Name of Institution: Seth Jai Parkash Mukand Lal Institute of Engg. & Tech. Radaur

Name of the Faculty: Mr. Vijender Kamboj & Ms. Rooz Munjal (Theory) AND Mr.

Vijender Kamboj & Ms. Rooz Munjal(Practical)

Discipline: BCA

Semester: 2nd

Subject: AD VANCED PROGRAMMING IN C

Lesson Plan Duration: 13 weeks (From April, 2022 to July, 2022)

We ek	Theory (BCA-121)		Practical (BCA-132)	
	Lecture Day	Topic (including assignment/t est)	Practical Day	Topic
1st	Programming fundamentals	Teaching	1	1. Develop the following application for Production & Sales Analysis (by using arrays) A Company manufactures five categories of products number of items manufactured and sold are recorded product wise every week in a month. The company reviews its productionscheduled at every month-end. The review may require one or more of the following information a) Value of weekly production and sales. b) Total value of all the products manufactured c) Total value of all the products sold d) Total value of each product, manufactured and sold.
	Revision of Data types, operators and functions	Teaching		
	Introduction to Strings in C, Declaration and initialization of string	Teaching		
	Array of strings	Teaching		
2n d	String manipulation functions: String length, copy	Teaching	2	2. Develop the following by using string's functions a) Count number of vowels in a string. b) Count words in a string. c) Length of a string using a function. d) Compare two strings using a function. e) Delete vowels from a string. f) Reverse the word. Replace character 'a' by 'b' using function from a string
	String manipulation functions compare, concatenate	Teaching		
	Two Dimentional array of characters	Teaching		
	Search for a substring.	Teaching		
3rd	Introduction to Structure and Union	Teaching/Ass ignment	3	3. Develop the code for processing of customer list (Using character arrays and Strings) Telephone numbers of important customers are
	Features of structures	Teaching		

	Declaration and initialization of structures, How structure elements are stored	Teaching		recorded as: FULL NAME TELEPHONE NUMBER Joseph Louis Lagrange 869254 Jean Robert Argand 900863 Carl Freidrich Gauss 745648 …………………… ……….. …………………… ……….. It is desired to prepare a revised alphabetical list with surname first, followed by a comma and the initials of the first Andmiddle names. For example, Argand, J.R
	Structure within structure	Teaching/Quiz		

4th	Array of structures	Teaching	4	4. Develop a top down modular program that will perform the following tasks:
				   a) Read two integer arrays with unsorted elements.
				   b) Sort them in ascending order.
				   c) Merge the sorted arrays.
				   d) Print the sorted list
				     Use functions for carrying out each of the above tasks. The main function should have only function calls.

	Structure and functions.	Teaching		
	Introduction and application of Union	Teaching		
	Union vs structures	Teaching		

5th	Typedef, Enumerations	Teaching	5	5. Develop the following application for Book Shop inventory(by using structures)
				   A book shop uses a personal computer to maintain the inventory of books that are being sold at the shop. The list includes details such as author, title, price, publisher, stock position, etc.
				   a)Whenever a customer wants a book, the shopkeeper inputs the title and author of the book system replies whether it is in the list or not.
				   b) If it is not, an appropriate message is displayed.
				   c) If the book is in the list, then system displays the book details and ask for number of copies.
				   d) If the requested copies are available, the total cost of the books is displayed; otherwise themessageRequired copies not in stock is displayed.

	Revision	Teaching	6	6. Develop the following applications by using concept of files
				   a) Copy the content of one file to another file.
				   b) To read last n characters from the file.
				   c) To convert the file contents in upper case & write contents in a output file.
				   d) Enter 10 numbers, save all the positive numbers to one file, all the negative numbers to another file.
				   e) Implement a program which replaces a specified word in a file with another word if it exists. If it does not exists display an appropriate message.
				   f) To find a given word in a file if it exist and also show the location of that word in a file

	Introduction to Pointers, Advantages	Teaching		
	Pointer variables	Teaching		

6th	Operations on pointer varaiables	Teaching/Assignment	7	7. Develop code for the following conversions: **a) <u>Decimal to Binary using Bitwise and operator</u>** b) Binary to Decimal number c) Decimal to Hexadecimal Conversion in C. d) Decimal number to Octal Conversion
	Pointer conversions and arithmetic	Teaching		
	Pointers and arrays	Teaching/Quiz		
	Pointers and arrays	Teaching		
7th	Pointers and functions	Teaching	8	8. Develop a macro, PRINT-VALUE which can be used to p values of arbitrary type.
	Pointers and functions	Teaching		
	Pointers and strings	Teaching		
	Pointer to pointer	Teaching		
8th	Dynamic allocation using pointers	Teaching/Assignment	9	9. Develop a program in c to implement selection sort.
	Dynamic allocation using pointers	Teaching		
	Revision	Teaching		
	Typecasting	Teaching		
9th	Introduction to File Handling in C	Teaching	10	10. Develop a program in c to implement bubble sort.
	File types and operations	Teaching		
	File I/O	Teaching		
	File I/O	Teaching		
10th	Structure Read and write in a file	Teaching	11	11. Develop a program in c to implement linear search.
	Errors in file handling	Teaching		
	Random-access I/O in files.	Teaching/Quiz		
	Random-access I/O in files.	Teaching		
11th	Revision	Teaching	12	12. Develop a program in c to implement binary search.
	Introduction to Preprocessor , #define	Teaching/Assignment		
	Macros Expansion, Macros with arguments	Teaching		
	macro versus functions, #include,	Teaching		
12th	Conditional compilation directives	Teaching	13	
	Undefining a macro	Teaching		
	Revision	Teaching		
	Command line arguments: defining	Teaching/Quiz		
13th	Using command line arguments.	Teaching	14	

Name of Institution: Seth Jai Parkash Mukand Lal Institute of Engg. & Tech. Radaur

Name of the Faculty: Mr. Sumit Mahana & Mr. Kapil Dev

Discipline: BCA

Semester: 2nd

Subject: Logical Organization of Computers-II

Lesson Plan Duration: 13 weeks (From April 2022 to July, 2022)

Week	Theory	
	Lecture Day	**Topic (including assignment/test)**
1st	Revision:- K-Map, Combinational CIrcuits	Teaching
	SequentialLogic: Introduction, Characteristics	Teaching
	Flip-Flops, latches	Teaching
	Clocked ,Types of Flip- Flops	Teaching
2nd	S-R flip flops and related problem	Teaching
	JK Flip flopsand drawback	Teaching
	Master- Slave JK flip-flop	Teaching
	Excitation Tables	Teaching
3rd	State table,State diagram	Teaching/Assignment
	Registers, Designing of registers	Teaching
	Types of Registers: SISO, SIPO	Teaching
	PISO, PIPO	Teaching/Quiz
4th	Shift Registers	Teaching
	Introduction to Counters	Teaching
	Definition & Types of counters	Teaching
	Synchronous Counters	Teaching
5th	Designing Modulo - N counters	Teaching
	Asynchronous Counters	Teaching
	Designing Up Counters	Teaching
	Designing Down counters	Teaching
6th	Designing binary counters	Teaching/Assignment
	Memory Introduction	Teaching
	Input/output devices Introduction	Teaching
	Flash Memory	Teaching

7th	Memory Parameters	Teaching
	Semiconductor Memory, RAM , ROM	Teaching
	Magnetic Storage Devices	Teaching
	Optical Storage devices	Teaching
8th	Flash Memory	Teaching/Assignment
	I/O Devices & their Controllers	Teaching
	Introduction to Instruction	Teaching
	Machine Instruction	Teaching
9th	Instruction set	Teaching
	Various types of Processors, Configuration	Teaching
	Addressing Modes	Teaching
	Interrupt: introduction & Types	Teaching
10th	Interrupt Structure	Teaching
	Program Controlled	Teaching
	Interrupt Controlled	Teaching/Quiz
	DMA & its transfer structure	Teaching
11th	I/O channels	Teaching
	Input- output Processing	Teaching/Assignment
	Question from Previous Papers	Teaching
	Question from Previous Papers	Teaching
12th	Question from Previous Papers	Teaching
	Question from Previous Papers	Teaching
	Question from Previous Papers	Teaching
	Question from Previous Papers	Teaching/Quiz
13th	Revision of syllabus	Teaching
	Revision of syllabus	Teaching
	Revision of syllabus	Teaching
	Revision of syllabus	Teaching

Name of Institution: Seth Jai Parkash Mukand Lal Institute of Engg. & Tech. Radaur

Name of the Faculty: Ms. Harpreet Kaur (Theory)

Discipline: BCA

Semester: 2nd

Subject: Mathematical Fundation-II

Lesson Plan Duration: 13 weeks (From April, 2022 to July, 2022)

Week	Theory		Practical	
	Lecture Day	**Topic (including assignment/test)**	**Practical Day**	**Topic**
1st	Propositions and logical operators	Teaching	-	-
	Truth tables Propositions generated by a set .	Teaching		
	Equivalence and implications	Teaching		
	Laws of logic	Teaching		
2nd	Class Test	Teaching/Test	-	-
	Mathematical system	Teaching		
	Propositions over a universe	Teaching		
	Mathematical induction	Teaching		
3rd	----------DO----------	Teaching	-	-
	Quantifiers	Teaching		
	--------DO-------------	Teaching		
	UNIT-1	Teaching/ Doubt Session/ Oral Revision		
4th	Binary operations on a non empty set.	Teaching	-	-
	Groups,Subgroups	Teaching		
	Normal Subgroups	Teaching		
	ASSIGNMENT	Teaching/Assignment		
5th	Cosets,Factor groups	Teaching	-	-
	Rings,Sub rings	Teaching		
	Ideals	Teaching		
	Factor rings	Teaching		
6th	Prime Ideals	Teaching	-	-
	Minimal ideal	Teaching		
	Fields	Teaching		
	Direct product of groups	Teaching		

7th	CLASS TEST	Teaching/Test	-	-
	Isomorphism of groups and rings	Teaching		
	------------do-------------	Teaching		
	Unit-2	Teaching		
8th	Addition and multiplication of matrices	Teaching	-	-
	Laws of matrix algebra	Teaching		
	Singular and non singular matrices	Teaching		
	Inverse of a matrix	Teaching		
9th	Rank of a matrix	Teaching	-	-
		Teaching/ Doubt Session/ Oral Revision		
	Rank of the product of two matrices	Teaching		
	...................do...........................	Teaching		
10th		Teaching	-	-
	Systems of linear equations i.e. AX=0 and AX=B	Teaching		
	CLASS TEST	Teaching/Test		
	UNIT-3	Teaching		
11th	Characteristic equations of a square matrix	Teaching	-	-
	ASSIGNMENT	Teaching/Assignment		
	Cayley-Hamilton Theorem	Teaching		
	Eigen values and Eigen vectors	Teaching		
12th		Teaching/ Doubt Session/ Oral Revision	-	-
	Eigen values and Eigen vectors of symmetric,skew symmetric.	Teaching		
	Hermitian and skew Hermitian matrices	Teaching		
	. ASSIGNMENT	Teaching/Assignment		
13th	---------do--------------	Teaching	-	.	-
	---------do---------------	Teaching		
	Diagonalization of a square matrix	Teaching		
	UNIT-4	Teaching/Doubt Session/ Oral Revision		

Name of Institution: Seth Jai Parkash Mukand Lal Institute of Engg. & Tech. Radaur

Name of the Faculty: Ms. Alka(Theory) and Ms. Alka (Practical)

Discipline: BCA

Semester: 2nd

Subject: Office Automation Tools

Lesson Plan Duration: 13 weeks (From April, 2022 to July, 2022)

Week	Theory		Practical	
	Lecture Day	**Topic (including assignment/test)**	**Practical Day**	**Topic**
1st	DesktopPublishing:Concept,NeedandApplications	Teaching	1	Features and components of page maker.
	HardwareandSoftwarerequirements forDTP	Teaching		
	AnOverviewandcomparisonbetweenDTPpackages	Teaching		
	CommonfeaturesofDTP	Teaching		
2nd	CLASS TEST	Teaching/Test	2	Introduction about the menus and toolbars in page maker
	IntroductiontoPage Maker	Teaching		
	Features,SystemRequirements	Teaching		
	ComponentsofPageMaker Window	Teaching		
3rd	----------DO----------	Teaching	3	Setting up a page size in page maker
	IntroductiontoMenuandToolbars	Teaching		
	--------DO-------------	Teaching		
	UNIT-1	Teaching/ Doubt Session/ Oral Revision		
4th	CreatingofPublications:StartingPageMaker	Teaching	4	Steps to apply paragraph settings and rules.
	SettingPagesize	Teaching		
	PlacingthetextFormatting thetext	Teaching		
	ASSIGNMENT	Teaching/Assignment		
5th	CharacterSpecificationParagraphsetting:ParagraphSpecification	Teaching	5	Steps to use Header and footer
	ParagraphRules	Teaching		
	Spacing,Indents/Tabs	Teaching		
	DefineStyles	Teaching		
6th	Hyphenation	Teaching	6	Steps to save and close a publication.
	Header&Footer	Teaching		
	Page Numbering	Teaching		
	SavingandClosingpublication	Teaching		

7th	CLASS TEST	Teaching/Test	7	Steps to find and replace the text.
	EditingPublication:Open apublication	Teaching		
	Storyeditor	Teaching		
	Findandchangethetext	Teaching		
8th	Change characterandParagraphattributes	Teaching	8	Write down the steps to apply spelling and grammer checking and correction.
	Spellchecking	Teaching		
	Selectingtext	Teaching		
	Cut,Copy,Paste,Paste multiple	Teaching		
9th	Workingwithcolumns	Teaching	9-10	Write down the steps to use thesaurus in Ms-Word.
	UNIT-2	Teaching/ Doubt Session/ Oral Revision		
	WordProcessing: Introduction to Office Automation	Teaching		Write down the steps to find and replace a text in the Ms- Word Document.
	Creating &Editing Document, FormattingDocument	Teaching		
10th	Auto-text,Autocorrect,Spelling andGrammarTool	Teaching	11	Write down the steps to apply bullets and numbering in the Ms-Word document.
	Document Dictionary	Teaching		
	CLASS TEST	Teaching/Test		
	PageFormatting,Bookmark	Teaching		
11th	AdvanceFeaturesofWord-Mail Merge,Macros	Teaching	12-13	Write down the steps to use mail merge.
	ASSIGNMENT	Teaching/Assignment		
	Tables,FileManagement,Printing	Teaching		Write down the steps to use macros.
	Styles,linkingandembeddingobject	Teaching		
12th	UNIT-3	Teaching/ Doubt Session/ Oral Revision	14-15	Write down the steps to insert pictures and clipart to the slides.
	PresentationusingPowerPoint: Presentations, Creating,Manipulating&EnhancingSlides	Teaching		Write down the steps to apply animations and transitions in power point.
	OrganizationalCharts, Excel Charts,WordArt	Teaching		
	ASSIGNMENT	Teaching/Assignment		
13th	Layering artObjects,Animationsand Sounds	Teaching	16	.write down steps to insert sounds in MS-power point.
	InsertingAnimatedPictures orAccessingthrough Object	Teaching		
	InsertingRecorded SoundEffectorIn-BuiltSoundEffect	Teaching		
	UNIT-4	Teaching/Doubt Session/ Oral Revision		

Name of Institution: Seth Jai ParkashMukandLal Institute of Engg. & Tech.Radaur

Name of the Faculty: Ms Priyanka Chauhan & Ms. Varsha Chauhan(Theory)

Discipline: BCA

Semester: 2nd

Subject: Structured System Analysis and Design

Lesson Plan Duration: 13 weeks (From April, 2022 to July, 2022)

Week	Theory	
	Lecture Day	**Topic (including assignment/test)**
1st	SystemConcept: Definition,Characteristics,	Teaching
	Elements ofsystem ,Physical and abstract system	Teaching
	openandclosedsystem	Teaching
	man-madeinformationsystems	Teaching
2nd	SystemDevelopmentLifeCycle:Variousphasesofsystemdevelopment	Teaching/ Assignment
	Considerationsfor systemplanningandcontrolforsystemsuccess.	Teaching
	Roleofsystemanalyst.	Teaching
	Class test	Class test/ doubt session
3rd	SystemPlanning:Basesforplanninginsystemanalysis	Teaching/Assignment
	DimensionsofPlanning. InitialInvestigation	Teaching
	Determininguser's requirementsandanalysis,factfindingprocessand techniques.	Teaching
	ToolsofstructuredAnalysis:DataFlowdiagram,datadictionary	Teaching
4th	ToolsofstructuredAnalysis: IPOandHIPOcharts, Ganttcharts,pseudocodes	Teaching
	ToolsofstructuredAnalysis: Flowcharts,decisiontree,decisiontables.	Teaching
	Feasibilitystudy:Technical,Operational	Teaching
	Feasibilitystudy: EconomicFeasibilities.	Teaching
5th	Assignment viva	Assignment
	Cost∕BenefitAnalysis:	Teaching
	Dataanalysiscost	Teaching
	benefitanalysisofasystem.	Teaching
6th	Input∕OutputandFormDesign	Teaching
	FileOrganizationanddatabasedesign:	Teaching
	Introductionto filesanddatabase	Teaching/Quiz
	,Filestructuresandorganization,	Teaching
7th	Class test	Teaching

	objectivesofdatabasedesign,	Teaching
	logicaland physicalviewofdata.	Teaching
	Revision	Teaching
8th	Doubt session and viva	Teaching/Assignm Ent
	Class test	Class test
	Systemtesting:Introduction	Teaching
	Introduction,objectivesoftesting	Teaching
9th	testplanning,	Teaching
	testingtechniques.	Teaching
	Qualityassurance	Teaching
	Subject viva	Teaching
10th	Goalofqualityassurance	Teaching
	levelsofqualityassurance	Teaching
	Systemimplementation	Teaching/Quiz
	softwaremaintenance:	Teaching
11th	revision	Teaching
	revision	Teaching/Assignm Ent
	primaryactivities in maintenance	Teaching
	Reducing_maintenance_costs.	Teaching
12th	Class test	Teaching
	revision	Teaching

	SystemDevelopmentLifeCycle:Variousphasesofsystemdevelopment	Teaching
	ToolsofstructuredAnalysis: Flowcharts,decisiontree,decisiontables.	Teaching/Quiz
13th	Subject viva	Teaching
	DimensionsofPlanning. InitialInvestigation	Teaching
	Dataanalysiscost	Teaching
	revision	Teaching
	Class test	Teaching/class test

Name of Institution: Seth Jai Parkash Mukand Lal Institute of Engg. & Tech. Radaur

Name of the Faculty: Ms Chetna Kapoor & Ms Monika Sahani(Theory)

Discipline: PD/ BCA

Semester: 2nd

Subject: Personality Development

Lesson Plan Duration: 13 weeks (From April, 2022 to July, 2022)

Week	Theory	
	Lecture Day	**Topic (including assignment/test)**
1st	Discussion of the course objectives, learning's from the course, future implications, etc	Teaching
	Personality- Meaning, Concept, Characteristics	Teaching
	Elements of Personality	Teaching
	Determinants of Personality ,	Teaching
2nd	Deranged Personality & Causes of deranged Personality	Teaching
	Personality Analysis	Teaching/ Assignment
	Understanding concept of personality through classroom activity	Teaching
	Personal grooming	Teaching
3rd	Personal hygiene	Teaching
	Body language- basic concept, meaning,	Teaching
	Reading body language	Teaching
	Use & misuse of body language	Teaching
4th	Social etiquettes	Teaching
	Business etiquettes	Teaching
	Dining etiquettes	Teaching/ Assignment
	Art of good conversation	Teaching
5th	Conversation in different situation	Teaching
	Listening skills	Teaching
	Interpersonal Skills- meaning, concept, how to develop these skills	Teaching
	Communication skill	Teaching

6th	Group decision making	Teaching
	Team work	Teaching
	Role plays- meaning, do's & don'ts, concept, use	Teaching
	Role plays scenarios- dealing with seniors, colleagues, juniors, contract workers	Teaching/ Role play
7th	Role plays scenarios- dealing with customers, owners, etc	Teaching/ Role play
	GD- Meaning, Do's & Don'ts of GD, team behavior in GD	Teaching
	Clarity of thought & its expression in GD	Teaching
	GD practice	Teaching/ GD
8th	GD practice	Teaching/ GD
	Presentation skills * practice will be done in end of semester	Teaching
	Seminar Skills	Teaching
	Class test	Test
9th	Interviews- Intent & purpose, types of interviews	Teaching
	Selection procedure in interviews, types of interviews	Teaching
	Self Planning- knowledge of company, academics & professional knowledge, time keeping, document portfolio	Teaching
	Writing winning resume	Teaching
10th	Resume evaluation	Teaching
	FAQs of interview & possible answers	Teaching
	FAQs of interview & possible answers	Teaching
	SWOT & Self introduction	Teaching
11th	Practice of self introduction	Teaching/ Assessment
	Personal grooming & Dressing sense	Teaching
	Panel addressing, mental framework during interviews	Teaching
	Interview practice	Teaching
12th	Interview practice	Teaching
	Presentations practice	Teaching/ presentation
	Presentations practice	Teaching/ presentation
	Revision of syllabus	Teaching
13th	Revision of syllabus	Teaching