Seth Jai Parkash Mukand Lal Institute of Engineering and Technology, Radaur

Department of Information Technology

Lesson Plans

Discipline:	B.Tech (IT)
Semester:	7th
Subject:	Compiler Design(IT-401 N)
Lesson Plan Duration:	15 weeks(July, 2019 to Dec., 2019)
Work Load (Lecture) per week (In hours):	Lecture-4

Week	Lecture	Topic
1.	1.	Introduction: The structure of a compiler
	2.	The role of the lexical analyzer
	3.	Top down Parsing – Recursive Descent Parsing
	4.	Revision
2.	5.	Predictive Parser Implementation
	6.	Bottom-up Parsing
	7.	Operator Precedence Parsing
	8.	Revision
3.	9.	Precedence Matrix and Precedence functions
	10.	Boolean matrices
	11.	Shift Reduce Parser
	12.	Revision
4.	13.	LR Parsers – SLR parsers
	14.	Canonical Parsers- CLR Parser
	15.	Assignmnet-1
	16.	Class Test-1st unit
5.	17.	Introduction to syntax-directed translation scheme,
	18.	syntax-directed translation scheme Of Desk calculator grammar
	19.	Syntax Directed translation scheme of Postfix Notation
	20.	Revision
6.	21.	Intermediate Languages – Three address code, its types
	22.	Implementation of Three address code
	23.	Declarations – Procedure, Scope information & Records, Back patching
	24.	Sessional Test-1
7.	25.	Syntax Directed translation scheme of Assignment statements
	26.	Syntax Directed translation scheme of Boolean expressions
	27.	Symbol Tables Data structures for symbol tables
	28.	Assignmnet-2
8.	29.	Storage allocation Strategies – static, stack and heap Allocation
	30.	Run time storage administration
	31.	Implementation of a simple stack allocation scheme
	32.	Revision

9.	33.	Implementation of Block structured languages
	34.	Error Detection and recovery method
	35.	Error: Lexical phase errors
	36.	Revision
10.	37.	syntactic phase error
	38.	Semantic error
	39.	Introduction: Principle sources of Optimization
	40.	Revision
11.	41.	Loop Optimization method Basic blocks
	42.	flow graphs
	43.	Optimization of basic blocks
	44.	Assignmnet-3
12.	45.	Loops in flow graphs, Next use information
	46.	DAG representation of basic blocks
	47.	Global data flow analysis
	48.	Sessional Test-2
13.	49.	Access to non-local names, parameter passing
	50.	A simple code generator
	51.	Issues in the design of a code generator
	52.	Revision
14.	53.	The target machine
	54.	Code generator algorithm with examples
	55.	Discussion on code generation issues
	56.	Assignmnet-4
15.	57.	Runtime environment issues
	58.	Peephole Optimization
	59.	Revision
	60.	Sessional Test-3

Discipline:	B.Tech (IT)
Semester:	7th
Subject:	Artificial Intelligence (IT-403N)
Lesson Plan Duration:	15 weeks (July, 2019 to Dec., 2019)
Work Load (Lecture) per week (In hours):	Lecture-4

Week	Lecture	Topic
1.	1.	**Introduction** –foundation and history of AI
	2.	Classical, Romantic and Modern period
	3.	Applications of AI
	4.	**Production System**
2.	5.	Production rules
	6.	the working memory
	7.	Recognize-act cycle
	8.	conflict resolution strategies
3.	9.	refractoriness
	10.	Recency
	11.	specificity
	12.	alternative approach for conflict resolution
4.	13.	Architecture of production system
	14.	Types of Production systems
	15.	conclusion
	16.	**Prepositional Logic**
5.	17.	Proposition, tautologies
	18.	Theorem proving in prepositional logic
	19.	Semantic method of Theorem proving
	20.	forward chaining
6.	21.	backward chaining
	22.	standard theorems in prepositional logic
	23.	method of substitution
	24.	theorem proving using Wang's algorithm, conclusion
7.	25.	**Predicate Logic**: - Alphabet of First order logic (FOL)
	26.	predicate, well formed formula
	27.	clause form, algorithm for writing sentence into clause form
	28.	inflict of predicates
8.	29.	unification algorithm, resolution
	30.	Robinson's inference rule, conclusion
	31.	**Logic Programming and Prolog**: - Logic program
	32.	Horn clause

9.	33.	program for scene interpretation
	34.	unification of goals, definite perform clause
	35.	SLD resolution, SLD tree, controlling back tracking
	36.	common use of cut
10.	37.	Implementation of backtracking using stack
	38.	risk of using cuts
	39.	fail predicate, application of cut-fail combination
	40.	replace cut-fail by not, conclusion.
11.	41.	**Default & Non monotonic reasoning**: - Axiomatic theory
	42.	non-atomic reasoning using NML-I
	43.	problems with NML-I
	44.	reasoning with NML-II
12.	45.	truth maintenance system with example, conclusion
	46.	**Imprecision & Uncertainty**
	47.	Definition, Probabilistic technicians, Fuzzy reasoning
	48.	certainty factor based reasoning
13.	49.	conditional probability
	50.	Baye's Theorem and its limitations
	51.	Bayesian belief network
	52.	propagation of belief
14.	53.	Dampster-Shafer theory of uncertainty management
	54.	Types of Learning
	55.	Introduction to Genetic algorithm
	56.	**Intelligent Search Technique**
15.	57.	Heuristic function
	58.	AND-OR graph
	59.	Heuristic search
	60.	A* algorithm and examples.

Discipline:	B.Tech (IT)
Semester:	7th
Subject:	Advanced Computer Networks (IT-415 N)
Lesson Plan Duration:	15 weeks(July, 2019 to Dec., 2019)
Work Load (Lecture) per week (In hours):	Lecture-4

Week	Lecture	Topic
1.	1.	Introduction: Overview of
	2.	computer networks,
	3.	seven-layer architecture,
	4.	TCP/IP suite of protocols etc.
2.	5.	MAC protocols for high-speed
	6.	LANs, MANs and wireless LANs.(For
	7.	example, FDDI,
	8.	DQDB,
3.	9.	HIPPI,
	10.	Gigabit Ethernet,
	11.	Wireless Ethernet etc.)
	12.	Fast access technologies (For
4.	13.	example: ADSL,
	14.	Cable Modem etc.)
	15.	Assignment/Class Test
	16.	Overview of IPv6
5.	17.	IPv6 & TCP/IP stack
	18.	IPv6 protocol architecture
	19.	IPv6 address basics, address notation, unicast address, multicast address
	20.	IPv6 headers
6.	21.	Routing table problem, static & automatic address configuration,
	22.	neighbor discovery, stateless address auto configuration
	23.	Interoperation concepts of IPv4/IPv6
	24.	Assignment/Class Test
7.	25.	Mobility in networks, Mobile IP
	26.	Security related issues in mobile IP. IP Multicasting
	27.	Multicast protocols
	28.	address assignments
8.	29.	session discovery
	30.	Network security at various layers. Secure-HTTP
	31.	SSL
	32.	ESP
9.	33.	Authentication header,
	34.	Key distribution protocols
	35.	Digital signatures, digital certificates
	36.	Revision
10.	37.	Assignment/Class Test

	38.	Wireless Applications Protocols
	39.	applications environment,
	40.	wireless application protocol client software,
11.	41.	------do----------
	42.	wireless application protocol gateways,
	43.	------do----------
	44.	implementing enterprise wireless application protocol strategy
12.	45.	-----do----------
	46.	security issues in Wireless LAN.
	47.	Wireless network management,
	48.	------do----------
13.	49.	GPRS
	50.	VOIP services.
	51.	Network Management: Introduction, LAN
	52.	------do----------
14.	53.	SNMP
	54.	CMIP
	55.	Issues in the management of large networks
	56.	------do----------
15.	57.	Multicast: IGMP,
	58.	PIM,
	59.	DVMRP
	60.	Assignment/Class Test

Discipline:	IT
Semester:	7th
Subject:	Software Project Management (IT-423 N)
Lesson Plan Duration:	15 weeks (July, 2019 to Dec., 2019)
Work Load (Lecture) per week (In hours):	Lectures-04

Week	Lecture	Topic
1.	1.	**Introduction** Evolution of software economics
	2.	do
	3.	Improving software economics
	4.	do
2.	5.	reducing product size
	6.	do
	7.	software processes
	8.	do
3.	9.	Software environments
	10.	do
	11.	team effectiveness
	12.	do
4.	13.	automation through Software environments
	14.	do
	15.	Principles of modem software management
	16.	Framework
5.	17.	Life cycle phases
	18.	do
	19.	inception
	20.	elaboration
6.	21.	construction the and training phase
	22.	Artifacts the process artifact of sets
	23.	management artifacts
	24.	engineering artifacts,
7.	25.	*pragmatics artifacts*
	26.	*Model software architectures based*
	27.	do
	28.	Workflows of the process
8.	29.	do
	30.	Checkpoints of the process
	31.	Software Management Disciplines
	32.	*Iterative process planning*
9.	33.	do
	34.	*Project organizations and responsibilities*
	35.	do
	36.	*Process automation*
10.	37.	*Project control and process*

		instrumentation
	38.	*core metrics*
	39.	*management indicators*
	40.	do
	41.	*life cycle expectations*
11.	42.	do
	43.	Process instrumentation
	44.	*Process discriminates*
12.	45.	*do*
	46.	**f**ramework for Management and control
	47.	do
	48.	Collection of tracking
13.	49.	do
	50.	Change control
	51.	Software Configuration Management
	52.	do
14.	53.	Managing contracts
	54.	Contract Management data Project termination
	55.	do
	56.	Visualizing progress
15.	57.	do
	58.	Cost monitoring
	59.	Earned Value Analysis
	60.	Project

Lesson Plan			
Discipline:		**IT**	
Semester:		**5th**	
Subject Code :		**IT-405N**	
Subject:		**Fundamentals of Entrepreneurship**	
Lesson Plan Duration:		**15 Weeks**	
Work Load:		Lecture-4	
Week	**Lecture Day**	**Class**	**Topic/Chapter Covered**
1st	L1	B.Tech IT- 7th Semester	Concepts & Definitions of Entrepreneurship
	L2	B.Tech IT- 7th Semester	Entrepreneurship & Economic Development
	L3	B.Tech IT- 7th Semester	Classification of Entrepreneurs
2nd	L4	B.Tech IT- 7th Semester	Types of Entrepreneurs
	L5	B.Tech IT- 7th Semester	Types of Entrepreneurship
	L6	B.Tech IT- 7th Semester	Entrepreneurial Competencies
7th	L7	B.Tech IT- 7th Semester	Factors affecting Entrepreneurial Growth (economic & Non Economic)
	L8	B.Tech IT- 7th Semester	EDP Programms
	L9	B.Tech IT- 7th Semester	EDP Programms
4th	L10	B.Tech IT- 7th Semester	Entrepreneurial Training
	L11	B.Tech IT- 7th Semester	Traits & Qualities of an Entrepreneur
	L12	B.Tech IT- 7th Semester	Manager vs. Entrepreneurs
5th	L13	B.Tech IT- 7th Semester	Entrepreneurs vs. entrepreneurship
	L14	B.Tech IT- 7th Semester	Entrepreneurship vs enterprise
	L15	B.Tech IT- 7th Semester	Entrepreneurial Opportunity Search & Identification
6th	L16	B.Tech IT- 7th Semester	Entrepreneurial Opportunity Search & Identification
	L17	B.Tech IT- 7th Semester	Criteria to Select a Product
	L18	B.Tech IT- 7th Semester	Conducting Feasibility Studies
7th	L19	B.Tech IT- 7th Semester	Conducting Feasibility Studies
	L20	B.Tech IT- 7th Semester	Project Finalization
	L21	B.Tech IT- 7th Semester	Project Finalization
8th	L2	B.Tech IT- 7th Semester	Source of Information
	L22	B.Tech IT- 7th Semester	Definitions of Small Scale, , Objective, Scope,
	L23	B.Tech IT- 7th Semester	Rationale of SSI
9th	L24	B.Tech IT- 7th Semester	Role of SSI in Economic Development in India
	L25	B.Tech IT- 7th Semester	SSI Registration
	L26	B.Tech IT- 7th Semester	NOC from Pollution Board
10th	L27	B.Tech IT- 7th Semester	Machinery & Equipment Selection
	L28	B.Tech IT- 7th Semester	Project Report Preparation

	L29	B.Tech IT- 7th Semester	Project Report Preparation
11th	L30	B.Tech IT- 7th Semester	Specimen of Project Report
	L31	B.Tech IT- 7th Semester	Planning & Scheduling using Networking Techniques of PERT/CPM
	L32	B.Tech IT- 7th Semester	Planning & Scheduling using Networking Techniques of PERT/CPM
12th	L33	B.Tech IT- 7th Semester	Methods of Project Appraisal
	L34	B.Tech IT- 7th Semester	Methods of Project Appraisal
	L35	B.Tech IT- 7th Semester	Director of Industries DIC, SIDO, SIDBI, SIDC, SISI, NSIC, NISBUD, State financial Corporation SFC
13th	L36	B.Tech IT- 7th Semester	Director of Industries DIC, SIDO, SIDBI, SIDC, SISI, NSIC, NISBUD, State financial Corporation SFC
	L37 Add On's	B.Tech IT- 7th Semester	Business Objectives
	L38 Add On's	B.Tech IT- 7th Semester	Marketing Management
14th	L39 Add On's	B.Tech IT- 7th Semester	Production Management
	L40 Add On's	B.Tech IT- 7th Semester	Finance Management
	L41 Add On's	B.Tech IT- 7th Semester	Business Environment
15th	L42	B.Tech IT- 7th Semester	Human Resource Management
	L43	B.Tech IT- 7th Semester	Export Marketing
	L44	B.Tech IT- 7th Semester	Case Study
16th	L45	B.Tech IT- 7th Semester	Case Study
	L46	B.Tech IT- 7th Semester	Business Plan Writing
	L47	B.Tech IT- 7th Semester	Final Submission of Business Plan
	L48	B.Tech IT- 7th Semester	Revision Unit –I
	L49	B.Tech IT- 7th Semester	Revision Unit - II
	L50	B.Tech IT- 7th Semester	Revision Unit – III
	L51	B.Tech IT- 7th Semester	Revision Unit – IV

Discipline	B.Tech-IT
Semester	7th Sem
Subject	Server-side Programing (IT-407 N)
Lesson Plan Duration	15 weeks(July, 2019 to Dec., 2019)
Workload	Practical-3

Week	Practical	
	Practical day	Topic
1.	1	Create a Subroutine with arguments passing & call the subroutine for specific no. of time.
2.	2	Write a program in ASP which define an object & then display the properties of object with method.
3.	3	Write a program in ASP to display present day, month & date. Also display digital clock.
4.	4	Write a program in ASP which will check that a specific file, folder & drive exists or not. Also return the extension of file. Then use the read & write properties on a file using text-stream object.
5.	5	Send information to the user after he submit the form using GET & POST method & implement from validation.
6.	6	Write a program in ASP that has a form taking the user's name as input. Store this name in a permanent cookie & whenever the page is opened again, then value of the name field should be attached with the cookie's content.
7.	7	Viva- voce
8.	8	Use ad-rotator to change advertisements on client side request.
9.	9	Create a session dictionary using object tag. In session-on start add keys for time, user agent, remote I.P. & add appropriate values. Create a simple page to display the values.
10.	10	Implement session tracking using user authentication.
11.	11	Write a program to delete all cookies of your web site that has created on the client's computer.
12.	12	Write a program is ASP to check the capabilities of the browser using browser capability component.

13.	13	Using data base to store & retrieves values input by a user showing them & make updating & add new records to existing database.
14.	14	Create two ASP pages, a form creation web page (selectprice.asp) and a form processing script (liststockbyprice.asp). In selectprice.asp, the user should be shown a form in which he can enter the item & desired maximum price. When it is submitted liststockbyprice.asp will return all the stocks from database whose cost are less than the price entered by user.
15.	15	Viva-voce

Discipline		B.Tech-IT
Semester		7th Sem
Subject		Mobile Application Development Lab (IT-409 N)
Lesson Plan Duration		15 weeks(July, 2019 to Dec., 2019)
Workload		Practical-3
Week	Practical	
	Practical day	Topic
1.	1	Develop an application that uses GUI components, Font and Colours.
2.	2	Write an android application that demonstrates activity life cycle.
3.	3	Develop an application that uses Layout Managers and event listeners.
4.	4	Develop a native calculator applications.
5.	5	Write an android program to change the background of your activity.
6.	6	Write an application that draws basic graphical primitives on the screen.
7.	7	Develop an application to demonstrate the use of String.xml file.
8.	8	Implement an application that implenets multi-threading.
9.	9	Develop a native application that uses GPS location information.
10.	10	Implement an application that writes data to the SD card.
11.	11	Implement an application that creates an alert upon receiving a message.
12.	12	Write a mobile application that creates alarm clock.
13.	13	Develop a sign-in page with appropriate validation.
14.	14	Develop a real life application that makes use of database.
15.	15	Develop an application to demonstrate the use of Google Maps in Android.