389106

Signature of faculty   Signature of HOD   Signature of Principal

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Session wise – Course Plan

Department of Computer Science and Engineering

SEMESTER   : V   NAME OF THE FACULTY   : Rajeevalochana MR
BRANCH   : ISE B   DATE OF COMMENCEMENT : 25/07/16
SUBJECT   : Formal Language and Automata Theory   DATE OF CLOSING   :
SUBJECT CODE : 10CS56   CLASS STRENGTH   : 57
NO OF HRS/WK : 6   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
1	1/1	25/07	**UNIT - 1 : INTRODUCTION** Introduction to finite automata; The central concepts of automata theory(Alphabets, Strings, Languages)	Board, chalk, duster	
2	2/1	27/07	Types of FA, Deterministic FA, Basic Model, Transition Diagram, Transition Table, Extended transition function	"	
3	3/1	27/07	Design of DFA for pattern matching	"	ASSIGNMENT-1
4	4/1	28/07	Problem solving on design of DFA	"	
5	5/1	29/07	Problem solving on design of DFA	"	
6	6/1	30/07	Language of DFA and problem solving on design of DFA	"	
7	7/1	01/08	Non Deterministic Finite Automata, Transition diagram, Transition Table, Extended transition function, Language of an NFA	"	
8	8/1	03/08	Equivalence of NFA and DFA	"	
9	9/1	03/08	Problem solving on conversion of NFA to DFA.	"	
10	10/1	04/08	Theorem proof for L(D)=L(N) and problem solving on NFA to DFA	Board, chalk,	

				duster	
11	1/2	05/08	**UNIT - 2 : FINITE AUTOMATA & REGULAR EXPRESSIONS** An Application of Finite Automata, Finite automata with Epsilon transitions	"	
12	2/2	06/08	Epsilon closures, Extended transition function, Languages of an Epsilon NFA	"	
13	3/2	08/08	Conversion of epsilon NFA to DFA.	"	ASSIGNMENT-2
14	4/2	10/08	Problem solving on Conversion of epsilon NFA to DFA, theorem proof	"	
15	5/2	10/08	Regular expressions, operators of regular expression, building regular expressions	"	
16	6/2	11/08	Problem solving on construction of regular expressions, Conversions of regular expressions to epsilon NFA	"	
12	7/2	12/08	Problem solving on Conversions of regular expressions to epsilon NFA, theorem proof	"	
13	8/2	16/08	Conversion of DFA to regular expression by state elimination method	"	
14	9/2	17/08	Problem solving on Conversion of DFA to regular expression by state elimination method	"	
15	10/2	19/08	DFA to regular expression	"	
16	11/2	19/08	Problem solving on DFA to regular expression, theorem proof	"	
17	12/2	20/08	Applications of regular expression	"	
18	1/4	22/08	**UNIT 4 :CONTEXT FREE GRAMMARS & LANGUAGES** Context free grammars, derivation using a grammar, LMD and RMD	"	
19	2/4	23/08	Problem solving on derivations, Language of a grammar, sentential form	"	
20	3/4	24/08	Constructing Parse trees, yield of a parse tree, inference, derivation and parse trees	Board, chalk, duster	ASSIGNMENT-3
21	4/4	26/08	Application of context free grammar, Ambiguity in grammar	"	
22	5/4	26/08	Problem solving on ambiguous grammar	"	
23	6/4	27/08	Design of CFG for the languages	"	
24	7/4	29/08	Problem solving on design of CFG for the languages	"	
25	8/4	30/08	Problem solving on design of CFG for the languages	"	
26	1/5	31/08	**UNIT 5 :PUSH DOWN**	"	

			AUTOMATA Pushdown automata, Basic model, ID of a PDA, transition diagram of PDA		
27	2/5	02/09	Languages of PDA, problem solving on movement of PDA for processing string.	"	
28	3/5	02/09	Design of a PDA for different types of language	"	ASSIGNMENT-4
29	4/5	09/09	Problem solving on design of a PDA for different types of language	"	
30	5/5	10/09	Problem solving on empty stack and final state PDA	"	
31	6/5	13/09	DPDA and NPDA	"	
32	7/5	14/09	From empty stack to final state PDA	"	
33	8/5	16/09	From final state to empty stack PDA	"	
34	9/5	16/09	From grammars to PDA	"	
35	10/5	17/09	Problem solving on grammars to PDA	"	
36	11/5	19/09	From PDA to grammar	"	
37	12/5	20/09	Problem solving on PDA to grammar	"	
38		21/09	Internal question paper discussion	"	
39	1/3	23/09	**UNIT - 3 : PROPERTIES OF REGULAR LANGUAGES** Proving languages not to be regular(Pumping lemma for regular languages)	"	
40	2/3	23/09	Applications of Pumping lemma	"	ASSIGNMENT-5
41	3/3	24/09	Closure Properties of regular language	"	
42	4/3	26/09	Closure Properties of regular languages	"	
43	5/3	27/09	Decision properties of regular languages	Board, chalk, duster	
44	6/3	29/09	Equivalence and minimization of Automata	"	
45	7/3	29/09	Problem solving on minimization of DFA	"	
46	8/3	03/10	Problem solving on minimization of DFA	"	
47	1/6	04/10	**UNIT - 6 :PROPERTIES OF CONTEXT FREE LANGUAGES** Normal forms of CFG's Eliminating Useless symbols	"	
48	2/6	05/10	Eliminating epsilon productions	"	
49	3/6	06/10	Problem solving on elimination of epsilon productions	"	ASSIGNMENT-6
50	4/6	07/10	Elimination of Unit productions	"	
51	5/6	13/10	Chomsky Normal Form	"	
52	6/6	13/10	Problem solving on CNF	"	
53	7/6	14/10	Problem solving on CNF	"	
54	8/6	17/10	Pumping lemma for CFL	"	
55	9/6	18/10	Closure properties of CFL	"	

56	1/7	19/10	**UNIT 7 : INTRODUCTION TO TURING MACHINE** The Turing machine Notations, ID, Transition diagram	"	
57	2/7	21/10	Language of a TM, Turing machines and Halting	"	
58	3/7	21/10	Design of Turing machine for a language	"	ASSIGNMENT-7
59	4/7	22/10	Problem solving on design of Turing machine for a language	"	
60	5/7	27/10	Problem solving on design of Turing machine for a language	"	
61	6/7	28/10	Programming techniques for TM	"	
62	7/7	02/11	Extension to basic TM	"	
63	1/8	04/11	**UNIT - 8 : UNDECIDABILITY** A language that is not recursively enumerable	"	
64	2/8	04/11	Undecidable problem that is RE	"	ASSIGNMENT-8
65	3/8	05/11	Post's correspondence problem	"	
66	4/8	07/11	Solving VTU question paper	"	
67	5/8	08/11	Solving VTU question paper	"	
68	6/8		Solving VTU question paper	"	

CMR INSTITUTE
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Session wise – Course Plan

Department of Computer Science and Engineering

SEMESTER   : V   NAME OF THE FACULTY   : Rajeevalochana MR
BRANCH   : ISE A   DATE OF COMMENCEMENT : 25/07/16
SUBJECT   : Formal Language and Automata Theory   DATE OF CLOSING   :
SUBJECT CODE : 10CS56   CLASS STRENGTH   : 53
NO OF HRS/WK : 6   TOTAL HRS   : 60

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1	1/1	26/07	**UNIT - 1 : INTRODUCTION** Introduction to finite automata; The central concepts of automata theory(Alphabets, Strings, Languages)	Board, chalk, duster	
2	2/1	26/07	Types of FA, Deterministic FA, Basic Model, Transition Diagram, Transition Table, Extended transition function	"	
3	3/1	27/07	Design of DFA for pattern matching	"	ASSIGNMENT-1
4	4/1	28/07	Problem solving on design of DFA	"	
5	5/1	29/07	Problem solving on design of DFA	"	
6	6/1	30/07	Language of DFA and problem solving on design of DFA	"	
7	7/1	02/08	Non Deterministic Finite Automata, Transition diagram, Transition Table, Extended transition function, Language of an NFA	"	
8	8/1	02/08	Equivalence of NFA and DFA	"	
9	9/1	03/08	Problem solving on conversion of NFA to DFA.	"	
10	10/1	04/08	Theorem proof for L(D)=L(N) and problem solving on NFA to DFA	Board, chalk, duster	
11	1/2	05/08	**UNIT - 2 : FINITE AUTOMATA & REGULAR EXPRESSIONS**	"	

			An Application of Finite Automata, Finite automata with Epsilon transitions		
12	2/2	06/08	Epsilon closures, Extended transition function, Languages of an Epsilon NFA	"	
13	3/2	09/08	Conversion of epsilon NFA to DFA.	"	ASSIGNMENT-2
14	4/2	09/08	Problem solving on Conversion of epsilon NFA to DFA, theorem proof	"	
15	5/2	10/08	Regular expressions, operators of regular expression, building regular expressions	"	
16	6/2	11/08	Problem solving on construction of regular expressions, Conversions of regular expressions to epsilon NFA	"	
12	7/2	12/08	Problem solving on Conversions of regular expressions to epsilon NFA, theorem proof	"	
13	8/2	16/08	Conversion of DFA to regular expression by state elimination method	"	
14	9/2	18/08	Problem solving on Conversion of DFA to regular expression by state elimination method	"	
15	10/2	18/08	DFA to regular expression	"	
16	11/2	19/08	Problem solving on DFA to regular expression, theorem proof	"	
17	12/2	20/08	Applications of regular expression	"	
18	1/4	22/08	**UNIT 4 :CONTEXT FREE GRAMMARS & LANGUAGES** Context free grammars, derivation using a grammar, LMD and RMD	"	
19	2/4	23/08	Problem solving on derivations, Language of a grammar, sentential form	"	
20	3/4	25/08	Constructing Parse trees, yield of a parse tree, inference, derivation and parse trees	Board, chalk, duster	ASSIGNMENT-3
21	4/4	25/08	Application of context free grammar, Ambiguity in grammar	"	
22	5/4	26/08	Problem solving on ambiguous grammar	"	
23	6/4	27/08	Design of CFG for the languages	"	
24	7/4	29/08	Problem solving on design of CFG for the languages	"	
25	8/4	30/08	Problem solving on design of CFG for the languages	"	
26	1/5	01/09	**UNIT 5 :PUSH DOWN AUTOMATA** Pushdown automata, Basic model, ID of a PDA, transition diagram of PDA	"	

27	2/5	01/09	Languages of PDA, problem solving on movement of PDA for processing string.	"	
28	3/5	02/09	Design of a PDA for different types of language	"	ASSIGNMENT-4
29	4/5	09/09	Problem solving on design of a PDA for different types of language	"	
30	5/5	10/09	Problem solving on empty stack and final state PDA	"	
31	6/5	13/09	DPDA and NPDA	"	
32	7/5	15/09	From empty stack to final state PDA	"	
33	8/5	15/09	From final state to empty stack PDA	"	
34	9/5	16/09	From grammars to PDA	"	
35	10/5	17/09	Problem solving on grammars to PDA	"	
36	11/5	19/09	From PDA to grammar	"	
37	12/5	20/09	Problem solving on PDA to grammar	"	
38		22/09	Internal question paper discussion	"	
39	1/3	22/09	**UNIT - 3 : PROPERTIES OF REGULAR LANGUAGES** Proving languages not to be regular(Pumping lemma for regular languages)	"	
40	2/3	23/09	Applications of Pumping lemma	"	ASSIGNMENT-5
41	3/3	24/09	Closure Properties of regular language	"	
42	4/3	26/09	Closure Properties of regular languages	"	
43	5/3	27/09	Decision properties of regular languages	Board, chalk, duster	
44	6/3	29/09	Equivalence and minimization of Automata	"	
45	7/3	29/09	Problem solving on minimization of DFA	"	
46	8/3	03/10	Problem solving on minimization of DFA	"	
47	1/6	04/10	**UNIT - 6 :PROPERTIES OF CONTEXT FREE LANGUAGES** Normal forms of CFG's Eliminating Useless symbols	"	
48	2/6	05/10	Eliminating epsilon productions	"	
49	3/6	06/10	Problem solving on elimination of epsilon productions	"	ASSIGNMENT-6
50	4/6	08/10	Elimination of Unit productions	"	
51	5/6	08/10	Chomsky Normal Form	"	
52	6/6	13/10	Problem solving on CNF	"	
53	7/6	14/10	Problem solving on CNF	"	
54	8/6	17/10	Pumping lemma for CFL	"	
55	9/6	18/10	Closure properties of CFL	"	
56	1/7	20/10	**UNIT 7 : INTRODUCTION TO TURING MACHINE** The Turing machine	"	

			Notations, ID, Transition diagram		
57	2/7	20/10	Language of a TM, Turing machines and Halting	"	
58	3/7	21/10	Design of Turing machine for a language	"	ASSIGNMENT-7
59	4/7	22/10	Problem solving on design of Turing machine for a language	"	
60	5/7	27/10	Problem solving on design of Turing machine for a language	"	
61	6/7	28/10	Programming techniques for TM	"	
62	7/7	03/11	Extension to basic TM	"	
63	1/8	03/11	**UNIT - 8 : UNDECIDABILITY** A language that is not recursively enumerable	"	
64	2/8	04/11	Undecidable problem that is RE	"	ASSIGNMENT-8
65	3/8	05/11	Post's correspondence problem	"	
66	4/8	07/11	Solving VTU question paper	"	
67	5/8	08/11	Solving VTU question paper	"	
68	6/8		Solving VTU question paper	"	