

GANPAT UNIVERSITY									
FACULTY OF COMPUTER APPLICATION									
Programme	B.Sc.(IT)				Branch/Spec.	-			
Semester	II				Version	1.0.0.0			
Effective from Academic Year	2014-15				Effective for the batch Admitted in	June 2015			
Subject code	U22A1DM1		Subject Name		Database Management System-I				
Teaching scheme					Examination scheme (Marks)				
(Per week)	Lecture(DT)		Practical(Lab.)		Total	CE	SEE	Total	
	L	TU	P	TW					
Credit	2	1	2	-	5	Theory	40	60	100
Hours	2	1	4	-	7	Practical	20	30	50
Pre-requisites:									
Knowledge of data and information. Fundamental knowledge of MS Access.									
Learning Outcome:									
Aware with manage database, query processing, transaction management and normalization concepts of database.									
Theory syllabus									
Unit	Content							Hrs	
1	Database Concepts and Architecture Introduction of Database, Benefits of Database Approach(01) <ul style="list-style-type: none"> • Structure of the Database System, Types of Database Users and Roles of Database Administrator(01) • Introduction to RDBMS?, Codd's rules for RDBMS, DBMS Vs. RDBMS (02) • Overview of Database System Architecture, Introduction to Distributed Database(02) • Database terms: Relation, Entity, Attribute, Attribute Value, Primary key, Candidate key, Alternate key (01) 							07	
2	Normalization & Transaction Control (15 sessions) Normalization(4) <ul style="list-style-type: none"> • First, second and third normal forms (2) • Boyce / Codd normal form(1) • multi-valued dependencies and fourth normal form (1) • Join dependencies and fifth normal form Transaction Control(11) <ul style="list-style-type: none"> • Transaction concepts, properties of transactions(02) • Serializability of transactions, testing for serializability(02) • System recovery, Two- Phase Commit protocol (02) • Recovery and Atomicity, Log-based recovery, concurrent executions of transactions and related problems(03) 							15	
3	Interactive SQL Part – I (24 Sessions) <ul style="list-style-type: none"> • Introduction to SQL, Logging into SQL * Plus, Naming Rules and Conventions, Data Types (03) • Creating a Table, Viewing data in the tables, Sorting data in a table, Delete operations, Updating contents of a table, Modifying the structure of tables, Renaming, Truncating and Destroying tables (10) • Examining objects created by a user (01) • Constraints (I/O and Business rule constraints) (04) • DDL, DML, DCL/TCL, DQL(Select Clause) (01) 							24	

	<ul style="list-style-type: none"> • Computations on table data(Range Searching Pattern Matching) (02) <p>User Management : Creating a new user in Oracle, Assigning rights to the user & changing the password of an existing user(01) Security Management using SQL</p> <ul style="list-style-type: none"> • Security using Grant and Revoke Statements (02) 	
4	<p>Interactive SQL Part – II (14 sessions) (Book 3 and Book 4)</p> <ul style="list-style-type: none"> • Oracle Built-in Functions (Single row Functions and Group Functions) (03) • Set Operators, Sub query(03) • Group by Clause, Having Clause, Group by using ROLLUP and CUBE operator, EXISTS/ NOT EXISTS operator (03) • Different Types of Joins(02) • Index, View, Sequence(03) • Setting environment using SET command(01) <p>Advance features in SQL * Plus (02)</p> <ul style="list-style-type: none"> • Code a tree structured Query, Code a Matrix Report in SQL , Dump function(02) 	14
Practical content		
List of programs specified by the subject teacher based on above mention topics.		
Text Books		
1	Database System Concepts- Silberschatz, Korth, Sudarshan, Fifth Edition, McGraw Hill An	
2	PL/SQL The Programming Language of Oracle by Ivan bayross(4 th Edition), BPB Publications	
Reference Books		
1	Introduction to Database Systems by C.J.Date (Eighth Edition)	
2	Database Systems Using ORACLE by Nilesh Shah (Second Edition), Prentice Hall of India SQL,	
3	Database System Concepts- Silberschatz, Korth, Sudarshan, Fifth Edition, McGraw Hill An	
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 Eight : each question must be 5 marks) --- 30 Questions must be covered from all possible section.	
	Q-2 (Must be From topics: Database Concepts and Architecture (07marks))	
	Q-3 (Must be From topics: Normalization & Transaction Control (07marks))	
	Q-4 (Must be From topics: Interactive SQL Part – I (08marks))	
	Q-5 (Must be From topics: Interactive SQL Part – II (08marks))	

Note:

Version 1.0.0.0 (First Digit= New syllabus/Revision in Full Syllabus, Second Digit=Revision in Teaching Scheme, Third Digit=Revision in Exam Scheme, Forth Digit= Content Revision)

L=Lecture, TU=Tutorial, P= Practical/Lab., TW= Term work, DT= Direct Teaching, Lab.= Laboratory work

CE= Continuous Evaluation, SEE= Semester End Examination

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FACULTY OF COMPUTER APPLICATION									
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Semester	II				Version	1.0.0.0			
Effective from Academic Year	2014-15				Effective for the batch Admitted in	June 2015			
Subject code	U22A2OOP		Subject Name		Object oriented Programming Concepts				
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:									
Must know about Basic concepts of C Programming.									
Learning Outcome:									
Aware all the basic concepts of OOP with practically. Getting the knowledge of package, Exception handling and various string function.									
Theory syllabus									
Unit	Content								Hrs
1	Introduction to Java and Basic Concepts: (13) Introduction to Java(6) Object-Oriented Paradigm (2) Basic Concepts: Data Abstraction, Encapsulation, Inheritance, Polymorphism, Dynamic Binding (1) What is Java, JDK and JRE? (1) The main() method, A First Java Program, Compiling and Interpreting Applications (2) Data types and Variables: (4) Primitive Data types, Declarations and scope (1) Variables and constants (1) Numeric Literals, Character Literals, String, String Literals (1) Arrays, Non-Primitive Data types (1) Operators and Expressions: (3) Expressions, Assignment Operator, Arithmetic Operators, Relational Operators, Logical Operators, Increment and Decrement Operators, Operate-Assign Operators (+=, etc.), The Conditional Operator, Operator Precedence. (2) Implicit Type Conversions , The Cast Operator , Generic type casting (1)								13
2	Decision Making, Branching and Looping (4) If...Else statements, Nesting of IF... Else statements, Else. If ladder. Switch, break and continue Statement (2) While loop, do-while, for loop (1) Enhanced for loop (1)								04
3	Introduction to Class, Method and Object: (8) Creating class and Methods (1) Calling Methods, Defining Methods, Method								08

	Parameters, Creating objects, new keyword, Scope (2) Constructors, destructors and garbage collector (1) Accessing class members and member functions, method overloading, method overriding (1) Static, final, abstract methods and classes, interface (1) Public, private, protected, default, friend access (1) Inheritance : Extending classes, Subclass, Multilevel inheritance, Hierarchical inheritance (1)	
4	Array, String, Vectors, Interfaces (11) • Arrays, Strings, Vectors: (7) Creating and initializing array, Two-dimensional array, Variable size array (3) String, String array, String methods, StringBuffer class (2) Vectors (1) ,Wrapper classes , autoboxing and Unboxing (1) • Interfaces : (4) Introduction, Defining and extending interfaces Implementing interfaces (2) Accessing interface variables, Concept of multiple inheritance (2)	11
5	Packages, Exception: (8) • Packages (3) Using system package, Naming conventions, creating packages, accessing package (2) Static import (1) • Managing errors and Exceptions: (5) Types of error, Compile time and run time errors (1) Exceptions, Exception handling code and syntax (1) Try-catch blocks, multiple catch statements. Finally block (2) User-defined exceptions, difference between throw and throws (1)	08
Practical content		
List of programs specified by the subject teacher based on above mention topics.		
Text Books		
1	Programming with Java by E. Balagurusamy, Tata McGraw Hill Publication	
Reference Books		
1	Programming java by Sachin Malhotra & Saurabh Chaudhary, Oxford Publication	
2	Head first java by Kathy Sierra & Bert Bates, O'Reilly	
3	Complete reference Java by Herbert Schildt, Tata McGraw Hill	
4	The Unified Modeling Language User Guide By Booch, Rumbaugh, Jacobson	
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 Eight: each question must be 5 marks) --- 30 Questions must be covered all possible section. Q-2 (Must be From topics: Introduction to Java and Basic Concepts (7) Q-3 (Must be From topics: Decision Making, Branching and Looping (3) Q-4 (Must be From topics: Introduction to Class, Method and Object (7)	

	Q-5 (Must be From topics: Arrays, Strings, Vectors, Interfaces (7)) Q-6 (Must be From topics: Packages, Exception (6))
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Semester	II				Version	1.0.0.0			
Effective from Academic Year	2014-15				Effective for the batch Admitted in	June 2015			
Subject code	U22A3WEB	Subject Name			Web Programming				
Teaching scheme					Examination scheme (Marks)				
(Per week)	Lecture(DT)		Practical(Lab.)		Total	CE	SEE	Total	
	L	TU	P	TW					
Credit	2	1	2	-	5	Theory	40	60	100
Hours	2	1	4	-	7	Practical	20	30	50
Pre-requisites:									
Knowledge of Basic HTML Tags.									
Learning Outcome:									
By applying this knowledge student can make static web page.									
Theory syllabus									
Unit	Content							Hrs	
1	Internet Concepts (10) <ul style="list-style-type: none"> • A brief Introduction to the Internet (02) • Internet Address, Uniform Resource Locator, Internet Service Provider (02) • Intranet, Extranet, Working of Internet (1.5) • Hypertext Transfer Protocol , Introduction to World Wide Web , Search Engines (1.5) • Introduction to web server and web browser, E-mail (02) • File Transfer Protocol (01) 							10	
2	Introduction to HTML (11) <ul style="list-style-type: none"> • Understanding HTML , Create a Web Page (01) • Custom Backgrounds and Colors, Linking to other Web Pages, Publishing HTML Pages (02) • Basic Tags and attributes (02) • Formatting, Tags (1.5) • List Tags (1.5) • Email Links and link within a Page (01) • Creating Web Page Graphics, Putting Graphics on a Web Page (01) • Audio & Video in HTML (01) 							11	
3	Advanced HTML and JavaScript (14) <ul style="list-style-type: none"> • Advanced Layout with Tables (1.5) • Working with Frame (1.5) • Creating HTML Forms (1.5) • Cascading Style Sheet (1.5) • Class and External Style Sheet (01) • Introduction to JavaScript, Variables (01) • Using Operators (01) • Control Statements (01) • JavaScript Loops (02) • JavaScript Functions (02) 							14	

4	<p>Macro-Media Dreamweaver (10)</p> <ul style="list-style-type: none"> • Introduction to Dream weaver (01) • Site Management, Designing Page Layout (02) • Accessing Menus (1.5) • Inserting and Formatting Text , Inserting Images (01) • Inserting Tables (1.5) • Inserting Frames (1.5) • Working with Forms (1.5) 	10
Practical content		
List of programs specified by the subject teacher based on above mention topics.		
Text Books		
1	Introduction to Internet and HTML Scripting , Bhaumik Shroff	
Reference Books		
1	SAMS Teach Yourself HTML in 24 hours, Techmedia.	
2	Dreamweaver MX Bible,Joseph W.Lowery	
3	The complete reference dreamweaver 4, Jennifer Ackerman Ketteell	
4	The complete reference web design Thomas a. Powell, TATA McGraw-Hill, Second Edition	
Note for Examiner		
	Q-1Must 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		
	<p>Q-1 Attempt any Six Out of Eight: each question must be 5 marks: (30 Marks) Questions must be covered all possible section.</p> <p>Q-2 Must be from topics: Internet Concepts: (06 marks)</p> <p>Q-3 Must be from topics: Introduction to HTML: (08 marks)</p> <p>Q-4 Must be from topics: Advanced HTML: (10 marks)</p> <p>Q-5 Must be from topics: Macro-Media Dreamweaver: (06 marks)</p>	

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Programme		B.Sc.(IT)				Branch/Spec.		-	
Semester		II				Version		1.0.0.0	
Effective from Academic Year			2014-15			Effective for the batch Admitted in			June 2015
Subject code		U22A4BCN		Subject Name		Basic of Computer Networks			
Teaching scheme					Examination scheme (Marks)				
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	4	-	-	-	4	Theory	40	60	100
Hours	4	-	-	-	4	Practical			
Pre-requisites:									
Basic knowledge of computer and IT.									
Learning Outcome:									
Getting the knowledge of how data is send from one device to another with layer technology and protocols and which protocol is used for particular transmission.									
Theory syllabus									
Unit	Content								Hrs
1	Introduction To Computer Network (4) Need of Computer Network, Advantages of Computer Network, Uses of Computer Network(1), Network Models, Categories of Networks and Internetworks(1), Line Configurations, Network Topologies (Bus, Star, Ring, Star Bus, Star Ring and Physical Mesh) (2)								04
2	Study of Reference Models (8) Study of Reference Models, Need of Layers, Design Issues of Layers, ISO/OSI Model(5), TCP/IP Model(1), A Comparison of OSI and TCP Reference Model(1), Asynchronous Transfer Mode (ATM) (1)								08
3	Network Concepts And Components (7) Network Concepts : Wireless Networks(1), Layered Approach, Interfaces, Services, Protocols(1), Brief Study of X.25 Protocol(1), Intranet and Extranet(1) Network Components : Cabling and Connector Standards(1), Network Interface Card, Concentrators, Hubs, Repeaters, Gateways(1),SDN,ridges/Switches,Routers(1)								07
4	TCP/IP protocols (12) IP Addressing, sub netting (2), ARP, IARP, ICMP, IGMP, UDP, TCP, Client- server model, BOOTP, DHCP, DNS, Telnet, FTP, TFTP, SMTP, SNMP, HTTP, WWW. (10)								12
Practical content									
Text Books									
1	Computer Network, S.S.Shinde, New Age International (P) Limited, Publishers								
Reference Books									
2	B.A. Forouzan: Data Communication and Networking, Tata McGraw Hill. Web								
3	Link : http://www.protocols.com/pbook/tcpip1.htm								

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 Eight : each question must be 5 marks) --- 30 Questions must be covered all possible section. Q-2 (Must be From topics: Introduction To Computer Network (Marks: 05)) Q-3 (Must be From topics: Study of Reference Models (Marks: 08)) Q-4 (Must be From topics: Network Concepts And Components (Marks: 08)) Q-5 (Must be From topics: TCP/IP protocols (Marks: 09))

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Programme		B.Sc.(IT)				Branch/Spec.		-	
Semester		II				Version		1.0.0.0	
Effective from Academic Year			2014-15			Effective for the batch Admitted in			June 2015
Subject code		U22B5CS2		Subject Name		Communication Skill-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 Grammar.									
Learning Outcome:									
To acquire proficiency in English language among the students.									
Theory syllabus									
	Internal Assessment (30)				External Examination (70)				
	Theory – I		LSRW (Theory-II+ Viva)		Theoyr – I		LSRW (Theory-II+viva)		
	40/2		40/2		60/2		60/2		
Unit	Content								Hrs
1	<p>Reading Skills:</p> <ul style="list-style-type: none"> -Reading as a skill and the process: information---interpretation-----analysis---logical correlation----comprehension and response -Reading books/novels/magazines/articles as per one’s interest and improving general understanding of English language, vocabulary building, understanding of correct sentence structure etc. -Reading English Newspaper, understanding the headlines /articles and improving formal understanding of English language, vocabulary building, understanding of correct sentence structure etc. -Exercises on reading comprehension <p>Pronouns; Prepositions; Conjunctions and Interjections</p> <p>Writing Skills:</p> <ul style="list-style-type: none"> -Understanding business communication, types and it’s nuances -The golden rules of business communication -Paragraph writing; Essay writing and Précis writing -Note making; Notice ; Memos and Circulars -How to write formal letters/cover letters effectively (Do’s and Don’ts) and practice exercises on various situations -How to write formal e mails effectively (Do’s and Don’ts) and practice exercises on various situations 								21
2	<p>Vocabulary building:</p> <ul style="list-style-type: none"> -roots; Prefix and suffix -synonyms and antonyms -idioms and phrases -phrasal verbs 								09

	-words often confused -contextual vocabulary -Analogy	
3	Simple, compound and complex sentences Integrated module) Speaking Skills & Writing Skills: -Writing and Speaking self-introduction effectively - Writing and Speaking on my daily life/routine activities - Writing and Speaking on topics pertaining to my mother/father/village/school/college etc. effectively - Writing and Speaking on my favorite book/role model/tourist destination/actor/freedom fighter etc. effectively - Writing and Speaking on experiences and sharing of events from school life, college life, personal life etc	09
4	Grooming and etiquette JAM Session Assessments and evaluation	09
Practical content		
Text Books		
1		
Reference Books		
1	Refer Materials provided by Faculty Member	
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 Eight: each question must be 5 marks) --- 30 Questions must be covered all possible section. Q-2 (Must be From topics: Pronouns; Prepositions; Conjunctions and Interjections and Writing Skills: (8 marks)) Q-3 (Must be From topics: Vocabulary building: (6 marks)) Q-4 (Must be From topics: Simple, compound and complex sentences, Speaking Skills & Writing Skills: (8 marks)) Q-5 (Must be From topics: Grooming and etiquette, JAM Session, Assessments and evaluation (8 marks))	

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