Department of

Information Technology B.Tech
VI semester

Course Details: (Professional Elective-III)

COURSETITLE	MiddlewareTechnologies
COURSECODE	15CT1129
PROGRAM	B.TECH
SPECIALIZATION	IT
PREREQUISITES	NIL

Course Outcomes(COs):

CO No.	Course outcomes
CO1	Define object middleware
CO2	Discuss the use of web services
CO3	Describe technical issues in middleware
CO4	Discover the use of middle ware in building distributed technologies
CO5	Associate security issues with distributed applications

CourseOutcome-

POmatrixSubject: Middleware

Technologies

Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO-1		2	2		2								2	1	
CO-2		2	2		3								2	1	
CO-3			2		2						2		2	1	
CO-4			3		2						3		2	1	
CO-5		3	3		3						3		2	1	

Week	Topic/Contents	CourseOutcomes	SampleQuestions	Teaching Learning Strategy	Assessment methodand Schedule
1	Unit-1: INTRODUCTION: Movingto ebusiness,whatisITarchitecture? Whyisthisdifferentfromwhatwedid	CO1	1. Explaintheneedfor movingto ebusiness 2. Definetheterm“IT Architecture”	Lecture	Assignment1,Test-1 Quiz1

S -Stronglycorrelated,M-Moderatelycorrelated,Blank-No correlation

Teaching-Learning&Evaluation

2	Who develops the architecture?Preliminaries RemoteprocedurecallsR emotedatabaseaccess Distributedtransactionprocessing	CO1	1. Writeshortnoteso n distributedtransa ctionprocessing. 2. ExplainRemote ProcedureCalls	Lecture	Assignment1,Test-1 Quiz1
3	Messagequeuing Messagequeuingversusdistributedtra nsactionprocessing whathappened toallthistechnology	CO1	1.DifferentiateMessag equeuinganddistribute dtransactionprocessin g	Lecture	Assignment1,Test-1 Quiz1
4	Unit-2: OBJECTS,COMPONENTS,AND THEWEB: Usingobjectmi ddlewareTransactionalcomponentmi ddleware,COM,EJB	CO2	1. Listoutthe componentsof Middleware 2. Whatistheroleofob jectmiddlewarein transactionprocess ing? 3. Whatisthepurposeo f EnterpriseJavaBean ?	Lecture	Assignment1,Test-1Quiz1
5	Finalcomments onTCM Internet Applications, WEBSERVICES:Servi ceconcepts, Webservices,UsingWebservices:A	CO2	1. ExplainCOM 2. How do youutilizea web service?	Lecture	Assignment1,Test-1 Quiz1
6	pragmaticapproach.UNIT-3: A TECHNICALSUMMARYOF MIDDLEWARE: Middleware elements,Thecommunicationslink,Th emiddlewareprotocol,Theprogramma ticinterface,	CO3	1.Discussmiddleware elements	Lecture	Assignment1,Test-1 Quiz1
7	Naminganddirectoryservices,Securit y,Systemmanagement,Commentson Webservices,Vendorarchitectures,Ve ndorplatformarchitectures,	CO3	1.Explainabout Middlewarebus architectures.	Lecture	Assignment1,Test-1 Quiz1
8	Test1	CO1,CO2 and CO3			

10	Vendor-distributedarchitectures,Using vendorarchitectures,Positioning,Strawmanfor usertarget architecture,Marketing, Implicitarchitectures,Middlewareinte	CO3	1.Differentiatebetweenlooselycoupled adtightlycoupled	Lecture	Assignment-2, Test-2Quiz - 2
11	UNIT-4: USINGMIDDLEWARETOBUILD DISTRIBUTED APPLICATIONS:What is middlewarefor?Supportforbusinessprocesses,Informationretrieval,Collaboration,Tiers,Thepresentationtier,The processing tier,	CO4	1. Whatis web servicesecurity? 2. How middlewaresupportsthebusinessprocess?	Lecture	Assignment-2, Test-2Quiz - 2
	Thedatatier				
12	Servicesversustiers,Architecturalchoices, Middleware busarchitectures,Hubarchitectures,Webservicesarchitectures,Looselycoupledversustightlycoupled.	CO4	1.ListoutthetiersinDistributeArchitecture. 2. Explainthesignificanceof Architecture	Lecture	Assignment-2, Test-2Quiz - 2
13	UNIT-5: SECURITY:Whatsecurityisneeded,Traditionaldistributedsystemsecurity, Webservicessecurity,Architectureandsecurity.APPLICATIONDESIGNANDIT'SARCHITECTURE:Problems withtoday'sdesignapproaches, Design up frontoras needed?,	CO5	1. How securityismaintained inadistributedarchitecture? 2. Writea shortnoteson Problems withtoday'sdesign	Lecture	Assignment-2, Test-2Quiz - 2
14	Theroleofbusinessrules,Existingsystems,Reuse,Siloandmonolithicdevelopment,Theroleofarchitecture,Levelsofdesign,Reconcilingdesignapproaches.	CO5	1.WhatisSiloandmonolithicdevelopment.	Lecture	Assignment-2, Test-2Quiz - 2
15	Test2	CO3,CO4 and CO5			