

GANPAT UNIVERSITY

FACULTY OF COMPUTER APPLICATIONS

TEACHING AND EXAMINATION SCHEME

Programme	BACHLOR OF SCIENCE IN INFORMATION TECHNOLOGY (INFRASTRUCTURE MANAGEMENT SERVICES) – BSC-IT (IMS)	Branch/Spec.	Computer APPLICATIONS																
Semester	IV																		
Effective from Academic Year		2017-18	Effective for the batch Admitted in											JAN – 2018					
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						
U44A1SNM2	SERVER NETWORK INFRASTRUCTURE MANAGEMENT-II	2	-	2	3	-	3	2	-	2	6	-	6	20	30	50	40	60	100
U44A2MSA	MAIL SERVER ADMINISTRATION	2	-	2	1	-	1	2	-	2	2	-	2	20	30	50	40	60	100
U44A3FER	FUNDAMENTALS ENTERPRISE ROUTING	1	-	1	3	-	3	1	-	1	6	-	6	20	30	50	40	60	100
U44A4FSM	FUNDAMENTALS OF STORAGE MANAGEMENT	4	-	4	-	-	-	4	-	4	-	-	-	40	60	100	-	-	-
U44A5AWT2	ADVANCED WEB TECHNOLOGY-II	1	-	1	3	-	3	1	-	1	6	-	6	40	60	100	20	30	50
U44A6IP2	INDUSTRIAL PROJECT-II	-	-	-	4	-	4	-	-	-	8	-	8	-	-	-	40	60	100
Total		10		10	14		14	10	-	10	24	-	24	140	210	350	180	270	450

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Programme	BACHLOR OF SCIENCE IN INFORMATION TECHNOLOGY (INFRASTRUCTURE MANAGEMENT SERVICES) – BSC-IT (IMS)				Branch/Spe c.	COMPUTER APPLICATION			
Semester	IV				Version	1.0.0.0			
Effective from Academic Year		2015-16			Effective for the batch Admitted in			June 2015	
Subject code	U44A1SNM 2		Subject Name:-		Server Network Infrastructure Management-II				
Teaching scheme					Examination scheme (Marks)				
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	2	-	3	-	5	Theory	20	30	50
Hours	2	-	6	-	8	Practical	40	60	100
Pre-requisites:									
<ol style="list-style-type: none"> 1. Must knowledge about the DNS and DHCP role. 2. How to connect client with static and dynamic IP. 3. Also knowledge about group policy. 									
Learning Outcome:									
<ol style="list-style-type: none"> 1. Student can get the knowledge about the MMC which provide the dash board of different services. 2. Student can get the knowledge about PowerShell ADRMS roles and VB script. 3. Student can create secure server using core installation of server 4. Student can develop the secure system instead of enterprise version using the core version because it more secure then enterprise. 5. Student can develop the word shred file with full of right for different users. 6. Student can create the own PowerShell command file and also WMI filter file for different clients 									
Theory syllabus									
Unit	Content								Hrs
1	<ul style="list-style-type: none"> • AD, Identity and Access , Components of AD infrastructure , Create new windows Server 2008 Forest , Adding AD DS role using windows interface , creating DC , installing server core , working with AD snap ins , AD administration tools , creating a Custom console with AD span ins , Creating Objects in AD , Delegation and Security of AD objects , 								10
2	<ul style="list-style-type: none"> • Creating users with templates , dsadd , csvde , ldifde , powershell , vbscript , cmdlets and objects of powershell , Using aliases , namespaces , PSdrives , Import users from database with windows power shell , vbscript vs. windows powershell , Supporting User Objects and Accounts , types of groups , scope , managing membership of groups , creating groups using dsadd-csvde-ldifde , dsrm , shadow groups , default groups , speial identities , workgroup-domain and trust , computer container , OUs and Computers , creating computers with netdom, power shell , vbscript , creating and managing custom MMC , troubleshooting computer objects and accounts 								10
3	<ul style="list-style-type: none"> • Overview and review of policy , policy settings , managing group policy scope , GPO links , inheritance and precedence , WMI filter , group policy processing , resultant set of policy , delegating the support of computers , delegating administration using restricted group policy , configuring local security policy , security templates , security configuration wizard , preparing SDP , managing the scope of a SD GPO , GPSI and Slow Links , Auditing 								10
4	<ul style="list-style-type: none"> • Configuring password and lockout policy , PSO precedence and Resultant PSO , PSO and OU , Auditing Authentication , Scoping audit policies , configuring RODC , deploying RODC , administer RODC credentials caching , administrating role separation , DNS structures , integration with ADDS , forwarders vs. root hints , DNS and DHCP considerations , unattended installation options and answer files , installing ADC-CDC-Tree , configuring operation master roles , FSMO , transferring-seizing OM roles , configuring DFS replication of sysvol 								10

5	<ul style="list-style-type: none"> Understanding sites , domain controller location and subnets , configuring the global catalog and application directory partition , universal group membership caching , configuring replication , intrasite replication , site-links , bridge-head server , monitoring replication , domain-forest functional levels ,managing multiple domain and trust relationship , authentication protocols and trust relationship , securing trust relationship 	10
6	<ul style="list-style-type: none"> Twelve categories of ADDS administrations , performing online and offline maintenance , working with ADDS database , managing system resources , working with windows system resource manager , Working with AD LDS, AD LDS Instances, Understanding AD CS, Configuring AD CS, Working with Enterprise PKI 	5
7	<ul style="list-style-type: none"> Understanding AD RMS, Configuring AD RMS, Creating a Rights Policy Template, The Purpose of Firewall, The AD FS Authentication Process, Installing AD FS, Configuring & managing AD FS. 	5
Practical content		
Text Books		
1	1. Configuring Windows Server 2008 Active Directory by Dan Holme, Nelson Ruest, Danielie Ruest, Publisher Microsoft Press	
Reference Books		
1		
Paper Structure		
	<p>(Attempt any Five Out of Seven : each question must be of 03 marks) --- 15 Questions must be covered all possible section. (Must be From topics : Installation, Understanding ADD Services on Server core, AD administration, Users , Group , Computers (04 marks))</p> <p>(Must be From topics : Group Policy Infrastructure , group policy settings, Authentication, integrating DNS with ADDS , Domain Controllers(04 marks))</p> <p>(Must be From topics : Sites and Replication , domain and Forest (03 marks))</p> <p>(Must be From topics : Directory Business Continuity , AD Light Weight Directory Service , AD Certificate Services, AD Rights Management Services, AD Federation Services(04 marks))</p>	

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									
Programme		BACHLOR OF SCIENCE IN INFORMATION TECHNOLOGY (INFRASTRUCTURE MANAGEMENT SERVICES) – BSC-IT (IMS)				Branch/Spec.		COMPUTER APPLICATION	
Semester		IV				Version		0.0.1.0	
Effective from Academic Year			2015-16			Effective for the batch Admitted in			June 2015
Subject code		U44A2MSA		Subject Name		MAIL SERVER ADMINISTRATION			
Teaching scheme					Examination scheme (Marks)				
(Per week)	Lecture(DT)		Practical(Lab.)		Total	CE		SEE	Total
	L	TU	P	TW					
Credit	1	-	2	-	3	Theory	20	30	50
Hours	1	-	4	-	5	Practical	40	60	100
Pre-requisites:									
Student should have basic knowledge of Active Directory in Windows Server 2008 Operating System									
Learning Outcome:									
At the end of this paper, students should be able to familiarise Exchange Server management, Sending mail to same domain user as well as different domain users. Students are also able to develop their own Simple Mail Server									
Theory syllabus									
Unit	Content								Hrs
1	Introduction to Mail Servers, basic concepts of exchange Introduction to Mail Servers, Passive Mail server, exchange servers, Exchange Editions								08
2	Overview of MS Exchange 2010 and the AD DS , installation and deployment of 2010 exchange Brief overview of AD , Exchange server 2010 and AD , DNS configuration , The role of exchange 2010 roles , stores and storage groups , database file structure , data recovery and transaction logs , public folder , exchange server storage design, Preparing for Installation, Installing & Verifying Exchange Server 2010								12
3	Configuring Mailbox Server Roles, Managing Recipients Objects, Managing E-Mail Addresses & Address Lists Implementing Mailbox Server Roles, Managing Public Folder Databases, Managing other Recipients, Configuring E-Mail Policies, Address Lists, Bulk Recipients ManagementTasks								10
4	Managing Clients Access, Message Transport Implementing Client Access Servers, Features, Outlook Web Access, Introduction to Implementing Mobile Messaging, Introduction to Message Transport, Implementing Message Transport								10
5	Managing Availability, Backup & Recovery, Maintaining the Messaging System Implementing High Availability for Mailbox Servers, Managing Backup Solution, managing a Recovery Solution, Overview of implementing change Management, updating exchange Servers								10
Practical content									
List of programs on the above-mentioned topics as per decided by subject faculty									
Text Books									
1	70-662 mcts exchange 2010 microsoft press								
Reference Books									
1									
Paper Structure									
Q-1 (Attempt any Five Out of Seven : each question must be of 03 marks) --- 15									

Questions must be covered all possible section.

(Must be From topics : Introduction to Mail Servers, basic concepts of exchange, Overview of MS Exchange 2010 and the AD DS , installation and deployment of 2010 exchange (04 marks))

(Must be From topics : Configuring Mailbox Server Roles, Managing Recipients Objects, Managing E-Mail Addresses & Address Lists (04 marks))

(Must be From topics : Managing Clients Access, Message Transport (03 marks))

(Must be From topics : Managing Availability, Backup & Recovery, Maintaining the Messaging System (04 marks))

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Semester		III				Version				
Effective from Academic Year			2015-16			Effective for the batch Admitted in			Jan 2016	
Subject code		U44A3FER		Subject Name		FUNDAMENTALS ENTERPRISE ROUTING				
Teaching scheme					Examination scheme (Marks)					
(Per week)	Lecture(DT)		Practical(Lab.)		Total	CE		SEE	Total	
	L	TU	P	TW						
Credit	1	-	3	-	4	Theory	20	30	50	
Hours	1	-	6	-	7	Practical	40	60	100	
Pre-requisites: Basic knowledge of Routing Protocols.										
Learning Outcome:This paper will provide the knowledge of Routing and Switching concepts.										
Theory syllabus										
Unit	Content								Hrs	
1	EIGRP Principles, Scalable EIGRP Principles of EIGRP, Features of EIGRP, Tables of EIGRP, Metric of EIGRP, Configuration of EIGRP, Summarization with EIGRP, EIGRP stub router, , unequal cost load balancing , Variance , Authentication , Wan topologies of EIGRP								18	
2	Understanding Simple Single- Area OSPF, Network Topologies, Across Multiple Areas, OSPF Advanced Topics Understanding OSPF Fundamentals, Configuring OSPF within Single Area, Cost, Understanding the differences between OSPF Network Types, Using OSPF Across Multiple Area- Features, Router Types, Link- State Advertisements, Different Types Of Areas, Propagation of LSAs, Special OSPF Area, Authentication, Wan topologies of OSPF								18	
3	BGP Concepts, Neighbors, Controlling BGP Route Selection Introduction to BGP, Context for the BGP, BGP Route Stability, BGP Operation Basics, When to use BGP, Muthoming, BGP States, Configuring BGP, Authentication, Controlling BGP Route Selection using the Weight, Local-Preference, MED								20	
4	Introduction to IPv6 & IPv6 Addressing IPv6 Routing Protocols, Configuration & Transitioning from IPv4 Introduction to IPv6, IPv6 Features, IPv6 Header, IPv6 Addressing, Types of Addresses, IPv6 Routing Overview, EIGRP for IPv6, RIPng, OSPFv3, OSPFv3 LSA types, configuring IPv6 Routing, Transitioning from IPv4 to IPv6								15	
5	Implementing Redistribution & Controlling Routing Updates Understanding Redistribution Fundamentals, Routing Metrics & Redistribution, Path Selection Between Routing Protocols, Configuring Retribution between Routing Protocol								13	
Practical content										
Text Books										
1	CCNP-Route Study Guide, Cisco Authorized book									
List of programs on the above mentioned topics as per decided by subject faculty										
Paper Structure										

Q-1 (Attempt any Five Out of Seven : each question must be of 03 marks) --- 15

Questions must be covered all possible section.

(Must be From topics : EIGRP Principles, Scalable EIGRP (03 marks))

(Must be From topics : Understanding Simple Single- Area OSPF, Network Topologies, Across Multiple Areas, OSPF Advanced Topics (04 marks))

(Must be From topics : BGP Concepts, Neighbors, Controlling BGP Route Selection (04 marks))

(Must be From topics : Introduction to IPv6 & IPv6 Addressing IPv6 Routing Protocols, Configuration & Transitioning from IPv4, Implementing Redistribution & Controlling Routing Updates (04 marks))

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Semester		IV				Version		1.0.0.1	
Effective from Academic Year			2016-17			Effective for the batch Admitted in			
Subject code		U44A4FSM		Subject Name		Fundamentals of Storage Management			
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 networking and data storage devices.									
Learning Outcome:									
Able to manage various data storage policy and use appropriate storage system as per requirement.									
Theory syllabus									
Unit	Content								Hrs
1	Storage Architectural, Landscape, Software(10) Storage Takes Centre Stage ,The Need for Business Continuance, Driving Towards Operational Agility, Charting a Storage Networking Roadmap, Audience and Text Overview, Chapter Summary, Storage Building Blocks, Internal Storage / Server Based Storage, External Storage (JBOD, RAID, TAPE and Other), DAS, NAS, SAN, IP San Protocol, Framework for Storage Management, Software, Storage Network Management, Storage Resource Management, Storage Policy Management, Data Protection, High Availability, Virtualization.								10
2	Storage System, Reaping Value From Storage Network, Business Continuity For Mission Critical Application (10 Hours) Storage Service Deliverables, Brief History and Evolution of Storage, Placing Storage Intelligence, Network Control Points, Balancing Multivendor Configurations, Balancing Offensive and Defensive strategies, Primary Defensive Strategies, Primary Offensive Strategies, Measuring Returns 1. Accessing Business Continuity Objectives, Availability within the Data Centre, Availability Across Geographies:, Disaster Tolerance and Recovery, Corporate Systems								10
3	Options For Operational agility, Initiating Deployment, Assessing Network Connectivity (10) Outsourced Storage, Integrated Network Services, Managing Service Level Agreements, Application Deployment, Corporate Asset Management, Infrastructure Design Shifts, Qualifying and Quantifying IT, Deployment, IP Storage Network Scenarios, Maximizing Operational Efficiency, Modern Networks Use Layered Protocols, Options for Metropolitan- and Wide-Area Storage Networking, Metropolitan- and Wide-Area Storage, Network Products, MAN and WAN Services, Security for Storage Networking								10
4	Long-Distance storage Networking applications, Managing The Storage Domain (9) Incrementing to Simplicity, Defining Simplicity, Managing Storage: A Plan of Attack, Creating Effective Policy Systems, Outsourcing for Management Simplicity IP Storage Networking Expands, Data Replication, Sizing the Link Bandwidth for Long-Distance Storage Networking, Applications 2, Estimating the Effects of Network Latency on Applications Performance 2, The Effects of TCP on Application, Performance,								9
5	Perfecting The storage Engine (9) Strategic Objectives, Tactical Goals, Storage Advances to Watch, Chapter Summary								9
Text Books/ Reference Book									
1	IP storage networking by : Gary Orenstein								
Paper Structure									
Q-1 (Attempt any Six Out of Eight: each question must be 5 marks) --- 30									

Questions must be covered all possible section.

(Must be From topics: (Storage Architectural, Landscape, Software (07marks))

(Must be From topics: (Storage System, Reaping Value From StorageNetwork, Business Continuity For Mission Critical Application (08 marks))

(Must be From topics: (Options For Operational agility, Initiating Deployment, Assessing Network Connectivity (07 marks))

(Must be From topics: (Long-Distance storage Networking applications | Managing The Storage Domain, Perfecting The storage Engine (08 marks))

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Semester		IV				Version		1.0.0.1		
Effective from Academic Year			2016-17			Effective for the batch Admitted in				
Subject code		U44A5AWT2		Subject Name		Advanced Web Technology-II				
Teaching scheme					Examination scheme (Marks)					
(Per week)	Lecture(DT)		Practical(Lab.)		Total	CE	SEE	Total		
	L	TU	P	TW						
Credit	1	-	3	-	3	Theory	20	30	50	
Hours	1	-	6	-	7	Practical	40	60	100	
Pre-requisites:										
Basic knowledge of C language and basic structure of different syntax.										
Learning Outcome:										
Able to manage various windows base c# application.										
Theory syllabus										
Unit	Content								Hrs	
1	Concepts of OOPS Introduction of OOPS, Class, Object, Method modifiers, Visibility modes, Polymorphism, Encapsulation, Inheritance,								10	
2	C# Fundamentals Understanding C# compiler, Layout of C# program, Primitives, Operators, Loops, C# Preprocessing directives, Strings, Enumerated Types, Arrays, Reference and Value types.								10	
3	Class Design in C# Introduction to C# class, Defining a class, Overview of Class Members, Constants, Fields, properties, Methods, Constructors, Delegates and Events, Operator Overloading, Interfaces, Generics, Structures, Structure versus class.								14	
4	Working with objects in C# Object Creation, Exception Handling, Implementing System Object methods in a custom class, Working with .NET Collection classes and Interfaces, Object Serialization, Object Life Cycle Management.								14	
Text Books/ Reference Book										
1	Pro c#.net by : Andrew Troelsen									
2	Corec#.net by : Stephen Perry									
Paper Structure										
<p>Paper Structure</p> <p>Note for Examiner must be common from any topics from syllabus. and onwards must be from specific topics and internal choice or option can be given</p> <p>(Attempt any Five Out of Seven : each question must be 5 marks) --- 15 Questions must be covered all possible section.</p> <p>(Must be From topics : Concepts of OOPS(04 marks)) Q-3 (Must be From topics : C# Fundamentals (03 marks)) Q-4 (Must be From topics : Class Design in C#(04marks)) Q-5 (Must be From topics : Working with objects in C#(04 marks))</p>										

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Semester	IV				Version	0.0.1.0			
Effective from Academic Year	2015-16				Effective for the batch Admitted in	June 2015			
Subject code	U44A6IP2		Subject Name		Industrial Project -II				
Teaching scheme					Examination scheme (Marks)				
(Per week)	Lecture(DT)		Practical(Lab.)		Total	CE	SEE	Total	
	L	TU	P	TW					
Credit	-	-	4	-	4	Theory	-	-	-
Hours	-	-	8	-	8	Practical	40	60	100
Pre-requisites:									
Student should have basic knowledge of Computer ABOUT COMPUTER NETWORK SERVER TECHNOLOGY , LINUX TECHNOLOGY, CISCO TECHNOLOGY									
Learning Outcome:									
At the end of this paper, students have Practical knowledge of different types of Operating System and its implementation and Configuration ,website Designing									