

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 2018-2019_ELECTIVES



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**STUDENT CIRCULAR 2015 BATCH
SCHOOL OF COMPUTING**

DEPARTMENT OF INFORMATION TECHNOLOGY

04.05.2018

This is to inform you that it is mandatory to select One elective subject for the VII semester of Academic year 2018-2019 based on your area of interest. You can select one of the following subjects

1. SIT1606-Big data
2. SCSX1061 – Python Programming

Confirm the elective Confirm the elective subject through your counselors to the HOD on or before
12-05-2018

HOD-IT
(Dr.R.Subhashini)

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
3512001	AATISHA CYRILL
3512003	ABINAYA. K
3512004	ABINAYABHARATHI. A
3512005	ABIRAMI. D
3512006	ADITYA RAJ
3512008	AKHILESH. S
3512009	AKILA SRIMATHI. P. T
3512010	ALAMPALLY PRANIDEEP
3512012	AMSAVALLI. P
3512013	ANANT ANAND
3512014	ANINDYA KAR CHOUDHURY
3512015	ANKITA RAKSHIT
3512016	ANTARA DEBNATH
3512020	ASHWATHI. V
3512021	AVINASH PRAJAPATI
3512022	AYSHWARYA. S
3512023	BABLOO KUMAR
3512024	BALAMURUGAN. S
3512025	BALINA PRUDHVI

3512026	BANA SURESH KUMAR REDDY
3512027	BEAUTY
3512028	BETHALA SONIYA
3512030	BINU. P
3512031	CHAGANTI SRINIVAS
3512032	CHALLA SIVA SAI KALYAN
3512033	DEEP ACHARJEE
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3512075	KODURU SRAVAN KUMAR
3512077	KOUSALYA. L
3512078	KSHITIJ CHOUDHARY
3512079	LIDIA VIOLET. A
3512080	MANEESHA. P

3512081	MANIVASAKAN. S
3512082	MARIA BERNADETTE. F
3512083	MARIA VISHALI. P
3512084	MARIAMMAL SONIYA. M
3512085	MARIYA CHRISTEENA VINITHA. K
3512086	MARY BENI RESHMA. A.B
3512087	MEKA BHANU PRAKASH REDDY
3512088	MOHAMED SHEIK DAWOOD. M
3512089	MOHAMMED THOUSEEF. D
3512090	MOHANA. S
3512091	MOHIT ANAND
3512092	MOHIT RAJ
3512093	MONICA. V
3512097	MYLAPALLE YESHWANTH
3512099	NAGESH BHARTI
3512102	NASRIEN REJEE.W.H

3512103	NEVEGEETHA. R
3512104	NILESH KUMAR
3512105	PALLA RATNA SAI KUMAR
3512106	PENUGONDA OBI REDDY
3512107	PERUMA. C
3512108	POOJAA UMayAL. AL
3512109	PRABAVATHY. S
3512110	PRATIKSHA RASHMI
3512113	PRINCY POOJA. A
3512114	PRIYA SINHA
3512115	PRIYA. V
3512116	PRIYADHARSHINI. J
3512117	RACHERLA SAI MADHUMITHA
3512118	RAHUL KUMAR
3512119	RAMANA VISHNU SAI REDDY
3512120	RAMYA. M
3512122	RAVURI MANOJ KUMAR
3512124	REETHIKA. R
3512125	REVAA. M
3512126	RISHAV KUMAR

3512127	RISHI KUMAR. S
3512129	SAI VENKATESH. M
3512130	SAJAL ARORA
3512131	SAMREEN. G.N
3512132	SANA SAI PRASAN KUMAR
3512133	SANDHIYA. M
3512134	SANTHIYA. K
3512135	SARVEPALLI JAAHNAVI
3512136	SHAIK ARIF PASHA. S
3512137	SHAILESH KUMAR
3512138	SHOMYA SHRISTI
3512139	SHRISTI KARDATE
3512140	SHASHANK SONI
3512141	SINDHU. K
3512143	SOWMIYA. G
3512144	SRIJANANI. B
3512145	SUGUMARAN. B
3512146	SUNDHARI. G
3512147	SUNKARA SAINATH
3512149	SURUTHI. S
3512151	TIMMASAMUDRAM YAGNA SRI SAMHITA

3512153	VAKULA. C.K
3512156	VATTIKUTI SAI BALAJI
3512157	VEDULLA POORNA CHANDRA GANESH PRASAD
3512158	VEDULLAPALLI LOKESH CHANDRA
3512160	VENKATA SAI SAMPATH NADAKUDITI
3512162	VISHALI. S

SCHOOL OF COMPUTING
DEPARTMENT OF INFORMATION TECHNOLOGY
STUDENT CIRCULAR 2016 BATCH

03.12.2018

This is to inform you that it is mandatory to select One elective subject for the VI semester of Academic year 2018-2019 based on your area of interest. You can select one of the following subjects

1. SIT1619 – Internet of Things
2. SCS1619 – Python

Confirm the elective Confirm the elective subject through your counselors to the HOD on or before 11-12-2018


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 Raspberry pi, 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

PART 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.

20 Marks

80 Marks

Name List – Internet of Things

Reg.No	Student Name
3612002	ABHISHEK OMAR
3612010	AKASH. U
3612013	AKSHAYA. P
3612019	AMIRTA. R
3612021	ANANDH. B
3612025	ANKIT KUMAR SINGH
3612040	BAASHWANTH KUMAR. R
3612055	DEEPIKA MENON. S
3612062	ELLAKKIYA. D
3612090	KANDI BHAVYA
3612100	KEERTHIVASAN PUSHPARAJ
3612112	MAHALAKSHMI N
3612114	MANISH KUMAR YADAV
3612121	MURTAZA M
3612123	NAIDU CHIRANJEEVI KRISHNA VENKATESHWARLOO
3612190	SYED AARIF SUHAIB QADRI
3612191	TAMILBHARATHI. R
3612194	UDAYAN CHOUDHURY
3612203	VISHALINI. J
3612204	VISHWAPRIYA. S
3612213	INFANT PHILO RAJULA. B
3612801	DURAI NIVETHAN. MA

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.Warinton, "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

Reg.No	Student Name
3612001	ABHINANDAN KUMAR
3612003	ABINAYA. R
3612004	ABISEK. K
3612005	ADARSH
3612007	AJAY. S
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3612014	ALDRIN ADOLPHOUS
3612017	ALOK AGNIHOTRI
3612018	AMAN ANAND
3612020	AMIT KUMAR JHA
3612022	ANIRBAN DATTA ROY
3612024	ANKIT KUMAR
3612027	ANKIT SINGH
3612028	ANTARIPA BORAH
3612031	ARCHANA. C
3612035	ASHILA. T
3612036	ASHUTOSH KUMAR
3612037	AVISHA. I
3612039	AZARIAH JOHN. K
3612041	BACHINA SOURAV TEJA
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3612051	CHINTAKUNTA HARITHA
3612056	DEV KUMAR
3612058	DINESH KUMAR. G
3612059	DINESH KUMAR. N
3612061	EDIGA KARTHIK GOUD
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
3612092	KASIREDDY LATHASRI
3612094	KAVIARASI K
3612095	KAVIYA V

3612097	KEERTHANA I
3612099	KEERTHANAA V
3612104	KONAKANDLA RAMA PRANAVI
3612106	KULDEEP KUMAR
3612107	KUMAR SATYAM
3612108	LAKSHMI JANA PRIYA MADDUKURI
3612115	MD ARSALAN ABID
3612117	MENAGA P
3612119	MONISHA C
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
3612157	RUDRA RAJ GOSWAMI
3612159	SAI VAMSI KRISHNA CHIRALA. V. S
3612161	SAKHAYADEEP NATH
3612162	SAKTHIVEL. E
3612164	SANJU KUMAR
3612165	SANTHANALAKSHMI. S
3612166	SARAVANAN. V
3612168	SAWAN KUMAR
3612169	SEMRAJ KUMAR
3612172	SHREEMI SINGH
3612173	SHRINATH NIMARE
3612174	SHRUTHI. R
3612176	SHWETHA. M
3612178	SNEHIL SINGH
3612182	SRUNGARAPU VENKATA SAI KARTHIKEYA
3612183	STEPHEN. K
3612185	SHUBHAM KUMAR
3612186	SUPRIYA MANDAL
3612192	THORATI SRINIVAS MANIKANTA
3612197	VEERABOMMA SAI RITHIKA
3612198	VEMULA T S L V DURGA PRATHYUSHA
3612200	VIKRAM KUMAR MEHTA

3612201	VINOTH. R
3612202	VINOTHINI. R
3612205	VUDUM SHIVA KRISHNA
3612206	VUPPALANCHU SAIKUMAR
3612212	ROSLIN KANUSHYA
3612214	MEENAKSHI. A

SCHOOL OF COMPUTING
DEPARTMENT OF INFORMATION TECHNOLOGY
STUDENT CIRCULAR 2015 BATCH

03.12.2018

This is to inform you that it is mandatory to select Two elective subjects for the VIII semester of Academic year 2018-2019 based on your area of interest. You can select any two from the following subjects

1. SIT1617 – Mobile Computing
2. SIT1610–Social Network Analysis
3. SIT1616-Hardware Peripheral and Interfacing

Confirm the elective Confirm the elective subject through your counselors to the HOD on or before
11-12-2018


HOD-IT
(Dr.R.Subhashini)

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
3512001	AATISHA CYRILL
3512003	ABINAYA. K
3512004	ABINAYABHARATHI. A
3512005	ABIRAMI. D
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3512108	POOJAA UMAYAL. AL
3512109	PRABAVATHY. S
3512110	PRATIKSHA RASHMI
3512113	PRINCY POOJA. A
3512114	PRIYA SINHA
3512115	PRIYA. V
3512116	PRIYADHARSHINI. J
3512117	RACHERLA SAI MADHUMITHA
3512118	RAHUL KUMAR
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3512120	RAMYA. M
3512122	RAVURI MANOJ KUMAR
3512124	REETHIKA. R
3512125	REVAA. M
3512126	RISHAV KUMAR

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3512160	VENKATA SAI SAMPATH NADAKUDITI
3512162	VISHALI. S

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

1. John Scott, "Social Network Analysis", Third Edition, SAGE Publications Ltd 2013.
2. Maksim Tsvetovat, 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. BorkoFurht, "Handbook of Social Network Technologies and Applications", 1st Edition, Springer, 2010.
6. GuandongXu,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: Social Network Analysis

Reg. No.	Student Name
3512001	AATISHA CYRILL
3512003	ABINAYA. K
3512004	ABINAYABHARATHI. A
3512005	ABIRAMI. D
3512006	ADITYA RAJ
3512008	AKHILESH. S
3512009	AKILA SRIMATHI. P. T
3512010	ALAMPALLY PRANIDEEP
3512012	AMSAVALLI. P
3512013	ANANT ANAND
3512014	ANINDYA KAR CHOUDHURY
3512015	ANKITA RAKSHIT
3512016	ANTARA DEBNATH
3512020	ASHWATHI. V
3512021	AVINASH PRAJAPATI
3512022	AYSHWARYA. S
3512023	BABLOO KUMAR
3512024	BALAMURUGAN. S
3512025	BALINA PRUDHVI

3512026	BANA SURESH KUMAR REDDY
3512027	BEAUTY
3512028	BETHALA SONIYA
3512030	BINU. P
3512031	CHAGANTI SRINIVAS
3512032	CHALLA SIVA SAI KALYAN
3512033	DEEP ACHARJEE
3512034	DENISA. A
3512035	DESAI SAI ASRITH
3512036	DEVARAJAN. K
3512039	DODDA SAI KRISHNA
3512041	GAJULA VENKATA PHANEENDRA
3512042	GARIMA
3512043	GOBINATH. M
3512049	GUDURU SREEHARI
3512050	GUNNAM VEERA VENKATA RAJESH
3512052	IGUDURU PUSHPA
3512053	IMMADISETTY CHAITANYA KUMAR
3512056	JEFFREY VIVIAN SAMUEL

3512058	JOSHINI NEHA. K
3512059	JOY BLESSY. U
3512060	JOYSON MOSES SELVA RAJANAYAGAM. M
3512061	KAARTHIKHA SUBHASRI. S
3512062	KALAGA LAKSHMI SAMHITA
3512064	KALLURU PAVAN KUMAR REDDY
3512065	KANIMOZHI. R
3512068	KARTHIK. S
3512069	KASETTY SHABARISH
3512070	KAUSHIK PRABHU
3512071	KEERTHANA. P
3512072	KEERTHANA.V
3512073	KEERTHI. A.R
3512074	KEERTHIKA. M
3512075	KODURU SRAVAN KUMAR
3512077	KOUSALYA. L
3512078	KSHITIJ CHOUDHARY
3512079	LIDIA VIOLET. A
3512080	MANEESHA. P

3512081	MANIVASAKAN. S
3512082	MARIA BERNADETTE. F
3512083	MARIA VISHALI. P
3512084	MARIAMMAL SONIYA. M
3512085	MARIYA CHRISTEENA VINITHA. K
3512086	MARY BENI RESHMA. A.B
3512087	MEKA BHANU PRAKASH REDDY
3512088	MOHAMED SHEIK DAWOOD. M
3512089	MOHAMMED THOUSEEF. D
3512090	MOHANA. S
3512091	MOHIT ANAND
3512092	MOHIT RAJ
3512093	MONICA. V
3512097	MYLAPALLE YESHWANTH
3512099	NAGESH BHARTI
3512102	NASRIEN REJEE.W.H

3512103	NEVEGEETHA. R
3512104	NILESH KUMAR
3512105	PALLA RATNA SAI KUMAR
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SIT1616	HARDWARE PERIPHERALS AND INTERFACING	L	T	P	Credits	Total Marks
		3	0	0	3	100

UNIT 1

9 Hrs.

CPU Essentials - Processor Modes - Modern CPU Concepts - Architectural Performance Features – The Intel's CPU - CPU Over Clocking - Over Clocking Requirements - Over Clocking The System - Over Clocking The Intel Processors - Essential Memory Concepts - Memory Organizations - Memory Packages - Modules – Logical Memory Organizations - Memory Considerations - Memory Types - Memory Techniques - Selecting And Installing Memory.

UNIT 2

9 Hrs.

Active Motherboards - Sockets And Slots - Intel D850GB - Pentium4 Mother Board - Expansion Slots – Form Factor - Upgrading A Mother Board - Chipsets - North Bridge - South Bridge - CMOS - CMOS Optimization Tactics - Configuring The Standard CMOS Setup - Motherboard BIOS - POST - BIOS Features - BIOS And Boot Sequences - BIOS Shortcomings And Compatibility Issues - Power Supplies And Power Management - Concepts Of Switching Regulation - Potential Power Problems - Power Management

UNIT 3

9 Hrs.

The Floppy Drive - Magnetic Storage - Magnetic Recording Principles - Data And Disk Organization – Floppy Drive - Hard Drive - Data Organization And Hard Drive - Sector Layout - IDE Drive Standard And Features – Hard Drive Electronics - CD-ROM Drive - Construction - CDROM Electronics - DVD-ROM - DVD Media - DVD Drive And Decoder.

UNIT 4

9 Hrs.

Parallel Port - Signals And Timing Diagram - IEEE1284 Modes - Asynchronous Communication - Serial Por Signals - Video Adapters - Graphic Accelerators - 3D Graphics Accelerator Issues - Directx - Mice - Modems -Keyboards - Sound Boards - Audio Bench Marks.

UNIT 5

9 Hrs.

Buses - Industry Standard Architecture (Isa), Peripheral Component Interconnect (Pci) - Accelerated Graphics Port (Agp) - Plug-And-Play Devices - Scsi Concepts - Usb Architecture.

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

1. Stephen J.Bigelow, "Trouble Shooting, maintaining and Repairing PCs", Tata McGraw-Hill, New Delhi, 2001.
2. Craig Zacker & John Rourke, "The complete reference:PC hardware", Tata McGraw-Hill, New Delhi, 2001
3. Mike Meyers, "Introduction to PC Hardware and Troubleshooting", Tata McGraw-Hill, New Delhi, 2003.
4. B.Govindarajulu, "IBM PC and Clones hardware trouble shooting and maintenance", Tata McGraw-Hill, New Delhi, 2002

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



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
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DEPARTMENT OF INFORMATION AND TECHNOLOGY

ACADEMIC YEAR 2018-2019_CBCS



INSTITUTE OF SCIENCE AND TECHNOLOGY
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DEPARTMENT OF INFORMATION AND TECHNOLOGY

04.05.2018

CIRCULAR

Department of IT, hereby inform you that, we are inviting students from inter disciplinary programmes to Register for the CBCS courses, which is offered by us for the academic year JUNE 2018. The Course code and the Subject names are listed below. The last date of registration is 10/05/2018.

CBCS-CHOICE BASED CREDIT SYSTEM

<u>YEAR/SEMESTER</u> <u>(offered in the Year/Sem</u> <u>by Soc)</u>	<u>COURSE CODE</u>	<u>COURSE NAME</u>	<u>ELIGIBLE STUDENTS</u>
<u>IV/VIII</u>	SIT1402	MOBILE APPLICATION DEVELOPMENT	<u>CSE,IT,ECE</u>
<u>III/IV</u>	SCS1302	COMPUTER GRAPHICS AND MULTIMEDIA SYSTEMS	<u>CSE,IT</u>

Kindly Fill up the Excel sheet with the required details Given.

S.No Name Regno. Student Name Branch Batch

Registered students name are reported to the respective department HOD and the Dean in due course for the Credit updation. The Syllabus for the Subjects is attached herewith for your reference. Kindly See your mail for further details


HOD-IT
(Dr.R.Subhashini)

SIT1402	MOBILE APPLICATION DEVELOPMENT	L	T	P	Credits	Total Marks
		3	0	0	3	100

UNIT 1 INTRODUCTION AND UI INTERFACE

9 Hrs.

Introduction to mobile technologies, mobile operation systems, Mobile devices - pros and cons, Introduction to Android, Versions, Features, Architecture, UI Widgets and Events handling, Layouts, Required tools - Eclipse, ADT, AVD, Application structure, AndroidManifest file, Android design philosophy, Creating Android applications.

UNIT 2 BUILDING BLOCKS AND DATABASES

9 Hrs.

Introduction to Activities and Intents - Understanding Activity life cycle, Linking Activities, Passing Data, Toast, Displaying a Dialog Window and Notifications. Content Provider, Services, Broadcast receivers, accessing databases, sample applications, debugging and deploying app, publish in Playstore.

UNIT 3 OBJECTIVE C PROGRAMMING

9 Hrs.

Objective C - Data Types and Expressions, Decision Making and Looping, Objects and Classes, Property, Messaging, Categories and Extensions, Fast Enumeration - NSArray, NSDictionary, Methods and Selectors, Static & Dynamic objects, Exception handling, Memory management, Required Tools - Xcode, iOS Simulator, Instruments, ARC, frameworks.

UNIT 4 INTRODUCTION TO iOS

9 Hrs.

Introduction to iPhone, History, Versions, Features, MVC Architecture, View Controller - Building the UI and Event handling, Application life cycle, Tab Bars, Story Boards and Navigation Controllers, Table View, Push Notification, Database handling, Debugging and Deployment, Publishing app in Appstore, sample applications.

UNIT 5 WINDOWS MOBILE APP DEVELOPMENT

9 Hrs.

Introduction to Windows Phone 8, Application Life cycle, UI Designing and events, Building, Files and Storage, Network Communication, Push Notification, Background Agents, Maps and Locations, Data Access and storage, Introduction to silverlight and XAML, Running and Debugging the App, Deploying and Publishing.

Max. 45 Hours

COURSE OUTCOMES

On completion of the course, student will be able to

CO1 : Comprehend various mobile technology and business trends in mobile applications.

CO2 : Develop the mobile applications using various controls.

CO3 : Explore Objective C and sketch out the different built in blocks

CO4 : Assess and deploy Iphone OS and apps

CO5 : Design mobile applications using emulators.

CO6 : Create applications to hand-held devices

TEXT / REFERENCE BOOKS

1.Reto Meier, "Professional Android Application Development", Wrox Edition.

2.<http://www.tutorialspoint.com/android/index.htm>

3.<http://developer.android.com/training/index.html>

4.Stephen G. Kochan, "Programming in Objective C", Addison Wesley, 4th Edition.

5.David Mark, Jack Nutting and Jeff LaMarche, "Beginning iOS 5 Development", Apress Edition.

6.Baijian Yang, Pei Zheng, Lionel M. Ni, "Professional Microsoft Smartphone Programming", Wrox Edition.

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 of internal choice, each carrying 16 marks

80 Marks

SCS1302	COMPUTER GRAPHICS AND MULTIMEDIA SYSTEMS	L	T	P	Credits	Total Marks
		3	0	0	3	100

UNIT 1 BASICS OF COMPUTER GRAPHICS

9 Hrs.

Output Primitives: Survey of computer graphics - Overview of graphics systems - Line drawing algorithm - Circle drawing algorithm - Curve drawing algorithm - Attributes of output primitives - Anti-aliasing.

UNIT 2 2D TRANSFORMATIONS AND VIEWING

8Hrs.

Basic two dimensional transformations - Other transformations - 2D and 3D viewing - Line clipping - Polygon clipping - Logical classification - Input functions - Interactive picture construction techniques.

UNIT 3 3D CONCEPTS AND CURVES

10 Hrs.

3D object representation methods - B-REP , sweep representations, Three dimensional transformations. Curve generation - cubic splines, Beziers, blending of curves- other interpolation techniques, Displaying Curves and Surfaces, Shape description requirement, parametric function. Three dimensional concepts – Introduction - Fractals and self-similarity- Successive refinement of curves, Koch curve and peano curves.

UNIT 4 METHODS AND MODELS

8Hrs.

Visible surface detection methods - Illumination models - Halftone patterns - Dithering techniques - Polygon rendering methods - Ray tracing methods - Color models and color applications.

UNIT 5 MULTIMEDIA BASICS AND TOOLS

10 Hrs.

Introduction to multimedia - Compression & Decompression - Data & File Format standards - Digital voice and audio - Video image and animation. Introduction to Photoshop - Workplace - Tools - Navigating window - Importing and exporting images - Operations on Images - resize, crop, and rotate - Introduction to Flash - Elements of flash document - Drawing tools - Flash animations - Importing and exporting - Adding sounds - Publishing flash movies - Basic action scripts - GoTo, Play, Stop, Tell Target.

Max. 45 Hours

COURSE OUTCOMES

On completion of the course, student will be able to

CO1 : Construct lines and circles for the given input.

CO2 : Apply 2D transformation techniques to transform the shapes to fit them as per the picture definition..

CO3 : Construct splines, curves and perform 3D transformations

CO4 : Apply color and transformation techniques for various applications.

CO5 : Analyze the fundamentals of animation, virtual reality, and underlying technologies

CO6 : Develop photo shop applications. .

TEXT / REFERENCE BOOKS

1. Donald Hearn, Pauline Baker M., "Computer Graphics", 2nd Edition, Prentice Hall, 1994.
2. Tay Vaughan , "Multimedia", 5th Edition, Tata McGraw Hill, 2001.
3. Ze-Nian Li, Mark S. Drew , "Fundamentals of Multimedia", Prentice Hall of India, 2004
4. D. McClelland, L.U.Fuller , "Photoshop CS2 Bible", Wiley Publishing, 2005.
5. Jjames D. Foley, Andries van Dam, Steven K Feiner, John F. Hughes, "Computer Graphics Principles and Practice, 2nd Edition in C, Audison Wesley, ISBN - 981 -235-974-5.

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 of internal choice, each carrying 16 marks

80 Marks



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SCHOOL OF COMPUTING
DEPARTMENT OF INFORMATION AND TECHNOLOGY

04.12.2018

CIRCULAR

Department of IT, hereby inform you that, we are inviting students from inter disciplinary programmes to Register for the CBCS courses, which is offered by us for the academic year JAN 2019. The Course code and the Subject names are listed below. The last date of registration is 11/12/2018.

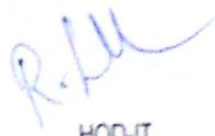
CBCS-CHOICE BASED CREDIT SYSTEM

<u>YEAR/SEMESTER</u> (offered in the Year/Sem by Soc)	<u>COURSE CODE</u>	<u>COURSE NAME</u>	<u>ELIGIBLE STUDENTS</u>
<u>III/IV</u>	SCS1306	DATABASE MANAGEMENT SYSTEM	<u>ALL BRANCHES</u>
<u>III/VI</u>	SCS1207	COMPUTER ARCHITECTURE AND ORGANIZATION	<u>CSE,IT, ECE</u>

Kindly Fill up the Excel sheet with the required details Given.

S.No Name Regno. Student Name Branch Batch

Registered students name are reported to the respective department HOD and the Dean in due course for the Credit updation. The Syllabus for the Subjects is attached herewith for your reference. Kindly See your mail for further details


HOD-IT
(Dr.R.Subhashini)

SCS1306	DATABASE MANAGEMENT SYSTEM	L	T	P	Credits	Total Marks
		3	0	0	3	100

UNIT 1 INTRODUCTION TO DATABASES

9 Hrs.

Databases and Databases users - Database system concepts and architecture - Data modeling using Entity Relationship (ER) Model. **Relational Model** - The Relational Data Model and Relational Database Constraints - The Relational Algebra and Relational Calculus.

UNIT 2 DATABASE DESIGN

9 Hrs.

Overview of the QBE Language - Overview of the Hierarchical Data Model - Overview of the Network Data Model - SQL-99: Schema Definition, Constraints, Queries, and Views- Functional Dependencies and Normalization for Relational Databases.

UNIT 3 QUERY PROCESSING

9Hrs.

Algorithms for Query Processing and Optimization - Introduction to Transaction Processing Concepts and Theory - Concurrency control techniques.

UNIT 4 RECOVERY AND SECURITY

9Hrs.

Database Recovery Techniques - Database Security - Distributed databases and Client- Server Architecture

UNIT 5 OBJECT DATABASE

9Hrs.

Concepts for Object Database - Enhanced Data Models for Advanced Application Emerging Database Technologies and Application

Max. 45 Hours

COURSE OUTCOMES

On completion of the course, student will be able to

CO1 : Construct ER model for a given application..

CO2 : Apply normalization on Relational Databases

CO3: Demonstrate query optimization and concurrent transaction processing

CO4: Analyse recovery techniques, security mechanism, fragmentation and load balancing of databases.

CO5 : Design database using Object Oriented techniques...

CO6: Create database for a specified application

TEXT / REFERENCE BOOKS

1. Elmasri& Navathe - Fundamentals of Database Systems - 3rd Edition, 2nd Reprint, Addison Wesley, 2000

2.Abraham Silberschatz, Henry. F. Korth and S. Sudharshan "Database System Concepts", 4th Edition, 2002.

3.C. J. Date, "Introduction to database systems", Addison Wesley, 7th Edition, 2001.

4.Jan L. Harrington, "Object oriented database design", Harcourt India private limited

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 of internal choice, each carrying 16 marks

80 Marks

CS1207	COMPUTER ARCHITECTURE AND ORGANISATION	L	T	P	Credits	Total Marks
		3	0	0	3	100

UNIT 1 INTRODUCTION

10 Hrs.

Central Processing unit - Introduction - General Register Organization - Stack organization - Basic computer Organization - Instruction codes - Computer Registers - Computer Instructions - Instruction Cycle - Arithmetic – Logic - Shift Microoperations - Arithmetic Logic Shift unit - Example Architectures: MIPS – Power – PC – RISC - CISC

UNIT 2 DATA PATH DESIGN

10 Hrs.

Computer arithmetic : Addition - Subtraction - Multiplication and Division algorithms - Floating Point Arithmetic operations
Microprogrammed Control : Control memory - address sequencing - Microprogram Example - Design of Control unit - Example Processor design

UNIT 3 MEMORY ORGANISATION

8 Hrs.

Memory Organization : Memory Hierarchy - Main memory - auxiliary Memory - Associative Memory - Cache Memory - Virtual memory

UNIT 4 IO ORGANISATION

9 Hrs.

Input - Output Organization : Peripheral Devices - I/O Interface - Modes of transfer - Priority Interrupt - DMA - IOP - Serial Communication

UNIT 5 MULTIPROCESSORS

8 Hrs.

Characteristics of multiprocessors - Interconnection Structures - Interprocessor Arbitration - Interprocessor Communication and Synchronization - Cache coherence.

Max. 45 Hours

COURSE OUTCOMES

On completion of the course, student will be able to

- CO1 : Identify various types of registers, microinstructions and Instruction codes.
- CO2 : Design the control unit of the Processor.
- CO3 : Analyze various memory Organization.
- CO4 : Describe about the peripheral devices, Interfaces, DMA and IOP.
- CO5 : Comprehend the characteristics, structure, communication and synchronization of multiprocessor.
- CO6 : Evaluate the communication and synchronization of interprocessor.

TEXT / REFERENCE BOOKS

1. M.Morris Mano, 'Computer system Architecture', Prentice-Hall Publishers, Third Edition.
2. John P Hayes, 'Computer architecture and Organization', McGraw Hill international edition, Third Edition.
3. Kai Hwang and Faye A Briggs, 'Computer Architecture and Parallel Processing', McGraw Hill international edition, 1995.

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