[M17 IT 1101]

I/II MTECH I SEMESTER REGULAR EXAMINATIONS

INFORMATION TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

ADVANCED DATA STRUCTURES

MODEL QUESTION PAPER

TIME: 3 Hours **Max.Marks: 70**

ANSWER ANY 5 QUESTIONS

ALL QUESTIONS CARRY EQUAL MARKS

1.	(a)	Explain about the implementation of stack operations using linked lists.	7M
	(b)	What is a linked list? Specify the difference between singly, doubly and circular linked lists.	7M
2.	(a)	How can you perform the selection sort and sort the following elements by using the selection sort technique 70, 30, 20, 50, 60, 10,40.	7M
	(b)	Explain about Breadth First Search Traversal technique with an example.	7M
3.	(a)	What do you mean by a hash table and a hash function? Explain the following hash functions with an example (i). Division method (ii). Mid square (iii). Digit analysis	7M
	(b)	What do you mean by collision and how can you handle it by using linear probing.	7M
4.	(a)	What is a binary search tree (BST) and specify the steps showing the construction of a BST for the following data 10, 08, 15, 12, 13, 07, 09, 17, 20, 18, 04, 05.	7M
	(b)	What is a priority queue ADT and explain the insertion & deletion operations on a priority queue with an example.	7M
5.	(a)	What do you mean by a balance factor in AVL tree and explain about LL & RR rotations with an example.	7M
	(b)	What is a B-Tree. Specify its properties and describe the construction of a B-Tree for the following elements 5, 2, 13, 3, 45, 72, 4, 6, 9, 22.	7M
6.	(a)	Create a binary tree from the following in-order and pre-order traversal data In-order traversal data: g,d,h,b,e,i,a,f,j,c. Pre-order traversal data: a,b,d,g,h,e,i,c,f,j.	7M
	(b)	Explain with an example about the collision handling by using a double hashing technique.	7M
7.	(a)	What do you mean by height of an AVL tree and explain about double rotations with an example.	7M
	(b)	What is a binary tree and define the following binary tree's with an example (i). Full binary tree (ii). Complete binary tree (iii) left & right skewed binary tree	7M
8.	(a)	Write an algorithm for a binary search technique and explain it with the help of an example.	7M
	(b)	Construct an AVL Tree with following data: 10 15 9 12 13 79 45 36 22.	7M

[M17 IT 1102]

I/II MTECH I SEMESTER REGULAR EXAMINATIONS

INFORMATION TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

DISTRIBUTED SYSTEMS

MODEL QUESTION PAPER

TIME: 3 Hours **Max.Marks: 70**

ANSWER ANY 5 QUESTIONS

ALL QUESTIONS CARRY EQUAL MARKS

1.	(a)	What is the importance of Client- Server communication? What are the main operations of the request- reply protocol?	7M
	(b)	In Remote Procedure Calls, what are the roles of the Client and Server Stub Procedures?	7M
2.	(a)	Compare between the microkernel based operating System and the monolithic Operating system design.	7M
	(b)	What are the various requirements of Distributed File Systems?	7M
3.	(a)	What are the criteria for evaluating the performance of mutual exclusion algorithms?	7M
	(b)	What are Nested Transactions? How are they different from Flat transactions?	7M
4.	(a)	Differentiate between the Backward and Forward validation approaches in the Optimistic Concurrency Control Algorithms.	7M
	(b)	Explain the Edge- chasing distributed Deadlock Detection Algorithm.	7M
5.	(a)	Bring out the importance of Digital Signatures in ensuring Security.	7M
	(b)	For the various distributed shared memory consistency models, in what ways can updates be propagated?	7M
6.	(a)	With suitable diagram, explain the architecture of SUN Network File System	7M
	(b)	What are the motivations for Replication in distributed Systems?	7M
7.	(a)	Give a comparison of different methods for concurrency control.	7M
	(b)	Explain the Memory Management mechanism in MACH operating system	7M
8.		Write short notes on a) IPC in UNIX b) Logical clocks. c) Fault Tolerance in Distributed Systems	14M

[M17 IT 1103]

I/II MTECH I SEMESTER REGULAR EXAMINATIONS

INFORMATION TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

SOFTWARE REQUIREMENTS AND ESTIMATION

MODEL QUESTION PAPER

TIME: 3 Hours **Max.Marks: 70**

ANSWER ANY 5 QUESTIONS

ALL QUESTIONS CARRY EQUAL MARKS

1.	(a)	Explain good practices adopted for software requirements engineering.	7M
	(b)	Explain how the requirements process can be improved.	7M
2.	(a)	Discuss how risk reduction can be done by prototyping.	7M
	(b)	Discuss how to verify requirements quality.	7M
3.	(a)	What is meant by requirements modeling?	7M
	(b)	Discuss about state transition and class diagrams with suitable examples.	7M
4.	(a)	Explain the requirements management principles and procedures.	7M
	(b)	What are the specific steps to be considered to implement requirements traceability on a specific project?	7M
5.	(a)	List out the benefits in using requirements Management Tools?	7M
	(b)	Draw the figure how the requirements Management Tools integrate with other kinds of software tools. Explain about Rational Requisite Pro.	7M
6.	(a)	What are the components of Software estimation? Discuss them in detail.	7M
	(b)	Discuss the key project factors that influence estimation.	7M
7.	(a)	Explain the MARK II FPA.	7M
	(b)	Explain the LOC estimation.	7M
8.	(a)	Explain the SLIM TOOLS and COCOMO II.	7M
	(b)	Explain the Putnam Estimation Model.	7M

[M17 IT 1103]

[M17 IT 1104]

I/II MTECH I SEMESTER REGULAR EXAMINATIONS

INFORMATION TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

DATA MINING AND KNOWLEDGE DISCOVERY

MODEL QUESTION PAPER

TIME: 3 Hours **Max.Marks: 70**

ANSWER ANY 5 QUESTIONS

ALL QUESTIONS CARRY EQUAL MARKS

1.	(a)	What is knowledge discovery? What is the role of data mining in the process of Knowledge discovery?	7M
	(b)	Explain concept hierarchy generation .With a suitable example show how is it done for categorical data.	7M
2.	(a)	What is data reduction? What are the different data reduction strategies?	7M
	(b)	What are the desirable properties of discovered knowledge?	7M
3.	(a)	Explain the different tasks in data cleaning.	7M
	(b)	Explain task specific population initialization and seeding.	7M
4.	(a)	Explain constraint based association mining.	7M
	(b)	What is fitness function and evaluation?	7M
5.	(a)	What is prediction? What are the issues related to classification and prediction?	7M
	(b)	Write the algorithm for classification by decision tree induction.	7M
6.	(a)	What is cluster analysis? What are its desired features?	7M
	(b)	Write a brief note on various cluster analysis methods.	7M
7.	(a)	Explain rule based classification with an example.	7M
	(b)	Explain linear regression and non linear regression.	7M
8.	(a)	What is Web Mining and explain its characteristics.	7M
	(b)	Explain about Ranking of WebPages with example.	7M

[M17 IT 1104]

[M17 IT 1105]

I/II MTECH I SEMESTER REGULAR EXAMINATIONS

INFORMATION TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

ADVANCED COMPUTER NETWORKS

MODEL QUESTION PAPER

TIME: 3 Hours **Max.Marks: 70**

ANSWER ANY 5 QUESTIONS

ALL QUESTIONS CARRY EQUAL MARKS

1.	(a)	Explain different methods that can be used for broadcast routing.	7M
	(b)	Explain about Route Discovery and Route Maintenance in MANETS.	7M
2.	(a)	For the IPv4 addresses given below calculate Subnet Mask, Broadcast Address And Number of Hosts possible i.) 10.0.199.237/22 ii.) 192.168.14.87/26	7M
	(b)	What is the necessity of IPv6 addressing? And how IPv6 is advantageous over IPv4?	7M
3.	(a)	With a neat sketch explain the architecture if IPv4 datagram.	7M
	(b)	Explain the transformation pf IPV4 to IPV6	7M
4.	(a)	Elaborate on different methods in TCP to handle flow control.	7M
	(b)	Explain association establishment process in SCTP.	7M
5.	(a)	Write notes on open loop and closed loop congestion control methods.	7M
	(b)	Write notes on congestion control in TCP.	7M
6.	(a)	Explain about Voice over IP and Audio Compression	7M
	(b)	Write short notes on MBone-the multicast back bone?	7M
7.	(a)	Write notes on Operating system support in sensor devices	7M
	(b)	Explain in detail about the design of Wireless mesh Networks.	7M
8.	(a)	Explain UDP Operations and Uses	7M
	(b)	Explain Flow classes techniques to improve QOS.	7M

[M17 IT 1105]

[M17 IT 1106]

I/II MTECH I SEMESTER REGULAR EXAMINATIONS

INFORMATION TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

WEB TECHNOLOGIES

MODEL QUESTION PAPER

TIME: 3 Hours **Max.Marks: 70**

ANSWER ANY 5 QUESTIONS

ALL QUESTIONS CARRY EQUAL MARKS

1. (a) Design the static web page that display a marks table with three rows and three columns as shown below: 7M

Marks1	Marks2	Marks3
90	90	90
81	80	82

(b) Explain how events are handled in JavaScript. 7M

2. (a) Create a DTD for your daily schedule. 7M

(b) Define an XML schema. Show how an XML schema can be created. 7M

3.(a) What is AJAX? When can we use AJAX? Explain with an example. 7M

(b) Explain the characteristics of WSDL and SOAP 7M

4.(a) Discuss different types of Conditional statements in PHP 7M

(b) Write a PHP program to demonstrate the passing a variable by reference. 7M

5. (a) Write a Perl program to connect to a MySQl database table. 7M

(b) How to call and identify a subroutine in Perl? Explain with examples. 7M

6. (a) What are the three levels of method access control for classes? What do they signify? Explain. 7M

(b) Write Ruby program which uses Math module to find area of a triangle 7M

7.(a) List out the categories of Perl functions. Explain any two functions for each category. 7M

(b) What are web services platform elements? Explain. 7M

8.(a) How does a symbol differ from a string in Ruby language? 7M

(b) Write a Ruby program that uses iterator to find out the length of a string. 7M

[M17 IT 1201]

I/II MTECH II SEMESTER REGULAR EXAMINATIONS

INFORMATION TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

ADVANCED UNIX PROGRAMMING

MODEL QUESTION PAPER

TIME: 3 Hours **Max.Marks: 70**

ANSWER ANY 5 QUESTIONS

ALL QUESTIONS CARRY EQUAL MARKS

1. (a)	Explain UNIX Architecture?	14M
2. (a)	Write a Shell Program for find the roots of quadratic equation	10M
(b)	Write the syntax for For-Loop in Shell	4M
3.	Explain the command ls –l in UNIX.	14M
4.	Write about the command wc in UNIX.	14M
5. (a)	Explain about File Permissions in UNIX.	7M
(b)	Explain File Permissions Commands	7M
6. (a)	Write about Directory Management in UNIX.	7M
(b)	Explain Directory Management Commands	7M
7. (a)	Explain the command chmod in UNIX.	7M
(b)	Explain the command chown in UNIX.	7M
8.(a)	Briefly explain any 7 File or Directory Handling Commands	14M

[M17 IT 1202]

I/II MTECH II SEMESTER REGULAR EXAMINATIONS

INFORMATION TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

CYBER SECURITY

MODEL QUESTION PAPER

TIME: 3 Hours **Max.Marks: 70**

ANSWER ANY 5 QUESTIONS

ALL QUESTIONS CARRY EQUAL MARKS

1.	(a)	Describe the different security attacks and mechanisms.	7M
	(b)	Draw the model for network security.	7M
2.	(a)	Describe the approaches for message authentication.	7M
	(b)	Define cryptography and explain one conventional encryption algorithm	7M
3.	(a)	Describe the RSA algorithm with an example.	7M
	(b)	Write about Kerberos.	7M
4.	(a)	Describe the IP Security architecture.	7M
	(b)	Describe the Secure Socket Layer management.	7M
5.		Describe the working of SET	14M
6.	(a)	Write difference between MIME & SMIME.	7M
	(b)	Describe working of PGP.	7M
7.	(a)	Describe the working of Intrusion detection system.	7M
	(b)	Define Virus, Intruder and worm.	7M
8.	(a)	Explain the different types of firewall	7M
	(b)	Write About Trusted Systems.	7M

[M17 IT 1202]

[M17 IT 1203]

I/II MTECH II SEMESTER REGULAR EXAMINATIONS

INFORMATION TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

BIG DATA ANALYTICS

MODEL QUESTION PAPER

TIME: 3 Hours **Max.Marks: 70**

ANSWER ANY 5 QUESTIONS

ALL QUESTIONS CARRY EQUAL MARKS

1.	(a)	Specify the role of job tracker and task tracker in HDFS.	7M
	(b)	Define the role of mapper code and reducer code in a map reduce application.	7M
2.	(a)	What is the difference between the 'set' & a 'map' data structure and explain about various map implementations in java with suitable examples.	7M
	(b)	Specify the difference between a primitive type and a wrapper class. Explain about the conversion from primitive type to wrapper class.	7M
3.	(a)	What are the various operational modes of hadoop cluster configuration ?	7M
	(b)	Similarities between the GFS & HDFS and explain the GFS architecture with a neat sketch	7M
4.	(a)	Explain the role of combiner, record reader and Partitioner within a map reduce program model of hadoop.	7M
	(b)	Distinguish between the old and new versions of Hadoop API for Map Reduce.	7M
5.	(a)	Explain the Writable class hierarchy with a neat sketch.	7M
	(b)	Explain the significance of Writable interface along with Writable Comparable and comparators w.r.to implementing the serialization.	7M
6.	(a)	Explain the operators supported by pig w.r.to. Data access, transformations and debugging operations	7M
	(b)	Explain the syntax of a pig program with suitable example.	7M
7.	(a)	Explain about the various data types supported by HIVEQL with an example.	7M
	(b)	Explain with neat sketch about the configuration of CLI client and WI client while interacting with HIVE.	7M
8.	(a)	Write short notes on a) IPC in UNIX b) Logical clocks. c) Fault Tolerance in Distributed Systems	14M

[M17 IT 1203]

[M17 IT 1204]

I/II MTECH II SEMESTER REGULAR EXAMINATIONS

INFORMATION TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

CLOUD COMPUTING

MODEL QUESTION PAPER

TIME: 3 Hours **Max.Marks: 70**

ANSWER ANY 5 QUESTIONS

ALL QUESTIONS CARRY EQUAL MARKS

1.	(a)	List and explain the cloud computing delivery models and services.	7M
	(b)	Define parallel computing. Explain the Parallel computer architecture.	7M
2.	(a)	Explain the Microsoft Windows Azure and online services.	7M
	(b)	Discuss the existing cloud applications and new application opportunities.	7M
3.	(a)	Illustrate the Full virtualization and par virtualization.	7M
	(b)	Draw and explain the Xen on x86 architecture	7M
4.	(a)	Describe the Security risks posed by a management OS.	7M
	(b)	Briefly explain the Transaction processing and NoSQL databases.	7M
5.	(a)	How to install Hadoop on Eclipse on a Windows system? Explain	7M
	(b)	Discuss the Google Web Toolkit	7M
6.	(a)	List and explain the Ethical issues and Vulnerabilities of cloud computing	7M
	(b)	Explain the Open-source software platforms for private clouds	7M
7.	(a)	Write the limits of responsibility between a cloud user and the cloud service provider	7M
	(b)	Discuss the Stability of a two-level resource allocation architecture.	7M
8.	(a)	Describe the Security risks posed by shared images	7M
	(b)	Give brief note on Microsoft Dynamics CRM.	7M

[M17 IT 1204]

[M17 IT 1205]

I/II MTECH II SEMESTER REGULAR EXAMINATIONS

INFORMATION TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

ADHOC AND SENSOR NETWORKS

MODEL QUESTION PAPER

TIME: 3 Hours **Max.Marks: 70**

ANSWER ANY 5 QUESTIONS

ALL QUESTIONS CARRY EQUAL MARKS

1.	(a)	What issues make sensor networks a distinct category of ad hoc wireless networks? Explain	7M
	(b)	Draw the schematic diagram of the ad hoc wireless internet. Mention some of the applications of the ad hoc wireless internet. Why QOS support provision in the ad hoc wireless internet is an important issue to be considered?	7M
2.	(a)	What are the main issues that need to be addressed while designing a MAC protocol for ad hoc wireless networks?	9M
	(b)	Give the classification of random access protocols.	4M
3.	(a)	Classify the ad hoc wireless network routing protocols based on the routing information update.	7M
	(b)	Discuss the on-demand protocol designed to restrict the bandwidth consumed by control packets in ad hoc wireless networks. Also mention its advantages and disadvantages.	7M
4.	(a)	Enumerate on the two types of multicast protocols for ad hoc wireless networks Based on the type of operation.	7M
	(b)	Explain in detail Weight-Based multicast protocol	7M
5.	(a)	What are the major reasons behind throughput degradation faced by TCP when used in ad hoc wireless networks?	7M
	(b)	Mention the targeted layer in the protocol stack for the following attacks i) Jamming ii) Byzantine attack iii) Routing attacks iv) Repudiation v) Wormhole attack vi) Impersonation	7M
6.		Explain in detail the existing network layer solutions that support QOS provisioning	14M
7.	(a)	Describe the data link layer solutions to calculate the optimum transmission range.	9M
	(b)	List and explain the factors on which the optimal value of the reception range depends	5M
8.	(a)	Explain Romor routing algorithm.	5M
	(b)	Explain some simple multi-alteration techniques.	7M
	(c)	Why clustered architecture is especially useful for sensor networks.	2M

[M17 IT 1206]

I/II MTECH II SEMESTER REGULAR EXAMINATIONS

INFORMATION TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

SEMANTIC WEBSERVICES

MODEL QUESTION PAPER

TIME: 3 Hours **Max.Marks: 70**

ANSWER ANY 5 QUESTIONS

ALL QUESTIONS CARRY EQUAL MARKS

1.	(a)	What is Moore's law and give the motivation for Semantic web?	7M
	(b)	Explain how logic for complex business calculations is currently carried out thro .NET and J2EE application servers.	7M
2.	(a)	Explain the difference between Higher order Logic (HOL) with first order logic	7M
	(b)	Explain in detail about(i) Software agents (ii) Ontology	7M
3.	(a)	Explain the following in detail? i) Resource description frame work (RDF) and Resource description frame work schema ii) Ontology web language (OWL)	7M
	(b)	Discuss how the number of nodes on the Web creates computational complexity limits the ability to develop logic proof systems.	7M
4.		Discuss the iterative approach for building Ontologies according to the process Of and Meguiness..	14M
5.	(a)	How the semantic web services are different from other web services? with an example	7M
	(b)	List three potential applications that would benefit from the Semantic Web environme	7M
6.	(a)	Explain Semantic search Technologies?	7M
	(b)	Define web search agents and semantic methods.	7M
7.	(a)	Discuss the Limitations of current web	7M
	(b)	What are the emerges took place in social web	7M
8.		Explain the procedure to build the semantic web applications with Social Network feature.	14M

[M17 IT 1207]

I/II MTECH II SEMESTER REGULAR EXAMINATIONS

INFORMATION TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

PRINCIPLES OF PROGRAMMING LANGUAGES

MODEL QUESTION PAPER

TIME: 3 Hours **Max.Marks: 70**

ANSWER ANY 5 QUESTIONS

ALL QUESTIONS CARRY EQUAL MARKS

1.	(a)	Write BNF notation for if-else statements.	7M
	(b)	What is a dangling pointer? With Example.	7M
2.	(a)	What type inferencing is used in ML?	7M
	(b)	List different forms of prolog term.	7M
3.	(a)	List and explain different phases of compilation process.	7M
	(b)	Write notes on context free grammars. How to identify whether a grammar is unambiguous?	7M
4.	(a)	Explain about static, fixed stack dynamic, fixed heap dynamic and dynamic arrays	7M
	(b)	List and explain design issues of pointers.	7M
5.	(a)	Discuss about scope and lifetime of a variable. What are the advantages of dynamic scoping over static scoping?	7M
	(b)	Explain different types of parameter passing techniques.	7M
6.	(a)	Explain about different mechanisms to implement polymorphism in C++.	7M
	(b)	Explain how message passing helps in concurrency control? Explain with an example.	7M
7.	(a)	Write a LISP function that computes nth Fibonacci number.	7M
	(b)	Explain in what ways ML is different from Scheme.	7M
8.	(a)	What are the applications of logic programming? Explain.	7M
	(b)	Discuss about goal statements in prolog.	7M

[M17 IT 1208]

I/II MTECH II SEMESTER REGULAR EXAMINATIONS

INFORMATION TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

INTERNET OF THINGS

MODEL QUESTION PAPER

TIME: 3 Hours **Max.Marks: 70**

ANSWER ANY 5 QUESTIONS

ALL QUESTIONS CARRY EQUAL MARKS

1. (a)	Explain about WWW and Internet	7M
(b)	Define IOT, Explain about Things / Objects in IOT with example	7M
2.(a)	Explain about various protocols used in IOT	7M
(b)	Explain identifier, enabling technologies of IOT	7M
3.(a)	Define RFID, explain principles of RFID	7M
(b)	Explain about components of RFID Systems and Issues	7M
4.(a)	Explain the concepts and terminologies of RFID Applications	7M
(b)	Explain about various ongoing research projects in IOT	7M
5.(a)	Define WSN	7M
(b)	Explain about various concepts involved in WSN	7M
6.(a)	Explain history and Context of WSN	7M
(b)	Explain about Secure Communication and standards in WSN	7M
7.(a)	Define PLC and its existing standards and technologies	7M
(b)	Design architecture for home network application	7M
8.(a)	List various architectures of home network applications	7M
(b)	Explain about Internet of things using PLC technology	7M

[M17 IT 1208]

[M17 IT 1209]

I/II MTECH II SEMESTER REGULAR EXAMINATIONS

INFORMATION TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

MACHINE LEARNING

MODEL QUESTION PAPER

TIME: 3 Hours **Max.Marks: 70**

ANSWER ANY 5 QUESTIONS

ALL QUESTIONS CARRY EQUAL MARKS

1.	(a)	What are the different models of artificial neurons? Explain them in detail.	7M
	(b)	What is learning?. Write any four learning techniques and in circular each case give the expression for weight- updating.	7M
2.	(a)	Describe the limitations of the perception model	7M
	(b)	Explain back propagation algorithm and derive expressions for weight update relations.	7M
3.	(a)	Explain decision tree model	7M
	(b)	Explain Ranking and probability estimation trees	7M
4.	(a)	Explain heuristic learning algorithm for linear classifiers	7M
	(b)	Explain about Support Vector machine	7M
5.	(a)	Explain Nearest neighbors classification	7M
	(b)	Explain about Hierarchical Clustering	7M
6.	(a)	Write notes on The normal distribution and its geometric interpretations	7M
	(b)	Explain about Bagging and random forests	7M
7.	(a)	How to obtain probabilities from linear classifiers, explain in detail	7M
	(b)	Explain about Distance based Clustering	7M
8.	(a)	Explain about unsupervised and descriptive learning	7M
	(b)	Write short notes on Beyond conjunctive concepts	7M

[M17 IT 1209]

[M17 IT 1210]

I/II MTECH II SEMESTER REGULAR EXAMINATIONS

INFORMATION TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

INFORMATION RETRIEVAL SYSTEM

MODEL QUESTION PAPER

TIME: 3 Hours **Max.Marks: 70**

ANSWER ANY 5 QUESTIONS

ALL QUESTIONS CARRY EQUAL MARKS

1. (a)	Describe the functional overview of information retrieval system	7M
(b)	Write the similarities between information retrieval systems and data warehouses	7M
2.(a)	Explain the miscellaneous capabilities of information retrieval systems	7M
(b)	Discuss the process of information extraction	7M
3.(a)	Explain the techniques for creation of index when the terms of original item are used as basis of index process.	7M
(b)	Explain the role of automatic indexing in Natural languages	7M
4.(a)	Explain about statistical thesauri and theoretically thesauri	7M
(b)	How the similarity measures are applied to statistical systems? Explain	7M
5.(a)	Explain one algorithm for PAT Tree	7M
(b)	How PAT are Represented in Arrays	7M
6.(a)	What is the purpose of Thesaurus? Explain what it contains.	7M
(b)	How to define the measures with the search process?	7M
7.(a)	How finite state Automata is used for hardware and software searchers?	7M
(b)	Explain Knuth – Pratt – Morris algorithm	7M
8.(a)	Explain Boyer-Moore Algorithm	7M
(b)	Explain The Naive Algorithm	7M

[M17 IT 1210]

[M17 IT 1211]

I/II MTECH II SEMESTER REGULAR EXAMINATIONS

INFORMATION TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

IMAGE PROCESSING AND PATTERN RECOGNITION

MODEL QUESTION PAPER

TIME: 3 Hours **Max.Marks: 70**

ANSWER ANY 5 QUESTIONS

ALL QUESTIONS CARRY EQUAL MARKS

1.	(a)	Explain about pattern recognition system with examples	7M
	(b)	Explain Minimum Error rate classification	7M
2.	(a)	What are the various techniques of contrast stretching?	7M
	(b)	What is Median Filtering?	7M
3.	(a)	What is the difference between false and pseudo coloring?	7M
	(b)	What is the role of array processor for image processing?	7M
4.	(a)	What are the different feature extraction techniques? Explain with example.	7M
	(b)	Explain levels of image data representation	7M
5.	(a)	Explain Pixel brightness	7M
	(b)	Adaptive neighborhood preprocessing	7M
6.	(a)	write short notes on parametric edge models	7M
	(b)	Explain sampling and Quantization of image Digitization	7M
7.	(a)	Explain principal component analysis	7M
	(b)	Explain low dimensional representations	7M
8.	(a)	Discuss the features, designing concept, advantages and applications of pattern recognition system	7M
	(b)	Explain with examples the syntactic pattern description and recognition.	7M

[M17 IT 1211]

[M17 IT 1212]

I/II MTECH II SEMESTER REGULAR EXAMINATIONS

INFORMATION TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

SOFTWARE TESTING METHODOLOGIES

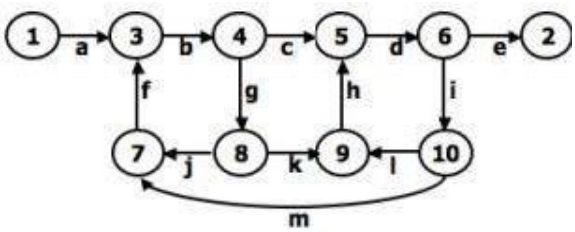
MODEL QUESTION PAPER

TIME: 3 Hours **Max.Marks: 70**

ANSWER ANY 5 QUESTIONS

ALL QUESTIONS CARRY EQUAL MARKS

1. (a)	Is prevented bug better than a detected and corrected bug? Justify. What is the purpose of Testing?	7M
(b)	Explain Model for Testing	7M
2.(a)	State and explain various path selection rules?	7M
(b)	Distinguish Control Flow and Transaction flow	7M
3.(a)	What is meant by domain testing? Discuss about Nice and Ugly domains.?	7M
(b)	Write a short note on Domain Dimensionality	7M
4.(a)	What are decision tables? Do you think decision tables as a basis for test case design justify?	7M
(b)	Explain Regular Expressions & Flow Anomaly Detection.	7M
5.(a)	Explain about good state and bad state graphs.	7M
(b)	Write in detail about Equivalent States.	7M
6.(a)	Discuss node reduction algorithm.	7M
(b)	How can a node reduction optimization be done	7M
7.(a)	Write a partition algorithm	7M
(b)	Write about loops in matrix representation	7M
8.(a)	Apply Reduction procedure algorithm to the following graph	7M



(b)	How can we determine paths in domains in Logic based testing?.	7M