

Lecture Planning Starting w.e.f January 2018

Name of the Institute : Aravali College of Engineering & Management

Name of teacher with designation: Ms. Ekta Dagar, Assistant Professor

Department: Computer Science

Subject: Computer Architecture and Organization

Month	Class	Topic/ Chapter to be covered	Academic Activity	Test / Assignment
		SECTION A		
January	C01	Introduction to computer architecture and organization		
	C02	Store program control concept structure organization, CPU, main memory, secondary memory units		
	C03	Boolean Algebra & logic gates, Sequential logic blocks		
	C04	combinational logic blocks, cache memory	Presentation-1	
	C05	cache memory: cache principle Performance metrics, MIPS, MFLOPS		
	C06	Flynn's classification of computers		
	C07	Multi level view point of machines, digital logic, micro architecture		
		SECTION B		
February	C08	Instruction set based classification of processors		
	C09	ISA, Addressing modes: register, immediate, direct		
	C10	Addressing modes: indirect ,indexed, Operation in the instruction set Arithmetic & logical data transfer		Assignment 1
	C11	Control flow, Instruction set format(fixed variable & hybrid)		
	C12	Architecture of 8086		
	C13	Addressing mode of 8086		
	C14	Registers of 8086		
				Test 1
		SECTION C		
	C15	CPU architecture types (accumulator, register, stack based CPU, memory/register)		
	C16	Detailed data path of a typical register based CPU		
	C17	The need for a memory hierarchy (Locality of reference principle)		
	C18	Fetch, decode & execute cycle		
March	C19	Micro instruction sequencing	Presentation-2	
	C20	Implementation of Control Unit, Memory parameters: access/ cycle		
	C21	Enhancing performance with pipelining		
	C22	Main memory (Semiconductor RAM & ROM organization, memory)		
	C23	Cache memory		
	C24	(Associative & direct mapped) cache organizations		
				Assignment 2
		SECTION D		
	C25	Goals of parallelism (Exploitation of concurrency, throughput enhancement), Instruction codes, computer register		

	C26	Amdahl's law; Instruction level parallelism (pipelining, super scaling –basic features)		
	C27	Processor level parallelism (Multiprocessor systems overview)		
	C28	Timing and control, Types of interrupts		Test 2
	C29	Computer instructions & instruction cycle		
April	C30	Type of instructions, memory reference, register reference, I/O reference, Basics of Logic Design, accumulator logic		
	C31	Stack Organization, micro-instruction formats		
	C32	Simulation using MSAM		
	C33	Instruction level parallelism		
			Presentation-3	

Name of teacher with designation: Ms. Monika Goyal, Assistant Professor

Department: Computer Science

Subject: Database and Management System

Month	Class	Topic/ Chapter to be covered	Academic Activity	Test / Assignment
January		SECTION A		
	C01	Introduction to DBMSs Advantages of DBMS, Disadvantages of file processing systems		
	C02	Functions and Responsibilities of DBA		
	C03	Instances and Schema, Logical view, internal view, External view		
	C04	Introduction to E-R Model, R-model, Hierarchical model, network model		
	C05	DDL, DML, DSDL	practical implementation	
	C06	Client Server Architecture ,		
	C07	Physical, Logical and View levels		
February	C08	Entity Relationship , Mapping cardinalities		Assignment 1
	C09	One to One , Many to Many , One to Many, Many to One		
	C10	Primary, Candidate, Foreign key Concepts		
	C11	Reduction of ER Diagrams to Tables		Test 1
		SECTION-B		
	C12-13	Details of Files Organisation, Basic Techniques of Index Sequential Files		
	C14	Definition and Implementation of Direct Files		
	C15	Bucket organisation		
	C16	Introduction to B+ trees and Binary trees		
	C17	Introduction to Tables and Relations		
	C18-19	Relational Algebra, Various operations		Assignment 2
March	C20	Relational calculus		
	C21	tuple calculus	Presentation 1	
		SECTION-C		
	C21	Intro.to Query Languages:QLB,QBE		
	C22	Integrity constraints		
	C23-24	Functional dependencies		
	C25	Normal forms:1st ,2nd, example		
	C26	3rd and example		
	C27	4th Normal Forms and Boyce Code Normal Form		Test 2
	C28	BCNF and examples		
		SECTION-D		
	C29	Distributed database		
	C30	Parallel database,		
April	C31	Architecture and Advantages of Parallel Database		
	C32	data mining,data warehousing		Assignment 3
	C33	Intro.to concurrency Control		
	C34	Methods Of Concurrency Control,		
	C35	Locking schemes		
	C36	Recovery systems		
	C37	Recovery Techniques and Concepts		

Name of teacher with designation: **Munish Nagar (Assistant Professor)**

Department: **Management Studies**

Subject: **Engg. Economics**

Month	Class	Topic/Chapter covered	Academic activity	Test/assignment
Section -A				
January	2	Definition of Economics - various definitions, Nature of Economic problem.		Assignment
January	1	Production possibility curve Economic laws and their nature.		
January	1	Relation between Science, Engineering, Technology and Economics.		
January	1	Concepts and measurement of utility.		
January	1	Law of Diminishing Marginal Utility		
January	1	Law of equi-marginal utility - its practical application and importance.		
January	1	Revision		
Section - B				
February	1	Meaning of Demand, Individual and Market demand schedule.		TEST
February	1	Law of demand, shape of demand curve.		
February	1	Elasticity of demand, measurement of elasticity of demand.		
February	1	Factors effecting elasticity of demand		
February	1	Practical importance of elasticity of demand.		
February	1	Applications of the concept of elasticity of demand.		
February	1	Meaning of production , factors of production;		
February	1	Law of variable proportions		
February	1	Returns to scale,		
February	1	Internal and External economics and diseconomies of scale.		
February	1	Revision		
February	1	Test		
Section-C				
March	1	Various concepts of cost - Fixed cost, variable cost,		Assignment
March	1	Meaning of Market,		
March	1	Types of Market - Perfect Competition, Monopoly,		
March	1	Oligopoly,		
March	1	Monopolistic Competition (Main features of these markets)		
March	1	Revision		
Section-D				
	1	Supply and Law of Supply		TEST
April	1	Role of Demand & Supply in Price Determination and		
April	1	Effect of changes in demand and supply on prices.		
April	1	Nature and characteristics of Indian economy (brief and elementary introduction),		
April	1	Privatization - meaning, merits and demerits.		
April	1	Globalization of Indian economy - merits and Demerits.		
April	1	Elementary Concepts of VAT , WTO		
April	1	Revision		
April	1	Test		

Name of teacher with designation: Mr Sanjay Singh, Assistant Professor

Department: Computer Science

Subject: Internet Fundamental

Month	Class	Topic/ Chapter to be covered	Academic Activity	Test / Assignment
Section: A Electronic Mail and Internet				
January	C01	Introduction, advantages and disadvantages		
	C02	Userids, Pass words, e-mail addresses		
	C03	message components, message composition		
	C04	mailer features		
	C05	E-mail inner workings		
	C06	E-mail management		
	C07	Mime types		
	C08	Newsgroups, mailing lists, chat rooms		
	C09	Introduction to networks and internet		
February	C10 - 11	history, Working of Internet, Internet Congestion, internet culture, business culture on internet	Presentation-1	
	C12	Collaborative computing & the internet. Modes of Connecting to Internet,		Test 1
	C13	Internet Service Providers(ISPs), Internet address, standard address, domain name, DNS, IP.v6.Modems and time continuum, communications software; internet tools.		Assignment 1
Section: B World Wide Web				
February	C14	Introduction, Miscellaneous Web Browser details		
	C15	searching the www: Directories search engines		
	C16	meta search engines		
	C17	search fundamentals, search strategies, working of the search engines		
	C18	Telnet and FTP		
	C19	Introduction to Browser, Coast-to-coast surfing		
	C20	hypertext markup language		
	C21	Web page installation		
March	C22-23	Web page setup, Basics of HTML & formatting and hyperlink creation	Presentation-2	
	C24	Using FrontPage Express, Plug-ins		Assignment 2
Section C : Languages				
March	C25	Basic and advanced HTML		
	C26	java script language		
	C27	Client and Server Side Programming in java script		
	C28	Forms and data in java script,		
	C29	XML basics		
	C30	Introduction to Web Servers		
	C31	Apache		
	C32	Microsoft Personal Web Server		
April	C33	Accessing & using these servers		Test 2
	C34	PWS, IIS		Assignment 3
Section: D Privacy and security topics				
April	C35	Introduction, Software Complexity		
	C36	Encryption schemes	Presentation-3	
	C37	Secure Web document		
	C38	Digital Signatures, Firewalls.		Assignment 4

Name of the Institute : Aravali College of Engineering & Management

Name of teacher with designation: Ms. Shilpa Malik, Assistant Professor

Department: Computer Science

Subject: Programming Language

Month	Class	Topic/ Chapter to be covered	Academic Activity	Test / Assignment
		Section A		
January	C01	Syntactic and semantic rules of a Programming language, Characteristics of a good programming language		
	C02	Programming language translators compiler & interpreters		
	C03-C04	Elementary data types – data objects, variable & constants, data types, Specification & implementation of elementary data types, Declarations		
	C05	Type checking & type conversions		
	C06	Assignment & initialization, Numeric data types, enumerations, Booleans & characters.		Assignment 1
		Section B		
	C07	Structured data objects & data types , specification & implementation of structured data types		
	C08	Declaration & type checking of data structure ,vector & arrays, records Character strings	Presentation 1	
February	C09	Variable size data structures , Union, pointer		
	C-10	Programmer defined data objects, sets, files.		
	C11	Evolution of data type concept, abstraction, encapsulation & information hiding		
	C12-C14	Subprograms, type definitions		
	C15	Abstract data types		
	C16			Test 1
		Section C		
	C17	Implicit & explicit sequence control, sequence control within expressions, sequence control within statement		
	C18 -C20	Subprogram sequence control: simple call return, recursive subprograms		
	C21-C22	Exception & exception handlers, co routines, sequence control.		
March	C23	Names & referencing environment		
	C24	Static & dynamic scope		
	C25	Block structure, Local data & local referencing environment.		
	C26-C27	Shared data: dynamic & static scope. Parameter & parameter transmission schemes.		Assignment 2
		Section D		
	C-28	Major run time elements requiring storage ,programmer and system controlled storage management & phases		
	C29	Static storage management , Stack based storage management		
April	C30	Heap storage management ,variable & fixed size elements	Presentation 2	
	C31	Introduction to procedural, nonprocedural, structured ,functional and object oriented programming language		
	C32	Comparison of C & C++ programming languages.		
	C33			Test 2

Name of teacher with designation

:Ashok Madaan , Assistant Professor

Department

: Computer Science & Engineering

Subject: OOPS

Month	Class	Topic/Chapter covered	Academic activity	Test/assignment
January	C01	C++ Standard Library, Basics of a Typical Environment, Pre-processor Directives,		
January	C02	Illustrative Simple C++ Programs		
January	C03-C04	Header Files and Namespaces, Library Files		
January	C05	Introduction to objects and object oriented Programming,		
January	C06	Encapsulation, Access Modifiers : Controlling access to a class method, or variable		
January		Polymorphism: Overloading, Overriding methods,		
January		Inheritance and its types and other modifiers		
January	C07	Abstract classes, Reusability Class's Behaviours		
February	C08	Classes and Data Abstraction:		
February	C09	Introduction, structure Definitions, Accessing Members of structures		TEST
February	C-10	Class Scope and accessing Class members ,separating Interface from implementation		
February	C11	Controlling Access function and Utility Functions		Assignment
February	C12	Initializing class objects: Constructors, Using Default Arguments with constructors,		
February	C13	Using Destructors, Classes: Const(Constant) Object And Const Member Function		
February	C14	Object as Member of Classes, Friend Function and Friend Classes		
February	C15	Using this pointer, dynamic memory allocation with new and delete		
February	C16	Static class members, Containers And Integrators, Proxy Classes, Function Overloading		
February	C17	Operator Overloading, Inheritance and Virtual Functions & Polymorphism		
February	C18	Fundamentals of operator Overloading, Restrictions on Operators Overloading,		
March	C19	Operator Functions as Class Members vs. As friend Functions		
March	C20	Overloading,<<,>>		
March	C21	Overloading Unary Operators, Overloading Binary Operators		
March	C22	Introduction to Inheritance, Base Classes and derived Classes, Protected Members,		
March	C23	Casting Base-Class pointers to derived-Class Pointers		
March	C24	using Member functions Overriding Base-Class Members in a derived class		
March	C25	Public, protected and private inheritance		
March	C26	Using constructors and destructors in derived classes		

March	C27	Implicit Derived-Class object to Base-Class Object conversion,		
March	C28	Composition vs Inheritance		
April	C29	Introduction to virtual functions, Abstract Base Classes and Concrete Classes		
April	C30	Files and I/O Streams and Templates and Exception Handling		Assignment
April	C31	File and Streams, Creating a sequential access file , reading data from a sequential access file		
April	C32	Updating sequential access files, Random access files, creating a random access file		
April	C33	Reading data sequentially from a random access file.		
April	C34	Stream input/output classes and objects, stream output, stream input, stream format states		TEST
April	C35	Unformatted I/O (with read & write), stream manipulators, Stream Error states		
April	C36	Function Templates, Overloading template functions, class templates and Non-Type Parameters,		
April	C37	Template and friends, template and static members		
April	C38	Introduction, basics of C++ Exception Handling: try, throw, catch, throwing an exception, catch an exception		
April	C39	Re throwing an exception, Exception specifications, Processing Unexpected Exceptions		
April	C40	Stack unwinding, Constructors, destructors and Exception Handling, Exceptions & Inheritance		