GANPAT UNIVERSITY

FACULTY OF COMPUTER APPLICATION

TEACHING AND EXAMINATION SCHEME

Programme	Bachelor of Computer Application	Branch/Spec.	
Semester	II		
Effective from Academic Year	2014-15	Effective for the batch Admitted in	June 2014

Subject Code	Subject Name	Teaching scheme												Examination scheme (Marks)					
		Credit						Hours (per week)						Theory			Practical		
		Lecture(DT)			Practical(Lab.)			Lecture(DT)			Practical(Lab.)			CE	SEE	Total	CE	SEE	Total
		L	TU	Total	P	TW	Total	L	TU	Total	P	TW	Total						
U32A1LDP	LOGIC DEVELOPMENT WITH PROGRAMMING-II	4		4	3		3	4		4	6		6	40	60	100	20	30	50
U32A2BWP2	BASIC WEB PROGRAMMING-II	3		3	2		2	3		3	4		4	40	60	100	20	30	50
U32A3ITM	INFORMATION TECHNOLOGY AND SYSTEM MAINTENANCE	3		3	2		2	3		3	4		4	40	60	100	20	30	50
U32A4DM	DISCRETE MATHEMATICS	3		3				3		3				40	60	100			
U32B5LCS	LANGUAGE AND COMMUNICATION SKILLS-II	3		3				3		3				40	60	100			
Total		16		16	7		7	16		16	14		14	200	300	500	60	90	150

GANPAT UNIVERSITY

FACULTY OF COMPUTER APPLICATIONS

Programme	Bachelor of Computer Application	Branch/Spec.	Computer Application
Semester	II	Version	1.0.0.0
Effective from Academic Year	2015-16	Effective for the batch Admitted in	June 2014
Subject code	U32A1LDP	Subject Name	LOGIC DEVELOPMENT WITH PROGRAMMING-II

Teaching scheme						Examination scheme (Marks)			
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	4		3		7	Theory	40	60	100
Hours	4		6		10	Practical	20	30	50

Pre-requisites:

Need to know about Basic of C programming language. Student need to understand the basic concept like data-type, variable, constant, control statement with structure of programing language need to understand before going for advanced concepts.

Learning Outcome:

By the completion of this course, students will be able to implement, test, debug, and document programs, Program with pointers and arrays, perform pointer arithmetic, and use the preprocessor, Understand how to write and use functions, how the stack is used to implement function calls, and parameter passing options, Understand and use the common data structures typically found in C programs — namely arrays, strings, lists, trees, and hash tables.

Theory syllabus		
Unit	Content	Hrs
1	**Arrays (08)** ▪ Introduction to Array and Dimensions in array (02) ▪ Concept of One Dimensions array and initialization of values in one dimension array (02) ▪ Concept of Two Dimensions array and initialization of values in two dimension array (02) ▪ Overflow and Underflow in arrays (01) ▪ Concepts of Multidimensional Array (01) **Character Arrays & strings (08)** ▪ Introduction of character arrays, Declaring and initializing string variables (02) ▪ Reading string from terminal and Writing string to screen (01) ▪ Arithmetic operations on characters (01) ▪ String Operations with string Handling functions (03): String Copy, String Compare, String Concatenation And String Length ▪ Table of strings (01)	(16)
2	**User-Defined Functions (13)** ▪ Introduction of UDF and Need for user-defined functions (01) ▪ The form of c function and Return values and their types (02) ▪ Calling a function (01) ▪ Category of functions (04): no arguments and no return values, arguments with return values ▪ Handling of non-integer functions (01) ▪ Nesting of functions (01) ▪ Recursion (01) ▪ Functions with arrays (01) ▪ The scope visibility and lifetime of variables in functions (01)	(13)
3	**Structures and Unions (08)** ▪ Introduction to Structure, defining structure variable (01) ▪ Assigning values into members, structure initialization (01) ▪ Copy and comparison of structures(variables) (01) ▪ Structure and arrays: arrays of structures, arrays within structures (02) ▪ Structures within structures, Structure and function (02) ▪ Introduction to union (01)	(8)
4	**Pointers (10)** ▪ Introduction of pointers, Declaring and initializing pointers (01) ▪ Accessing the address of variable and variable through its pointer (01) ▪ Pointer expressions, incrementing a pointer and scale factor (01) ▪ Pointers and arrays (02) ▪ Pointers and character strings (02)	(10)

	▪ Pointers and Functions (02) ▪ Pointers and structures (01)	
5	**File Management in C (08)** ▪ Introduction, Defining files (01) ▪ File Operations (02) ▪ Error handling during I/O operations (01) ▪ Random access files (02) ▪ Command line arguments (02) **The Preprocessors(05)** ▪ Introduction of Preprocessors (01) ▪ Macro Substitution (1.5) ▪ File Inclusion (01) ▪ Compiler control Directives (1.5)	(13)

Practical content

1. Write a c program to arrange accepted numbers in ascending and descending order using array.
2. Write a c program to find log and square root of first 20 integer numbers.
3. Write a c program for accept two different arrays with equal of elements and match corresponding elements of array. Also display prop message for matched or unmatched elements.
4. Write a c program to check accepted nos. are +Ve , -Ve or Zero. Use array to store different nos.
5. Write a c program to find the median from given numbers.
6. Write a c program for addition of two matrix.
7. Write a c program for multiplication of matrix.
8. Write a c program to accept two different arrays, merge it and make it short in ascending order.
9. Write a c program to sort the accepted string in ascending order.
10. Write a c program to convert given line into upper case or lower case character as user want.
11. Write a c program to convert accepted integer into word.
12. Write a c program to find longest line from given line.
13. Write a c program to count how many characters, words, lines, tabs and spaces in text.
14. Write a c program to find smallest character from each word of accepted line. Print the smallest character with its word.

15. Write a c program which takes two strings as an input and perform all string functions on it.
16. Write a c program to display this kind of output on screen.

C

CP

CPR

.

.

CPROGRAMMING

.

.

CPRO

CPR

CP

C

17. Write a c program to print the multiply value of two accepted no's using user define function.
18. Write a c program to make simple calculator using UDF and Switch Case Statement.
19. Write a c program to find area of circle using UDF.
20. Write a c program to find volume of cylinder using UDF.
21. Write a c program which explains nesting of functions in UDF.
22. Write a c program to find factorial of a given number using Recursion.

23. Write a c program to multifunction to illustrate how automatic variables work.
24. Write a c program to print book details like Bno,Bname,Author and Pages on screen.
25. Write a c program to print 3 students details like Rno,Nmae,Address,City and Phone on screen using array of structure.
26. Write a c program to calculate the subject wise and student wise totals and store them as a part of structure.
27. Write a c programme to demonstrate the concept of structure within structure.
28. Write a c programme to demonstrate the concept of stucture and function.
29. Write a c program to simple pointer practical for printing integer and its memory address.
30. Write a c program using pointers to determine the length of a string.
31. Write a c program to swap the values of two different no. Use pointer and function.
32. Write a c program to assign employee data to variable and access its information using pointer. (no, name, city, salary).
33. Write a c program to create one file store some information into it and print the same information on terminal.
34. Write a c program to create one file store some information using fprintf() and fscanf() function.
35. Write a c program to append text existing file.
36. Write a c program to for a 5 students with name and roll no in a file and print the same by reading a file.

Text Books	
1	Programming in ANSI-C By E. Balaguruswami, TMH Publication

Reference Books	
1	Programming in C By Pradip dey and Manash Ghosh
2	Let us C By Yashwant Kanetkar, BPB Publication

Examination Scheme :

Note for Examiners:

Q-1 Must be common from any topics from syllabus.

Q-2 And onwards must be from specific topics and internal choice or option can be given.

Paper Structure:

Q-1 Attempt any Six Out of Nine: each question must be 5 marks: (30 Marks)

Questions must be covered all possible section.

Q-2 Must be From topics: Arrays ,Character Arrays & Strings: (05 marks)

Q-3 Must be From topics: User-Defined Functions: (06 marks)

Q-4 Must be From topics: Structures and Unions: (06 marks)

Q-5 Must be From topics: Pointers: (06 marks)

Q-6 Must be From topics: File Management in C and The Preprocessors: (07 marks)

GANPAT UNIVERSITY

FACULTY OF COMPUTER APPLICATIONS

Programme	Bachelor of Computer Application	Branch/Spec.	Computer Application
Semester	II	Version	1.0.0.0
Effective from Academic Year	2017-18	Effective for the batch Admitted in	June 2017
Subject code	U32A2BWP2	Subject Name	BASIC WEB PROGRAMMING-II

Teaching scheme						Examination scheme (Marks)			
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	3		2		5	Theory	40	60	100
Hours	3		4		7	Practical	20	30	50

Pre-requisites:

Students should know basic understanding of HTML, CSS and Java Script.

Learning Outcome:

After the completion of the course, student able to develop websites using different tools. To develop the skill & knowledge of Web page design.

Theory syllabus

Unit	Content	Hrs
1	**HTML5 Basic: (14)** ▪ What is HTML5?, New features of HTML5, Browser support(1) ▪ New Elements in HTML5, (3) ▪ HTML5 Semantic Elements(3) ▪ New Media Elements(1), ▪ New Form Elements(1), ▪ Structural Elements(3), ▪ HTML5 New Input Types, HTML5 form elements, HTML 5 form attributes(2)	(14)
2	**HTML5 Advanced (10)** ▪ Introduction of HTML5 canvas(1.5), ▪ Introduction of HTML5 SVG (Scalable Vector Graphics)(1), ▪ Drag and Drop elements(1), ▪ Introduction of HTML5 API: Geolocation, HTML5 web storage object, local storage object, sessionStorage object, Application cache, updating cache, cache manifest file (4) ▪ HTML5 form validations(2.5)	(10)
3	**CSS3 (10)**	(10)

	▪ CSS3 introduction, CSS3 Backgrounds & Text Effects (1), ▪ Styling tables with Pseudoclassess(2), ▪ Making Links Printable with: after and content(2), ▪ Creating multi column Layouts(2), ▪ CSS3 Animation(1) ▪ Building mobile interface with media queries(2)	
4	**jQuery (11)** ▪ What is JQuery? How to use JQuery? Downloading & installing JQuery to web pages(1), ▪ Overview of jQuery's features, Jquery basic syntax, How to use Custom Scripts? (3), ▪ jquery selectors(2), ▪ event methods(2), ▪ jQuery Animations and Effects: Hiding and showing elements, Fading elements in and out, Sliding elements, Creating custom animations, callback, stop() (4)	(11)

Practical content
List of programs specified by the subject teacher based on above mentioned topics

Text Books	
1	HTML5 & CSS3 by Brian P. Hogan

Reference Websites	
1	http://www.tutorialspoint.com/jquery
2	https://www.w3schools.com/jquery

Note for Examiners:	
	Q-1 Must be common from any topics from syllabus.
	Q-2 And onwards must be from specific topics and internal choice or option can be given

Paper Structure:	
	Q-1 Attempt any Six Out of Nine: each question must be 5 marks: (30 Marks) Questions must be covered all possible section. Q-2 Must be from topics: HTML5**:** (06 marks) Q-3 Must be from topics: Advanced HTML5: (08 marks) Q-4 Must be from topics: CSS3: (8 marks) Q-5 Must be from topics: JQuery: (08 marks)

GANPAT UNIVERSITY

FACULTY OF COMPUTER APPLICATION

Programme	Bachelor of Computer Application				Branch/Spec.			
Semester	II				Version	1.0.0.0		
Effective from Academic Year	2015-16				Effective for the batch Admitted in	June 2014		
Subject code	U32A3ITM	Subject Name			INFORMATION TECHNOLOGY AND SYSTEM MAINTENANCE			
Teaching scheme					Examination scheme (Marks)			
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	3	-	2	-	5	Theory	40	60	100
Hours	3	-	4	-	7	Practical	20	30	50

Pre-requisites:

Student should have basic knowledge of computer.

Learning Outcome:

After the completion of course student should

- Understand all computer peripherals.
- Understand different languages like programming, machine, assembly etc.
- PC Assembling and Disassembling.
- To do Windows and application software installation.
- To do Hardware Device Driver Installation.

Theory syllabus

Unit	Content	Hrs
1	Introduction to information technology (08) ▪ Data and Information, Features of Information (01) ▪ Types of Languages, Low level V/s High level languages (01) ▪ Generations of Programming Language (03) ▪ Introduction Of Machine Language (01) ▪ Introduction of Assembly Language (01) ▪ Fourth Generation Language (01)	8
2	Computer Peripherals (13) ▪ Primary Memory : RAM and it's types (DDRRAM, RDRAM, SDRAM) (02) ▪ Secondary Storage Devices: Floppy Disk, Hard Disk, CD-ROM, DVD (Above all topics Include only principles, types, data storage and Application) (03) ▪ Input Devices: Key Board, Mouse, Touch screen, Scanner (Above all topics Include only principles, types and Application) (03) ▪ Output Devices: VDU (Computer Graphics, Working of CRT, Resolution of different	13

	VDU), Printer (Characteristic, Classification, Working, principle, Uses) (03) ▪ Communication Devices: MODEM, NIC (Network Interface Card) (Principles, Baud rate, Application) (02)	
3	Introduction to language processor, software and communication methods (12) ▪ Language Processor: Compilers, Interpreter, Assemblers. (02) ▪ Difference between Compiler-Assembler-Interpreter (02) ▪ Types of Software: System Software, Application Software(01) ▪ I/O Communication Methods: Programmed I/O, Interrupts, Direct Memory Access (DMA) (03) ▪ Flow Of Control – Sequential Flow of Control and Branches (01) ▪ Types of Instructions : Arithmetic Instruction, Logical Instruction, Branch Instruction (02) ▪ Instruction Execution (01)	12
4	System Maintenance & Support (12) ▪ PC Assembling and Disassembling ▪ Configuring and Troubleshooting BIOS Settings ▪ Installation of Windows XP Professional ▪ Configuring Windows XP Desktop and Display Settings ▪ Application Software Installation ▪ Working with User accounts and Password ▪ Hardware Device Driver Installation ▪ Setting up a Network Connection ▪ Configuring IE, Pop-up blocker, IE security and privacy options ▪ Working on NTFS permission ▪ Installing and managing Local and Network printer ▪ Data Backup and Restore & System Restore ▪ Disk and Storage Management, Create/Manage Partition using Disk Mgmt Utility (compmgmt.msc) ▪ Optimizing system Performance using Check Disk, Defragmentation and Disk Cleanup ▪ Managing services ▪ Troubleshooting with common issues and Problem Troubleshooting using internet	12
Practical content		
▪ PC Assembling and Disassembling ▪ Configuring and Troubleshooting BIOS Settings ▪ Installation of Windows XP Professional ▪ Configuring Windows XP Desktop and Display Settings ▪ Application Software Installation ▪ Working with User accounts and Password ▪ Hardware Device Driver Installation		

- Setting up a Network Connection
- Configuring IE, Pop-up blocker, IE security and privacy options
- Working on NTFS permission
- Installing and managing Local and Network printer
- Data Backup and Restore & System Restore
- Disk and Storage Management, Create/Manage Partition using Disk Mgmt Utility (compmgmt.msc)
- Optimizing system Performance using Check Disk, Defragmentation and Disk Cleanup
- Managing services
- Troubleshooting with common issues and Problem Troubleshooting using internet

Text Books	
1	

Reference Books	
1	'O' Level Simple: Information Technology by Satish Kumar-BPB Publications
2	Fundamentals of computer by V.Rajaraman-PHI Publications.
3	Structure computer Organization by Andrew S. Tanenbaum-PHI Publications.

Examination Scheme :

Note for Examiners:
Q-1 Must be common from any topics from syllabus.
Q-2 And onwards must be from specific topics and internal choice or option can be given.

Paper Structure:
Q-1 Attempt any Six Out of Nine: each question must be 5 marks: (30 Marks)
Questions must be covered all possible section.
Q-2 Must be from topics: Introduction to information technology: (06 Marks)
Q-3 Must be from topics: Computer Peripherals: (08 Marks)
Q-4 Must be from topics: Introduction to language processor,
software and communication methods: (09 Marks)
Q-5 Must be from topics: System Maintenance & Support: (07 Marks)

GANPAT UNIVERSITY

FACULTY OF COMPUTER APPLICATION

Programme	Bachelor of Computer Application				Branch/Spec.			
Semester	II				Version	1.0.0.0		
Effective from Academic Year	2015-16				Effective for the batch Admitted in	June 2014		
Subject code	U32A4DM	Subject Name	DISCRETE MATHEMATICS					
Teaching scheme					Examination scheme (Marks)			
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	3	-	-	-	3	Theory	40	60	100
Hours	3	-	-	-	3	Practical		--	--

Pre-requisites:

Elementary knowledge of mathematics at school level.

Learning Outcome:

Upon completion of this course, students will:

- Be able to use concept of set theory and functional relationship
- Know the need of matrices in computer science and solve the system of linear equations using matrices
- Study computational and mathematical context of Boolean Algebra
- Describe several practical applications of graph theory.

Theory syllabus

Unit	Content	Hrs
1	Set Theory (09) ▪ Introduction, Representation of sets, Types of sets (01) ▪ Venn Diagram, Operations on sets (01) ▪ Algebra of sets with proof (02) ▪ Cardinality of sets, Addition theorem and its examples (02) ▪ Examples on set theory (03)	9
2	Function (08) ▪ Introduction, Definition, Domain, Co-domain and Range of a Function (01) ▪ Types of Function-Into Function, On To Function, One to one function, Many to One Function, One to One Correspondence and its examples(03) ▪ Classification of Function-Algebric Functions, Composite, Identity and Inverse	8

	functions, ▪ Transcendental Functions, exponential functions and logarithmic functions (04)	
3	Boolean Algebra(09) ▪ Introduction, Basic Definitions(01) ▪ Duality, Basic Theorems(03) ▪ Boolean Algebras as lattices(01) ▪ Kinds of Lattices(01) ▪ Representation Theorem, Sum-of-product form for sets, Sum-of-products form for Boolean ▪ Algebras.(03)	9
4	Graph Theory(09) ▪ Introduction and Data Structures, Kinds of graph, Degree of a vertex(03) ▪ Complete graph, Regular graph, Cycle, Pendant vertex(02) ▪ Definitions, Paths Connected Graphs, graph isomorphism, Sub graph, Walks(02) ▪ Trees, Spanning Trees, Directed graphs(02)	9
5	Matrix Algebra(10) ▪ Determinant, Rules of determinant with examples (01) ▪ Meaning and Definition of Matrix, Types of Matrices (01) ▪ Addition and Subtraction of Matrices, Scalar Product of a Matrix with examples (02) ▪ Multiplication of two Matrices with Examples, Transpose of a matrix, Adjoint matrix(02) ▪ Inverse of a matrix, Solution of simultaneous equations using matrix, Laws of Matrix Algebra, ▪ Examples (04)	10
Practical content		
Text Books		
1		
Reference Books		
1	Advance Mathematics, Ravi Gor, Nirav Prakashan	
2	Advance Mathematics, Prof. H.R. Vyas and Others, B.S. Shah Prakashan	
3	Advance Mathematics for F.Y.B.C.A., Dr. K.R. Kachot, Ramesh Kataria, Mahajan Publishing House	
4	Fundamental Approach to Discrete Mathematics, D.P. Acharya sleekkumar	
5	Schaum's outlines Discrete Mathematics Graph Theory, Narsingh Deo	
Examination Scheme :		
Note for Examiner:		

Q-1 Must be common from any topics from syllabus.
Q-2 And onwards must be from specific topics and internal choice or option can be given.
Paper Structure:
Q-1 Attempt any Six Out of Nine: each questions must be 5 marks: (30 Marks)
Questions must be covered all possible section.
Q-2 Must be from topics: Set Theory: (06 marks)
Q-3 Must be from topics: Function: (05 marks)
Q-4 Must be from topics: Boolean Algebra: (05 marks)
Q-5 Must be from topics: Graph Theory: (07 marks)
Q-6 Must be from topics: Matrix Algebra: (07 marks)

GANPAT UNIVERSITY

FACULTY OF COMPUTER APPLICATIONS

Programme	Bachelor of Computer Application	Branch/Spec.	Computer Application
Semester	II	Version	1.0.0.0
Effective from Academic Year	2014-15	Effective for the batch Admitted in	June 2014
Subject code	U32B5LCS	Subject Name	LANGUAGE AND COMMUNICATION SKILLS-II

Teaching scheme						Examination scheme (Marks)			
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	3		-		3	Theory	40	60	100
Hours	3		-		3	Practical	-	-	-

Pre-requisites:

Knowledge of English Language which includes basic grammar, basic structure formation and basic comprehension of listening and reading.

Learning Outcome:

Theory syllabus

Unit	Content	Hrs
1	**Flow of Communication (09)** ▪ Channels of Communication (01) ▪ Vertical – Upward, Downward (02)	(09)

	▪ Horizontal- Grapevine, Consensus (Informal Communication)(02) ▪ With other Organizations – Inward, Out ward (01) ▪ Communication Networks (01) ▪ Barriers to Communication (02)	
2	**Business Correspondence (09)** ▪ Need, Functions & Kinds of Business Letter (02) ▪ Essentials of an effective Business letter (01) ▪ The Layout (03) ▪ Planning the letters (01) ▪ Selected Business Terms (02) COD, CWO, CIF, FOB, FOR, E & OE, Cartage, Freight, Excise Duty, Custom Duty, VAT, Invoice, Proforma Invoice, Trademark, Hypothecation, Ex-warehouse, Debit Note, Credit Note, Pilferage, Demurrage, Power of Attorney, Consignment, Bill of Lading, Bonded Warehouse, Certificate of Origin	(09)
3	**Internal Communication (09)** ▪ Office Memorandums (01) ▪ Office Orders (01) ▪ Office Circulars (01) ▪ Report Writing, Individual & Group (03) ▪ Agenda & minutes of meeting (03)	(09)
4	**External Communication (Manufacturing and Service type Business) (09)** ▪ Bank correspondence, correspondence with customers, head office and other bank (02) ▪ Insurance correspondence, life insurance, fire insurance (02) ▪ Enquires & Relies, Orders & Their Execution (03) ▪ Credit & Adjustment (01) ▪ Collection letters (01)	(09)
5	**Selected Short Stories (09)** ▪ A True Story – Mark Twain (03) ▪ Blow up with the ship – Wilkie Collins (03) ▪ The Mother – Somerset Maugham (03)	(09)
Practical content		
NIL		
Text Books		
1	C. S. Sharma-Twelve Short-Stories, OUP	

2	Meenakshi Raman & Sangeeta Sharma -Technical Communication, 2006, OUP, New Delhi
Reference Books	
1	Rhoda Doctor –Principles and Practice of Business Communication-Sheath publishers.
2	Rajendra pal- Essentials of Business Communication.
3	Business communication-R.C bhatiya
4	Barker, Alan, Improve Your Communication Skills, 2007, Kagan Page (I) Pvt. Ltd. New Delhi
5	Resumes and Interviews by M Ashraf Rizvi- Tata Mc Graw hill
	101 Great resumes-Jaico Publishing House.
7	Taylor, Poul J & O'Driscoll Michael P., The Handbook of interviewing, 2001, Infinity Books, New Delhi

Examination Scheme :

Note for Examiners:

Q-1 Must be common from any topics from syllabus.

Q-2 And onwards must be from specific topics and internal choice or option can be given

Paper Structure:

Q-1 Attempt any Six Out of Nine: each question must be 5 marks: (30 Marks)

Questions must be covered all possible section.

Q-2 Must be from topics: Flow of communication: (06 marks)

Q-3 Must be from topics: Business correspondence: (06 marks)

Q-4 Must be from topics: Internal communication: (06 marks)

Q-5 Must be from topics: External communication: (06 marks)

Q-6 Must be from topics: Selected Short Stories: (06 marks)