GANPAT UNIVERSITY

FACULTY OF COMPUTER APPLICATIONS

Programme	MCA				Branch/Spec.	Computer Applications		
Semester	I				Version	1.0.0.0		
Effective from Academic Year		2015-16			Effective for the batch Admitted in			June 2015
Subject code	P11A1ADP		Subject Name		Algorithm Development & Introduction to Programming			
Teaching scheme					Examination scheme (Marks)			
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	3	0	2	0	5	Theory	40	60	100
Hours	3	0	4	0	7	Practical	20	30	50

Pre-requisites:

Basic Knowledge of computer

Learning Outcome:

Student can develop program to solve the given problem

Theory syllabus

Section	Content	Hrs
1	**Concepts of C: (9)** • **Overview of C (5)** Brief history of C, Importance of C, Features of 'C' language(1), Basic Structure of C Programs(1), Programming Style, Steps to execute 'C' Program(1), Understanding the terminologies: Source Program, Object Program, Executable Program, Linker, Loader(1), Debug, Compilation process, Interpreter(1),. • **Constants, Variables and Data Types: (4)** Character set, C tokens, keywords and identifiers (1), constants, variables (1), data types (1), declaration of variables, assigning value to variable, defining symbolic constants (1). **Operators and Managing I/O (9)** • Operators – arithmetic, relational (1), logical, assignment, increment-decrement (1), conditional, bit-wise and special(1),Arithmetic expressions, evaluation of	28

	expressions, precedence of arithmetic operators(1), type conversions in expressions(1), operator precedence and associativity, mathematical functions.(1), Reading and writing a character Formatted input-output (3) **Decision Making branching & Looping: (10)** • **Decision Making Branching (5):** Decision making with IF statement, simple IF statement, the IF-ELSE statement (1), nesting of IF … ELSE statements, the ELSE IF ladder (1), Switch statement (1), turnery (? :) operator(1), Go-To statement (1)	
2	**Looping(5) :** • Looping statements – WHILE (1), DO (1) and FOR. (2) Nesting and Jumps in loops, Break & Continue (1) **Array & Function (11)** • Arrays: (4) Introduction to Array, Concept of Dimensions in arrays, (1) Initialization values in an array, Overflow and Underflow, (2) Concepts in Multidimensional Array. (1) • Functions: (7) Need for user-defined functions, the form of c function, return values and their types, (1)calling a function, category of functions, (1) no arguments and no return values, arguments with return values, (1) handling of non-integer functions, nesting of functions, recursion, functions with arrays,(2) the scope, visibility and lifetime of variables in functions.(2) **Structure: (06)** • Structure definition, Assigning values into members,(1) structure initialization, comparison of structures, (1) arrays of structures, (2) arrays within structures,(2)	22
Practical content		
List of programs specified by the subject teacher based on above mentioned topics		
Text Books		
1	Programming in ANSI C by Balaguruswami E. - TMH Publications	
Reference Books		
1	“Programming in C” by Pradip dey and Manash Ghosh	
2	Let us ‘C’ by Yashwant Kanetkar –BPB Publications	
3	Mastering Turbo C by Stan, Kelly,Bootle -BPB Publications	

4	How to Solve it by Computer, R.G.Dromey-PHI Publication
	Question Paper Scheme: **University Examination Duration: 3 Hours** Note for Examiner: - (I) Questions 1 and 4 are compulsory with no options. (II) Internal options should be given in questions 2, 3, 5 and 6. **SECTION - I** Q.1 –8 Marks Q.2 –11 Marks Q.3 –11 Marks **SECTION - II** Q.4 –8 Marks Q.5 –11 Marks Q.6 –11 Marks

GANPAT UNIVERSITY

FACULTY OF COMPUTER APPLICATIONS

Programme	MCA		Branch/Spec.	Computer Applications	
Semester	I		Version	1.0.0.0	
Effective from Academic Year	2015-16		Effective for the batch Admitted in	June 2015	
Subject code	P11A2IDE	Subject Name	Introduction to Digital Electronics		

Teaching scheme						Examination scheme (Marks)			
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	3	0	1	0	4	Theory	40	60	100
Hours	3	0	2	0	5	Practical	20	30	50

Pre-requisites:

Basic Knowledge of computer and simple calculations.

Learning Outcome:

Understand the applications of number systems, Boolean algebra.,logic gates, logic circuits, flip flops , memory elements ,registers and counters for computers

Theory syllabus

Section	Content	Hrs
1	**Data Representation and Number System: (15)** Number Systems: Introduction to Decimal, Binary, Octal, Hexadecimal Number Systems [2], Conversation of number from one number system to another number System [4], Binary Arithmetic: Addition, Subtraction (Simple method, using 1's And 2's Complement method) [3], Multiplication, Division (Simple method) [3]. Representation & Error detection and correction codes [03] **Logic Gates and Boolean algebra: (15)** **Logic Gates: 04** Introduction of Digital Electronics [1], Inverter, OR Gate, AND Gate, NOR Gate, NAND Gate, [1] Demorgan's Theorems, EX-OR Gate, EX-NOR Gate [2] **Boolean algebra: 11** Boolean Relation [1] , SOP Method and POS Method [2], Algebraic Simplification.(Only for Examples, not for theory)[1], Universal Building blocks (Only for Logic conversion, not for	30

	theory) [3], Implementation of Digital circuits using Universal gates, Pair, Quad, Octet [2], K-MAP Simplifications	
2	**Data Processing Circuit and ALU:(14)** **Data Processing Circuits: 08** Combinational circuits and sequential circuits [1], Multiplexer (4 to 1, 8 to 1,16 to 1), Demultiplexer (1 to 4, 1 to 8, 1 to 16) [3], Decoder (1 of 4, 1 of 8,1 of 16) Seven Segment Display, Decoder (1 of 4, 1 of 8, 1 of 10, BCD to Decimal), [2],Encoder (Decimal to BCD, Hexadecimal to BCD)[2] **Arithmetic Logic Unit: 06** Half Adder, Full Adder[2],Half Subtractor, Binary Adder[2], Signed binary number, 2's complement Adder – Subtractor.[2] **Flip-Flop,Memory,Regiter,Counter: (11)** **Flip Flop, Memory : (6)** NOR Latch, NAND Latch, R S Flip Flop[2], ROM, PROPM (Programmable ROM)[1], EPROM (Erasable Programmable ROM),EEPROM (Electrically Erasable programmable ROM), RAM, Dynamic RAM, Static RAM, Hexadecimal Addresses [3] **Registers and counters: (5)** **Registers: 05** Buffer Register, Shift left register[2],Shift right register, Asynchronous and Synchronous Counter(Ring Counter, Ripple Counter) [3]	25
Practical content		
List of programs specified by the subject teacher based on above mentioned topics		
Text Books		
1	Digital Electronics by R.P.Ajwalia –Atul Prakashan	
Reference Books		
1	Digital Computer Electronics by Malvino & Brown, Third Edition – TMH Publications.	
2	Fundamentals of computer by V.Rajaraman-PHI Publications.	
3	Digital Principles and applications by Malvino & Leach – TMH Publication.	
	Question Paper Scheme:	

	University Examination Duration: 3 Hours Note for Examiner: - (I) Questions 1 and 4 are compulsory with no options. (II) Internal options should be given in questions 2, 3, 5 and 6. **SECTION - I** Q.1 –8 Marks Q.2 –11 Marks Q.3 –11 Marks **SECTION - II** Q.4 –8 Marks Q.5 –11 Marks Q.6 –11 Marks

GANPAT UNIVERSITY

FACULTY OF COMPUTER APPLICATIONS

Programme	MCA				Branch/Spec.	Computer Applications			
Semester	I				Version	1.0.0.0			
Effective from Academic Year	2015-16				Effective for the batch Admitted in	June 2015			
Subject code	P11A3IDD	Subject Name			Introduction to Data Analysis & Data Management				
Teaching scheme					Examination scheme (Marks)				
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	3	0	1	0	4	Theory	40	60	100
Hours	3	0	2	0	5	Practical	20	30	50

Pre-requisites:

Basic Knowledge of computer

Learning Outcome:

To make effective presentation, document editing, spreadsheets, database that will be useful for project documentation, arithmetic calculation, project report.

Theory syllabus

Section	Content	Hrs
1	**Open Office – Writer (8)** Selecting the application package Working with Documents- Formatting Documents - Setting Page style- Creating Tables- Drawing Tools - Printing Documents - Operating with MS Word documents Mail Merge Watermark, Drop cap Macro **Open Office-Calc (12)** Introduction to Spreadsheets Overview of a Worksheet	20

	Creating Worksheet & Workbooks Organizing files, Managing files & workbooks Functions & Formulas Working with Multiple sheets Creating Charts & Printing Charts	
2	**Open Office-Math (5)** Introduction-Formula Editor Math Menus Toolbars **Open Office -Base (8)** Introduction- Database Concepts Advantages of OPEN OFFICE -BASE Overview of Database Creating a New Database Creating Tables **Open Office -Impress (7)** Introduction – Creating Presentation Advantages of OPEN OFFICE -IMPRESS Saving Presentation Files, Master Templates & Re-usability, Slide Transition.	20
Practical content		
List of programs specified by the subject teacher based on above mentioned topics		
Text Books		
1	Open Office Basic: An Introduction Paperback by Prof James Steinberg.	
Reference Books		
1	PC Software for windows made simple by Taxali R.K.-Tata McGraw-Hill Publishing Co. LTD.	
2	Taming Apache OpenOffice: Getting Started By Jean Hollis Weber.	
3	ACCESS 2000 ,BPB Publications, Celeste Robinson .	
4	10 Minute guide to MS-ACCESS 2000 ,PHI publication, Faithe wempen .	
	Question Paper Scheme:	

	University Examination Duration: 3 Hours Note for Examiner: - (I) Questions 1 and 4 are compulsory with no options. (II) Internal options should be given in questions 2, 3, 5 and 6. **SECTION - I** Q.1 –8 Marks Q.2 –11 Marks Q.3 –11 Marks **SECTION - II** Q.4 –8 Marks Q.5 –11 Marks Q.6 –11 Marks

GANPAT UNIVERSITY

FACULTY OF COMPUTER APPLICATIONS

Programme	MCA		Branch/Spec.	Computer Applications	
Semester	I		Version	1.0.0.0	
Effective from Academic Year	2015-16		Effective for the batch Admitted in	June 2015	
Subject code	P11A4IIT	Subject Name	Introduction to 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	0	-	-	3	Theory	40	60	100
Hours	3	0	-	-	3	Practical	-	-	-

Pre-requisites:

Student should have basic knowledge of Computer and Technologies

Learning Outcome:

Students have knowledge of computer technologies, various devices, computer architecture and their internal components.

Theory syllabus

Section	Content	Hrs
1	**Introduction to Computer, Information Technology, Hardware and processor (12)** History of Computer Definition of computer Block Diagram of computer Characteristics of computer Generation of computer:Digital computer, mini, micro, mainframe, super Hybrid computer Data and Information Features of Information System Hardware Processor Architecture Computer Arithmetic Instruction Set Architecture	20

	Peripheral Device(8) FDD, Types of FDD Hard disk drive Types of HDD Tape Drives CD-DVD Drives USB Cache Memory Pen Drive Port Introduction: USB, Serial, Parallel and PS2 Input Devices: Key Board, Mouse , Touch screen, Scanner, OMR,MICR,OCR Output Devices: VDU, Printer Communication Devices: MODEM, NIC	
2	**Introduction to Language, Processor and software (12)** Types of Languages: Low level v/s High level languages, Introduction of Machine Language, Introduction of Assembly Language Language Processor: Compilers, Interpreter, Assemblers Difference between Compiler-Assembler-Interpreter Types of Software: System Software, Application Software **System security and Management(8)** Backup and Restore Defragment Disk Management Installation of OS and Applications Driver Installation Booting system Securing system from virus or unauthorized	20
Practical content		
N. A.		
Text Books		
1	PC Hardware in a Nutshell,2ndEditionByBarbara FritchmanThompson,Robert Bruce Thompson- O'Reilly Publisher	
Reference Books		

1	Fundametal Of computer Organization By Albert Zomaya
2	Fundamentals of Computer Organization and Architecture By Mostafa AB-EL-BARR and Hesham EL-REWNI
	Question Paper Scheme: **University Examination Duration: 3 Hours** Note for Examiner: - (I) Questions 1 and 4 are compulsory with no options. (II) Internal options should be given in questions 2, 3, 5 and 6. **SECTION - I** Q.1 –8 Marks Q.2 –11 Marks Q.3 –11 Marks **SECTION - II** Q.4 –8 Marks Q.5 –11 Marks Q.6 –11 Marks

GANPAT UNIVERSITY

FACULTY OF COMPUTER APPLICATIONS

Programme	MCA				Branch/Spec.	Computer Applications		
Semester	I				Version	1.0.0.0		
Effective from Academic Year			2015-16		Effective for the batch Admitted in			June 2015
Subject code	P11A5FOS		Subject Name		Fundamentals of Operating System			
Teaching scheme					Examination scheme (Marks)			
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	3	0	2	0	5	Theory	40	60	100
Hours	3	0	4	0	7	Practical	20	30	50

Pre-requisites:

Basic Knowledge of computer

Learning Outcome:

To understand the working of operating system.

Theory syllabus

Section	Content	Hrs
1	**Introduction To Operating System(20)** Introduction to Operating System, Evolution of operating system, Structure of Operating , OS Operations OS Organizations , Distributed Systems , Open source Operating systems , Process Management , Memory Management , Storage Management , Computing Environment **Installing , upgrading and managing Windows – 7 (10)** gathering hardware devices , Preparing to install windows 7 , upgrading and migrating to windows 7 , Clean and Image based installation , Configuring Application Compatibility , administrating windows features , Disk management , installing and configuring device drivers **File Access, Printers and Network connectivity with Windows – 7 –I (12)** Introduction to Authentication and Authorization , Managing file access , Shared Folders , File compression , file archiving , managing printers , connecting windows 7 client with server , configuring ipv4 & ipv6 connectivity	

2	**File Access, Printers and Network connectivity with Windows – 7 –II (12)** Implementing APIPA , Introduction to Name resolution , troubleshooting network issues , Overview of wireless network , configuring wireless network **Securing , Optimizing and maintaining windows 7 Client (20)** Overview of local security management , local security policy settings , EFS and Bitlocker , Application restrictions , UAC , Windows Firewall , Administrating IE8 , Windows Defender **Configuring Mobile Computing and Remote Access in windows 7 (10)** Configure Mobile computer and device settings , Remote desktop , remote assistance , direct access , branch cache	
Practical content		
List of programs specified by the subject teacher based on above mentioned topics		
Text Books		
1	Operating System Concepts 8th Edition By Silberschatz, Galvin and Gagne- John Wiley and Sons,Inc Publisher.	
Reference Books		
1	Microsoft Windows 7 –Microsoft Press Book	
	Question Paper Scheme: **University Examination Duration: 3 Hours** Note for Examiner: - (I) Questions 1 and 4 are compulsory with no options. (II) Internal options should be given in questions 2, 3, 5 and 6. **SECTION - I** Q.1 –8 Marks Q.2 –11 Marks Q.3 –11 Marks	

	SECTION - II Q.4 –8 Marks Q.5 –11 Marks Q.6 –11 Marks

GANPAT UNIVERSITY

FACULTY OF COMPUTER APPLICATIONS

Programme	MCA	Branch/Spec.	Computer Applications
Semester	I	Version	1.0.0.0
Effective from Academic Year	2015-16	Effective for the batch Admitted in	June 2015
Subject code	P11B6CS1	Subject Name	Communication Skill-I

Teaching scheme						Examination scheme (Marks)			
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	4	0	0	0	4	Theory	40	60	100
Hours	4	0	0	0	4	Practical	0	0	0

Pre-requisites:

Knowledge of English Language which includes basic grammar, basic structure formation and ability to understand listening and reading comprehension

Learning Outcome:

Students will be able to demonstrate awareness of vocabulary unique to academic, personal and professional realms, clear pronunciation and adequate speed of speech appropriate to the intermediate level of English fluency.

Theory syllabus

Section	Content	Hrs
1	Introduction to Communication skills : Process of communication and its application Types of communication Activities on Verbal and non -verbal Communication Activities on Formal & Informal Communication Activities on Upward. downward and horizontal Communication Barriers in communication Signal language and symbol language The relative value of words, voice and expressions in communication Positive communication	9

	Proactive communication Situations specific communication Telephonic communication LSRW skills and its relevance in professional life	
	Parts of speech-Noun; adjective; verb and adverb	3
	Sentence formation Subject-verb agreement Auxiliary verb; Regular and Irregular verb Tense chart-Noun and Pronoun Positive; Negative; Interrogative and Interrogative negative sentences Usage of tenses	6
	Active and passive voice	3
	Direct speech and Indirect speech	3
2	Listening Skills: Role of listening in acquisition of English Language Types of listening Exercises on active, passive and selective listening Listening skills-audio/Video sessions on Indian accent Listening skills-audio/Video sessions on British/American and various other types of accent	9 12
	Presentation Skills: The art of presenting one's ideas effectively Planning, Preparation and Performance How to give a formal presentation individually/in a group (Do's and Don'ts) and mock presentations How to give a seminar presentation individually/in a group (Do's and Don'ts) and mock presentations	
	Assessments and evaluation	3
Practical content		
N. A.		
Text Books		
1		
Reference Books		
1		

	Question Paper Scheme: **University Examination Duration: 3 Hours** Note for Examiner: - (I) Questions 1 and 4 are compulsory with no options. (II) Internal options should be given in questions 2, 3, 5 and 6. **SECTION - I** Q.1 –8 Marks Q.2 –11 Marks Q.3 –11 Marks **SECTION - II** Q.4 –8 Marks Q.5 –11 Marks Q.6 –11 Marks