

SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)

Accredited "A" Grade by NAAC | 12B Status by UGC | Approved by AICTE

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SCHOOL OF COMPUTING

DEPARTMENT OF INFORMATION TECHNOLOGY

ACADEMIC YEAR 2019-2020_ELECTIVES



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SCHOOL OF COMPUTING

DEPARTMENT OF INFORMATION TECHNOLOGY

STUDENT CIRCULAR 2016 BATCH

04.05.2019

This is to inform you that it is mandatory to select one elective subject for the VII semester of Academic year 2019-2020 based on your area of interest. You can select one of the following subjects

1. SCS1608-Software Quality Assurance and testing
2. SIT1606-Big Data

Confirm the elective subject through your counselors to the HOD on or before
12-05-2019

HOD-IT
(Dr.R.Subhashini)

SCS1608	SOFTWARE QUALITY ASSURANCE AND TESTING	L	T	P	Credits	Total Marks
		3	0	0	3	100

UNIT 1

9 Hrs.

Software Quality Assurance Framework and Standards SQA Framework: Quality, Software Quality Assurance, Components of Software Quality Assurance -Software Quality Assurance Plan: Steps to develop and implement a Software Quality Assurance Plan -Quality Standards: ISO 9000 and Companion ISO Standards, CMM, CMMI, PCMM, Malcom Balridge, 3Sigma, 6Sigma.

UNIT 2

9 Hrs.

Software Quality Assurance Metrics and Measurement Software Quality Metrics: Product Quality metrics, In Process Quality Metrics, Metrics for Software Maintenance, Examples of Metric Programs Software Quality metrics methodology: Establish quality requirements, Identify Software quality metrics, Implement the software quality metrics, analyze software metrics results, validate the software quality metrics - Software quality indicators - Fundamentals in Measurement theory.

UNIT 3

9 Hrs.

Software Testing Strategy and Environment: Establishing testing policy, structured approach to testing, test factors, Economics of System Development Life Cycle (SDLC) Testing Software Testing Methodology: Defects, verification and validation, functional and structural testing, workbench concept, eight considerations in developing testing methodologies, testing tactics checklist

UNIT 4

9 Hrs.

Software Testing Techniques: Black- Box, Boundary value, Bottom -up, Branch coverage, Cause -Effect graphing, CRUD, Database, Exception, Gray - Box, Histograms, Inspections, JADs, Pareto Analysis, Prototyping, Random Testing, Risk - based Testing, Regression Testing, Structured Walkthroughs, Thread Testing, Performance Testing, White - Box Testing

UNIT 5

9 Hrs.

Software Testing Tools Taxonomy of Testing tools, Methodology to evaluate automated testing tools, Load Runner, Win runner and Rational Testing Tools, Silk test, Java Testing Tools, JMetra, JUNIT and Cactus

Max. 45 Hrs.

COURSE OUTCOMES

On completion of the course, student will be able to:

- CO1 : Explore the fundamental concepts of Software Quality Assurance.
- CO2 : Model Software Quality Assurance based on Metrics, Measurement.
- CO3 : Describe Software Testing Strategy, System Development Life Cycle, Software Testing Methodology
- CO4 : Validate Black Box Testing, White Box Testing, Pareto Analysis
- CO5 : Explain how to evaluate automated testing tools, Load Runner, JMetra, Cactus
- CO6 : Demonstrate in the form of Histogram, JADS

TEXT / REFERENCE BOOKS

1. Effective Methods for Software Testing, 2nd Edition, William E. Perry , Second Edition, Wiley India, 2006.
2. Software Quality, Mordechai Ben-Menachem/Garry S. Marliss, Thomson Learning Publication, 1997.
3. Software Engineering: A Practitioner's Approach, Roger S Pressman, Sixth Edition, McGraw Hill, 2005.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks : 100

Exam Duration: 3

Hrs.

PART A: 2 Questions from each unit, each carrying 2 marks

20 Marks

PARTB: 2 Questions from each unit with internal choice, each carrying 16 marks

80 Marks

Name List: Software Quality Assurance and Testing

Reg.No	Student Name
3612019	AMIRTA. R
3612035	ASHILA. T
3612041	BACHINA SOURAV TEJA
3612042	BANDI SAI KUMAR REDDY
3612047	BOPPANA KRISHNA PRASAD
3612049	CHATURVEDULA ANAGHA PRAVEENA
3612051	CHINTAKUNTA HARITHA
3612055	DEEPIKA MENON. S
3612062	ELLAKKIYA. D
3612067	GOKUL. R. S
3612075	HANUMANTHU GIRISH NAIDU
3612090	KANDI BHAVYA
3612092	KASIREDDY LATHASRI
3612117	MENAGA P
3612125	NANDHINI R
3612130	PAULINE JOYCE ZAC D
3612145	RAASHIKA. K
3612152	REGAN. G
3612155	ROOBAVIGNESH. M
3612159	SAI VAMSI KRISHNA CHIRALA. V. S
3612162	SAKTHIVEL. E
3612165	SANTHANALAKSHMI. S
3612166	SARAVANAN. V
3612172	SHREEMI SINGH
3612174	SHRUTHI. R
3612182	SRUNGARAPU VENKATA SAI KARTHIKEYA
3612197	VEERABOMMA SAI RITHIKA
3612198	VEMULA T S L V DURGA PRATHYUSHA
3612203	VISHALINI. J
3612204	VISHWAPRIYA. S
3612205	VUDUM SHIVA KRISHNA
3612801	DURAI NIVETHAN. MA

SIT1606	BIG DATA	L	T	P	Credits	Total Marks
		3	0	0	3	100

UNIT 1 INTRODUCTION

9 Hrs.

Introduction to Big Data - Challenges of Conventional Systems - Nature of Data - Small data - Medium data - Big Data - Small data vs Big data - Sources of Big Data - Big Data Characteristics - Big Data Analytics - Importance of Big Data, Big Data in the Enterprise - Big Data Enterprise Model - Building a Big Data Platform - Big data in Social and Behavioral sciences.

UNIT 2 HDFS, HADOOP AND HADOOP INFRASTRUCTURE

9 Hrs.

Hadoop and Databases - Typical Datacenter Architecture - Adding Hadoop to the Mix - Key Benefit - Flexibility: Complex Data Processing - HDFS - Hadoop Infrastructure - Architecture - Different in Data Model and Computing Model - HDFS Files and Blocks, Components of HDFS - Hadoop framework - HDFS - Map Reduce Framework - Data Loading techniques - Hadoop Cluster Architecture - Hadoop Configuration files - Hadoop Cluster modes - Single Node - Multi Node - Fully distributed node.

UNIT 3 HADOOP MAP REDUCE FRAMEWORK

9 Hrs.

Relationship between MapReduce and HDFS - Relationship between MapReduce and HDFS - Clients, Data Nodes, and HDFS Storage - MapReduce workloads. Hadoop framework - Hadoop data types - Hadoop map reduce Paradigm - Map and Reduce Tasks - Map reduce Execution framework - Partitioners and Combiners - Input formats (Input Splits and Records, Text Input, Binary Input, Multiple Inputs) - Output Formats (TextOutput, BinaryOutput, Multiple Output) - Hadoop Mapreduce programming - Advanced Map reduce concepts - Counters, Custom Writables - Unit testing framework - Error Handling - Tuning - Advanced Map reduce.

UNIT 4 HADOOP IMPLEMENTATION AND HADOOP ECO SYSTEM TOOLS

9 Hrs.

Hadoop Implementation - Job Execution - Hadoop Data Types - Job Configurations - Input and Output Formats - ECO system tools - Pig's Data Model, Pig Latin, Developing & Testing Pig Latin Scripts - Writing Evaluation, Filter, Load & Store Functions - Hive - Hive Architecture - Comparison with Traditional Database - HiveQL: Data Types, Operators and Functions - Hive Tables - Querying Data - Advance Hive, NoSQL Databases - HBase - Loading Data in Hbase - Querying Data in Hbase

UNIT 5 HADOOP PROJECT ENVIRONMENT

9 Hrs.

HBase: Introduction to HBase, Client API's and their features, Available Client, HBase Architecture, MapReduce - Integration. HBase: Advanced Usage, Schema Design, Advance Indexing, Coprocessors, Hadoop 2.0 - MRv2 - YARN - NameNode High Availability, HDFS Federation, MRv2, YARN, Running MRv1 in YARN, Upgrade your existing MRv1 code to MRv2, Programming in YARN framework-cover Apache Oozie Workflow Scheduler for Hadoop

Max. 45 Hours

COURSE OUTCOMES

On completion of the course, student will be able to-

1. Comprehend Enterprise Data to make Business Decisions
2. Analyse methods of loading voluminous data into Big Data framework using Flume and Sqoop.
3. Demonstrate the functions of Map Reduce Framework on any huge amount of Data
4. Apply Ecosystem tools for querying structured and unstructured Data.
5. Manage Data using HBase Framework.
6. Develop an application using Big Data tools.

TEXT / REFERENCES BOOKS

1. WA Gmob, "Big Data and Hadoop", Kindle Edition, 2013
2. Eric Miller, "A Overview of Map Reduce and its impact on Distributed Data", Kindle Edition, 2012.
3. Strata, "Big Data Now", O'Reilly Media Inc., Kindle Edition, 2012.

END SEMESTER EXAM QUESTION PAPER PATTERN	
Max. Marks : 100	Exam Duration: 3 Hrs.
PART A: 10 questions of 2 marks each - No choice	20 Marks
PART B : 2 Questions from each unit with internal choice, each carrying 12 marks	80 Marks

Name List-Big Data

Reg.No	Student Name
3612001	ABHINANDAN KUMAR
3612002	ABHISHEK OMAR
3612003	ABINAYA. R
3612004	ABISEK. K
3612005	ADARSH
3612007	AJAY. S
3612010	AKASH. U
3612012	AKHIL. K
3612013	AKSHAYA. P
3612014	ALDRIN ADOLPHOUS
3612017	ALOK AGNIHOTRI
3612018	AMAN ANAND
3612020	AMIT KUMAR JHA
3612021	ANANDH. B
3612022	ANIRBAN DATTA ROY
3612024	ANKIT KUMAR
3612025	ANKIT KUMAR SINGH
3612027	ANKIT SINGH
3612028	ANTARIPA BORAH
3612031	ARCHANA. C
3612033	ARJUN. V
3612036	ASHUTOSH KUMAR
3612037	AVISHA. I
3612039	AZARIAH JOHN. K
3612040	BAASHWANATH KUMAR. R
3612043	BHURSE BHISHAN SURESH
3612044	BHUVANESHWARI. G
3612045	BISWAJIT SAHU
3612056	DEV KUMAR
3612058	DINESH KUMAR. G
3612059	DINESH KUMAR. N
3612061	EDIGA KARTHIK GOUD
3612065	GAUTHAM SHEKAR
3612070	GOPINATH. K
3612078	HARSH RAJ
3612083	JASMINE S
3612084	JAYASHREE J
3612085	JAYASHREE S
3612086	JEEVANATH J
3612087	JITENDRA GUPTA
3612088	JOTHI A
3612094	KAVIARASI K
3612095	KAVIYA V
3612097	KEERTHANA I
3612099	KEERTHANAA V

3612100	KEERTHIVASAN PUSHPARAJ
3612104	KONAKANDLA RAMA PRANAVI
3612106	KULDEEP KUMAR
3612107	KUMAR SATYAM
3612108	LAKSHMI JANA PRIYA MADDUKURI
3612112	MAHALAKSHMI N
3612114	MANISH KUMAR YADAV
3612115	MD ARSALAN ABID
3612119	MONISHA C
3612121	MURTAZA M
3612123	NAIDU CHIRANJEEVI KRISHNA VENKATESHWARLOO
3612129	NIRANJANI R
3612133	POORNIMA M
3612134	PRABHAT SAHU
3612137	PRANAY KUMAR
3612138	PRARTHANA PARAMESHWARI RAMANATHAN
3612139	PRASANJEET DAS
3612142	PRAVEENA V
3612148	RAHUL RAJ. B
3612150	RAUNAK KUMAR SINGH
3612153	RESHMA. R
3612154	RISHU KUMARI
3612157	RUDRA RAJ GOSWAMI
3612161	SAKHAYADEEP NATH
3612164	SANJU KUMAR
3612168	SAWAN KUMAR
3612169	SEMRAJ KUMAR
3612173	SHRINATH NIMARE
3612176	SHWETHA. M
3612178	SNEHIL SINGH
3612183	STEPHEN. K
3612185	SHUBHAM KUMAR
3612186	SUPRIYA MANDAL
3612190	SYED AARIF SUHAIB QADRI
3612191	TAMILBHARATHI. R
3612192	THORATI SRINIVAS MANIKANTA
3612194	UDAYAN CHOUDHURY
3612200	VIKRAM KUMAR MEHTA
3612201	VINOTH. R
3612202	VINOTHINI. R
3612206	VUPPALANCHU SAIKUMAR
3612212	ROSLIN KANUSHYA
3612213	INFANT PHILO RAJULA. B
3612214	MEENAKSHI. A

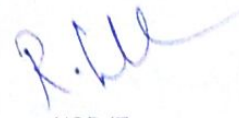
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STUDENT CIRCULAR 2017 BATCH

03.12.2019

This is to inform you that it is mandatory to select Two elective subjects for the VI semester of Academic year 2019-2020 based on your area of interest. You can select one of the following subjects

4. SIT1619 – Internet of Things
5. SCS1619 – Python Programming

Confirm the elective subject through your counselors to the HOD on or before
11-12-2019


HOD-IT
(Dr.R.Subhashini)

SIT1619	INTERNET OF THINGS	L	T	P	Credits	Total Marks
		3	0	0	3	100

UNIT 1

9 Hrs.

Introduction to IoT, Current technological trends and future prospects, - Evolution of IoT - IoT and related terms – Business Scope, Relation with embedded system, Introduction to Arduino and Raspberrypi, Overview of Elements of IoT - Basic Architecture of an IoT.

UNIT 2

9 Hrs.

Application Sensors & Actuators - Edge Networking (WSN) – Gateways - IoT Communication Model – WPAN & LPWA, IoT platform for available applications, Hardware Devices: Arduino, Raspberry pi and Smartwifi, etc, Wearable Development Boards, Softwares, Programs and Stacks available for building IoT applications, Installation of various packages necessary for project and list of tools.

UNIT 3

9 Hrs.

IoT Communication Model, Cloud computing in IoT, IoT in cloud architecture, Logging on to cloud, Selecting and Creating cloud service ,Managing Cloud Account Credentials and Generating Key Pair, Creating IoT Cloud Service.

UNIT 4

9 Hrs.

Big Data Analytics – Data Exploration, Data Visualization, Visualization tools for IoT.

UNIT 5

9 Hrs.

DIY Kits – Soil moisture monitoring, Weather monitoring, Air quality Monitoring, Movement Detection, etc, IFTTT and other apps.

Max. 45 Hrs.

COURSE OUTCOMES:

On completion of the course, student will be able to

- CO1 : Illustrate the technology and current trends in Internet of things.
- CO2 : Understand the various elements of IoT system and hardware devices.
- CO3 : Learn the programming languages and platforms for building IoT applications
- CO4 : Demonstrate cloud computing and its relevance for developing IoT applications.
- CO5 : Implement IoT applications that manage big data with data analytics and visualization tools.
- CO6 : Implement hands-on projects using an appropriate software and hardware devices in various applications.

TEXT / REFERENCE BOOKS

1. The Internet of Things: Applications and Protocols, Wiley publications. Author(s): Oliver Hersent, David Boswarthick, Omar Elloumi.
2. Architecting the Internet of Things, Springer publications. Author(s):Dieter Uckelmann, Mark Harrison, Florian Michahelles.
3. Internet of Things with Arduino Cookbook, Packt Publications. Author(s): Marco Schwatz.
4. Internet of Things and Data Analytics, Wiley Publications.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100

A: 2 Questions from each unit, each carrying 2 marks

PART B: 2 Questions from each unit with internal choice, each carrying 16 marks

Exam Duration: 3 Hrs. PART

20 Marks

80 Marks

Name List – Internet of Things

Reg.No	Student Name
37120004	R.N.AKASH
37120026	Emmanuel Charles .S
37120037	.Goutham Kumar
37120044	Mohamed Ayman Latheef M
37120045	Mudaccir
37120049	Murugdoss
37120050	M.sreelatha
37120051	Nandhitha
37120052	Padmashri R
37120062	Salman
37120063	Saranya shree. S
37120067	Shalini .T
37120069	SHANMUGAPRIYAN .N
37120070	Sivakumar G
37120071	Sneha.j
37120073	K.sowndharya
37120074	Subhiksha.c
37120076	Suruthi.m
37120079	Vaishnavi D
37120082	Vedhanayaki
37120084	Vijay Vinayak R
37120085	Y VENKATA SAI
37120701	Md Farhan
37120901	S.suwetha

SCS1619	PYTHON PROGRAMMING	L	T	P	Credits	Total Marks
		3	0	0	3	100

UNIT 1

9 Hrs.

Introduction to the IDLE interpreter (shell) -Expressions – Data Types - Built-in function -Conditional statements - Iterative statements- Input/output -Compound Data Types - Nested compound statements – Introduction to Object Oriented Concepts.

UNIT 2

9 Hrs.

File Operations –Iterators - Exception handling - Regular Expressions

UNIT 3

9 Hrs.

GUI Programming in Python - Introduction to GUI library - Layout management - Events and bindings - Fonts – Colours - Canvas - Widgets (frame, label, button, check box, entry, list box, message, radio button, text, spin box).

UNIT 4

9 Hrs.

Database (using NoSQL): Connector Module –Cursor – Statements - Exceptions in database.
Network connectivity: Socket module - Client – Server – Email – URL Access

UNIT 5

9 Hrs.

Web Programming using Python.
Image Processing – Facebook Analysis – Twitter Analysis.

Max. 45 Hrs.

COURSE OUTCOMES

On completion of the course, student will be able to:

- CO1 : To learn and demonstrate the decision controls, looping constructs, lists and dictionaries in the design of Python Program.
- CO2 : To design and develop GUI based applications.
- CO3 : To deploy Web based applications by integrating with NoSQL Database.
- CO4 : To analyze the contents social media on Text mining, Sentiment Analysis.
- CO5 : To implement Machine Learning Algorithms (Cluster Algorithms, Decision Trees) using libraries.
- CO6 : To demonstrate visualization using open source data sets.

TEXT / REFERENCE BOOKS

1. John Scott, "Social Network Analysis", Third Edition, SAGE Publications Ltd 2013.
2. Maksim Tsvetov, Alexander Kouznetsov, "Social Network Analysis for Startups", First Edition, O'Reilly Media, 2011.
3. Peter Mika, "Social Networks and the Semantic Web", First Edition, Springer 2007.
4. David Knoke, Song Yang, "Social Network Analysis", First Edition, SAGE Publication Ltd 2007.
5. Borko Furht, "Handbook of Social Network Technologies and Applications", 1st Edition, Springer, 2010.
6. Guandong Xu, Yanchun Zhang and Lin Li, "Web Mining and Social Networking - Techniques and applications", First Edition Springer, 2011.
7. John G. Breslin, Alexander Passant and Stefan Decker, "The Social Semantic Web", Springer, 2009
Van.C.Warington, "Protective Relays-their Theory and Practice", Vol I & II, Champ Man and Hall Ltd, London, 2014.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks : 100

Exam Duration: 3

Hrs.

PART A: 2 Questions from each unit, each carrying 2 marks

20 Marks

PARTB: 2 Questions from each unit with internal choice, each carrying 16 marks

80 Marks

Name List – Python Programming

37120001	Aagash
37120002	ABHINASH KUMAR
37120005	Akassh P
37120007	Akshaya.V
37120008	Anand kumar Ranjan
37120009	Anirudh Srinivas G.N
37120010	Aparna G
37120011	Aswin.J.Richards
37120013	Sowmya reddy
37120014	Benson joel
37120015	R.Bharathi
37120016	Janaki ram reddy
37120017	Christina Steffi
37120018	Daniel N
37120019	Deebika.S
37120020	Deepika.M
37120021	Dewashish kumar
37120022	Dinesh kumar.Y
37120023	Dineshmanju R
37120024	T. Divya Barathi
37120025	Divya.s
37120027	K. S Gayathri
37120028	M.Harish
37120029	Harsh Gupta
37120031	Immanuel Stanley S
37120032	Iyer Priya Eswar Padaleeswaran
37120034	Jaya rasika.j
37120035	JENILA J

37120036	Jithin Abhishek Fernando
37120038	Karthick.s
37120039	Kaviya.v
37120040	E.keerthivasan
37120041	m.m.kishore
37120042	R.Logeswaran
37120043	Madhumitha Chandrasekar
37120045	Mudassir
37120046	Mohammad Habib Memon
37120047	Mohammed Salman
37120048	Mohana priya.R
37120053	Sai ashik
37120055	Prashanthi niharika
37120056	R.PUGAZHANTHI
37120057	Ramya
37120058	Ravi kumar .P
37120060	Rohit Kumar tiwari
37120064	Saravanan s
37120065	Sayed Sajid Ali
37120066	Selciya nayagam
37120072	Sowmiya K
37120075	Supriya.S
37120077	Syed Mubbashir Najmul
37120078	Thamizharasi.M
37120080	Vajrapu Ullas
37120081	Varsha m
37120086	Y.santhosh
37120087	Dinesh kumar A



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DEPARTMENT OF INFORMATION TECHNOLOGY
STUDENT CIRCULAR 2016 BATCH

03.12.2019

This is to inform you that it is mandatory to select Two elective subjects for the VIII semester of Academic year 2019-2020 based on your area of interest. You can select one of the following subjects

1. SIT1617 – Mobile Computing
2. SIT1610 – Social Network Analysis
3. SCS1614 – Advance Database Technologies

Confirm the elective Confirm the elective subject through your counselors to the HOD on or before
11-12-2019

HOD-IT
(Dr. R. Subashini)

SIT1617	MOBILE COMPUTING	L	T	P	Credits	Total Marks
		3	0	0	3	100

UNIT 1

9 Hrs.

Introduction - Wireless transmission - Frequencies for radio transmission - Signals - Antennas – Signal propagation - Multiplexing - Modulations - Spread spectrum - MAC - SDMA - FDMA - TDMA - CDMA – Cellular wireless networks.

UNIT 2

9 Hrs.

Telecommunication systems - GSM - GPRS - DECT - UMTS - IMT-2000 - Satellite networks - Basics - Parameters and configurations

UNIT 3

9 Hrs.

Mobile IP (Goals, assumptions, entities and terminology, IP packet delivery, agent advertisement and discovery, registration, tunneling and encapsulation, optimizations), Dynamic Host Configuration Protocol (DHCP).

UNIT 4

9 Hrs.

Overview, Properties of a MANET, spectrum of MANET applications, routing and various routing algorithms, security in MANETs..

UNIT 5

9 Hrs.

Wireless Application Protocol - WAP. (Introduction, protocol architecture, and treatment of protocols of all layers), Bluetooth (User scenarios, physical layer, MAC layer, networking, security, link management) and J2ME.

Max. 45 Hrs.

COURSE OUTCOMES

On completion of the course, student will be able to:

CO1 : Classify various types of Medium access methods in wireless communication.

CO2 : Demonstrate the usage of Telecommunication systems.

CO3 : Describe the behavior of network protocols stack.

CO4 : Explain the Routing and Applications of MANET.

CO5 : Implement mobile application using J2ME.

CO6 : Explain the structure and components for Mobile IP and WAP

TEXT / REFERENCE BOOKS

1. Jochen Schiller, "Mobile Communications", Addison-Wesley, Second Edition, 2004.
2. Stojmenovic and Cacute, "Handbook of Wireless Networks and Mobile Computing", Wiley, 2002, ISBN 0471419028.
3. Reza Behravanfar, "Mobile Computing Principles: Designing and Developing Mobile Applications with UML and XML", ISBN:0521817331, Cambridge University Press, October 2004,
4. Adelstein, Frank, Gupta, Sandeep KS, Richard III, Golden, Schwiebert, Loren, "Fundamentals of Mobile and Pervasive Computing", ISBN: 0071412379, McGraw-Hill Professional, 2005.
5. Hansmann, Merk, Nicklous, Stober, "Principles of Mobile Computing", Springer, second edition, 2003.
6. Martyn Mallick, "Mobile and Wireless Design Essentials", Wiley DreamTech, 2003.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks : 100

Exam Duration: 3

Hrs.

PART A: 2 Questions from each unit, each carrying 2 marks

20 Marks

PARTB: 2 Questions from each unit with internal choice, each carrying 16 marks

80 Marks

Name List: Mobile Computing

Reg.No	Student Name
3612001	ABHINANDAN KUMAR
3612002	ABHISHEK OMAR
3612003	ABINAYA. R
3612004	ABISEK. K
3612005	ADARSH
3612007	AJAY. S
3612010	AKASH. U
3612012	AKHIL. K
3612013	AKSHAYA. P
3612014	ALDRIN ADOLPHOUS
3612017	ALOK AGNIHOTRI
3612018	AMAN ANAND
3612019	AMIRTA. R
3612020	AMIT KUMAR JHA
3612021	ANANDH. B
3612022	ANIRBAN DATTA ROY
3612024	ANKIT KUMAR
3612025	ANKIT KUMAR SINGH
3612027	ANKIT SINGH
3612028	ANTARIPA BORAH
3612031	ARCHANA. C
3612033	ARJUN. V
3612035	ASHILA. T
3612036	ASHUTOSH KUMAR
3612037	AVISHA. I
3612039	AZARIAH JOHN. K
3612040	BAASHWANTH KUMAR. R
3612041	BACHINA SOURAV TEJA
3612042	BANDI SAI KUMAR REDDY
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3612044	BHUVANESHWARI. G
3612045	BISWAJIT SAHU
3612047	BOPPANA KRISHNA PRASAD
3612049	CHATURVEDULA ANAGHA PRAVEENA
3612051	CHINTAKUNTA HARITHA
3612055	DEEPIKA MENON. S
3612056	DEV KUMAR
3612058	DINESH KUMAR. G
3612059	DINESH KUMAR. N
3612061	EDIGA KARTHIK GOUD
3612062	ELLAKKIYA. D

3612065	GAUTHAM SHEKAR
3612067	GOKUL. R. S
3612070	GOPINATH. K
3612075	HANUMANTHU GIRISH NAIDU
3612078	HARSH RAJ
3612083	JASMINE S
3612084	JAYASHREE J
3612085	JAYASHREE S
3612086	JEEVANATH J
3612087	JITENDRA GUPTA
3612088	JOTHI A
3612090	KANDI BHAVYA
3612092	KASIREDDY LATHASRI
3612094	KAVIARASI K
3612095	KAVIYA V
3612097	KEERTHANA I
3612099	KEERTHANAA V
3612100	KEERTHIVASAN PUSHPARAJ
3612104	KONAKANDLA RAMA PRANAVI
3612106	KULDEEP KUMAR
3612107	KUMAR SATYAM
3612108	LAKSHMI JANA PRIYA MADDUKURI
3612112	MAHALAKSHMI N
3612114	MANISH KUMAR YADAV
3612115	MD ARSALAN ABID
3612117	MENAGA P
3612119	MONISHA C
3612121	MURTAZA M
3612123	NAIDU CHIRANJEEVI KRISHNA VENKATESHWARLOO
3612125	NANDHINI R
3612129	NIRANJANI R
3612130	PAULINE JOYCE ZAC D
3612133	POORNIMA M
3612134	PRABHAT SAHU
3612137	PRANAY KUMAR
3612138	PRARTHANA PARAMESHWARI RAMANATHAN
3612139	PRASANJEET DAS
3612142	PRAVEENA V
3612145	RAASHIKA. K
3612148	RAHUL RAJ. B
3612150	RAUNAK KUMAR SINGH
3612152	REGAN. G
3612153	RESHMA. R

3612154	RISHU KUMARI
3612155	ROOBAVIGNESH. M
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3612212	ROSLIN KANUSHYA
3612213	INFANT PHILO RAJULA. B
3612214	MEENAKSHI. A
3612801	DURAI NIVETHAN. MA

SIT1610	SOCIAL NETWORK ANALYSIS	L	T	P	Credits	Total Marks
		3	0	0	3	100

UNIT 1

9 Hrs.

Introduction to Semantic Web: Limitations of current Web - Development of Semantic Web - Emergence of the Social Web Social Network Analysis: Social Networks Perspective - Analysis of Network Data - Interpretation of Network Data - Social Network Analysis in the Social and Behavioral Sciences - Metrics in social network analysis.

UNIT 2

9 Hrs.

Modeling and aggregating social network data: Ontological representation of social individuals - Ontological representation of social relationships - Aggregating and reasoning with social network data - Advanced representations. Social network analysis software - Tools - Libraries.

UNIT 3

9 Hrs.

Components and Sub graphs: Sub graphs - Ego Networks, Triads, Cliques, Hierarchical Clustering, Triads, Network Density and conflict. Density: Egocentric and Socio centric - Digression on Absolute Density - Community structure and Density, Centrality : Local and Global - Centralization and Graph Centres, Cliques and their intersections, Components and Citation Circles - Positions, Sets and Clusters

UNIT 4

9 Hrs.

Development of Social Network Analysis - Understanding and predicting human behavior for social communities - User data management - Inference and Distribution - Enabling new human experiences - Reality mining - Context - Awareness - Privacy in online social networks - Trust in online environment - Trust models based on subjective logic - Trust network analysis - Trust transitivity analysis - Combining trust and reputation - Trust derivation based on trust comparisons - Attack spectrum and countermeasures.

UNIT 5

9 Hrs.

Medium data - Tradition, Big Data, Small Data - Flat File Representations, Medium Data - Data Representation, Working with 2-Mode Data, Social Networks and Big Data, Big Data at work. Visualizing online social networks, Advances in Network Visualization - Elites, Communities and Influence, Applications of Social Network Analysis.

Max. 45 Hrs.

COURSE OUTCOMES

On completion of the course, student will be able to:

- CO1 : Outline the importance of Social Network Analysis.
- CO2 : Classify the social network models
- CO3 : Describe cliques, clusters and components
- CO4 : Predict the human behavior of the different communities
- CO5 : Explain policies for privacy and trust
- CO6 : Visualize data using visualization tools.

TEXT / REFERENCE BOOKS

- John Scott, "Social Network Analysis", Third Edition, SAGE Publications Ltd 2013.
- Maksim Tsvetovat, Alexander Kouznetsov, "Social Network Analysis for Startups", First Edition, O'Reilly Media, 2011.
- Peter Mika, "Social Networks and the Semantic Web", First Edition, Springer 2007.
- David Knoke, Song Yang, "Social Network Analysis", First Edition, SAGE Publication Ltd 2007.
- Borko Furht, "Handbook of Social Network Technologies and Applications", 1st Edition, Springer, 2010.
- Guandong Xu, Yanchun Zhang and Lin Li, "Web Mining and Social Networking - Techniques and applications", First Edition Springer, 2011.
- John G. Breslin, Alexander Passant and Stefan Decker, "The Social Semantic Web", Springer, 2009
Van.C.Warington, "Protective Relays-their Theory and Practice", Vol I & II, Champ Man and Hall Ltd, London, 2014.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks : 100

Exam Duration: 3

Hrs.

PART A: 2 Questions from each unit, each carrying 2 marks

20 Marks

PARTB: 2 Questions from each unit with internal choice, each carrying 16 marks

80 Marks

Name List: Social Network Analysis

Reg.No	Student Name
3612001	ABHINANDAN KUMAR
3612002	ABHISHEK OMAR
3612003	ABINAYA. R
3612004	ABISEK. K
3612005	ADARSH
3612007	AJAY. S
3612010	AKASH. U
3612012	AKHIL. K
3612013	AKSHAYA. P
3612014	ALDRIN ADOLPHOUS
3612017	ALOK AGNIHOTRI
3612018	AMAN ANAND
3612019	AMIRTA. R
3612020	AMIT KUMAR JHA
3612021	ANANDH. B
3612022	ANIRBAN DATTA ROY
3612024	ANKIT KUMAR
3612025	ANKIT KUMAR SINGH
3612027	ANKIT SINGH
3612028	ANTARIPA BORAH
3612031	ARCHANA. C
3612033	ARJUN. V
3612035	ASHILA. T
3612036	ASHUTOSH KUMAR
3612037	AVISHA. I
3612039	AZARIAH JOHN. K
3612040	BAASHWANTH KUMAR. R
3612041	BACHINA SOURAV TEJA
3612042	BANDI SAI KUMAR REDDY
3612043	BHURSE BHISHAN SURESH
3612044	BHUVANESHWARI. G
3612045	BISWAJIT SAHU
3612047	BOPPANA KRISHNA PRASAD
3612049	CHATURVEDULA ANAGHA PRAVEENA
3612051	CHINTAKUNTA HARITHA
3612055	DEEPIKA MENON. S
3612056	DEV KUMAR
3612058	DINESH KUMAR. G
3612059	DINESH KUMAR. N

3612061	EDIGA KARTHIK GOUD
3612062	ELLAKKIYA. D
3612065	GAUTHAM SHEKAR
3612067	GOKUL. R. S
3612070	GOPINATH. K
3612075	HANUMANTHU GIRISH NAIDU
3612078	HARSH RAJ
3612083	JASMINE S
3612084	JAYASHREE J
3612085	JAYASHREE S
3612086	JEEVANATH J
3612087	JITENDRA GUPTA
3612088	JOTHI A
3612090	KANDI BHAVYA
3612092	KASIREDDY LATHASRI
3612094	KAVIARASI K
3612095	KAVIYA V
3612097	KEERTHANA I
3612099	KEERTHANAA V
3612100	KEERTHIVASAN PUSHPARAJ
3612104	KONAKANDLA RAMA PRANAVI
3612106	KULDEEP KUMAR
3612107	KUMAR SATYAM
3612108	LAKSHMI JANA PRIYA MADDUKURI
3612112	MAHALAKSHMI N
3612114	MANISH KUMAR YADAV
3612115	MD ARSALAN ABID
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SCS1614	ADVANCED DATABASE TECHNOLOGIES	L	T	P	Credits	Total Marks
		3	0	0	3	100

UNIT 1

9 Hrs.

Data base system Architecture - Query Optimization Techniques - Transaction Management: Transaction Processing Concepts - Concurrency Control - Recovery Techniques -Database Security.

UNIT 2

9 Hrs.

Architecture- Query evaluation - Query optimization - parallelizing Individual operations. Distributed DBMS: Architecture - storing data - Cataloguing - Query processing -Transactions Concurrency and Recovery

UNIT 3

9 Hrs.

Active Database Concepts and Triggers -Temporal Databases - Spatial Databases - Deductive Databases - XML Databases: XML Data Model - Geographic Information Systems - Genome Data Management

UNIT 4

9 Hrs.

Object Databases - Advantages and disadvantages compared to Relational Databases - Abstract data types, Objects identity and reference types-Inheritance Database design for ORDBMS ODMG data model and ODL OQL. MULTIMEDIA DATABASES: Nature of Multimedia data and applications Data management issues - Components of Multimedia database management system.

UNIT 5

9 Hrs.

Big Data - Introduction - Technologies - Reference Architecture - Hadoop - Introduction Hadoop Distributed File System - Design of HDFS - HDFS Concepts - Interfaces for Hadoop File System - Map Reduce - A weather Data set - Analyzing the data with Hadoop -Anatomy of MapReduce Job Run

Max. 45 Hrs.

COURSE OUTCOMES:

On completion of the course, student will be able to

- CO1 : Explain and evaluate the fundamental theories and requirements that influence the design of modern database systems.
- CO2 : Assess and apply database functions and packages suitable for enterprise database development and database management.
- CO3 : Critically evaluate alternative designs and architectures for databases and data warehouses.
- CO4 : Discuss and evaluate methods of storing, managing and interrogating complex data
- CO5 : Explain and critically evaluate database solutions for data exchange.
- CO6 : Analyze the background processes involved in queries and transactions, and explain how these impacts on database operation and design.

TEXT / REFERENCE BOOKS

1. Raghu Ramakrishnan and Johannes Gehrke, "Database Management Systems", 3rd Edition McGraw Hill Publications.
2. Korth . H.Fand A.Silberschatz, "Database system concepts", 3rd Edition, McGraw Hill Publications.
3. Ramez Elmasri & B.Navathe: Fundamentals of Database Systems, V Ed., AddisonWesley, 2008.
4. Stenfro Ceri and Giesuppe pelagatti, " Distributed database- principles and systems",Third Edition.
5. O'Reilly, " Hadoop - The Definitive Guide ",O'Reilly Media
6. B.Prabakaran, "Multimedia Database Management Systems", Kluwer Academic Publishers.
7. <http://www.oracle.com/technetwork/topics/enlarch/articles/info-mngt-big-data-re-arch-1902853.pdf>

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100

Exam Duration: 3 Hrs.

PART A: 2 Questions from each unit, each carrying 2 marks

20 Marks

PART B: 2 Questions from each unit with internal choice, each carrying 16 marks

80 Marks