

Code: 9A05701

1

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December/January 2013/14

WEB TECHNOLOGIES

(Computer Science and Engineering)

Time: 3 hours

Max Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 (a) How to handle HTTP requests and response? Explain in detail.
(b) Write a short note on client/server model.
- 2 (a) What makes PHP a choice among the other scripting languages?
(b) Where can we use PHP scripts?
- 3 (a) Explain about string formatting with example.
(b) How to define constants in PHP? Explain with an example.
- 4 (a) Which function is used to lock files? Explain with an example program.
(b) Write a PHP program to create a counter using files.
- 5 (a) What is a session? Explain briefly about sessions.
(b) Explain with an example, how storing of simple data types is done in sessions.
- 6 Explain the following functions handling special characters:
 - (a) trim()
 - (b) htmlspecialchars()
 - (c) strip_tags()
 - (d) addslashes()
- 7 (a) Write PHP code to connect to a MySQL database.
(b) How to perform a query in PHP? Explain with PHP code.
- 8 Explain the following functions with examples:
 - (a) Simplexml_load_file()
 - (b) Simplexml_load_string()

Code: 9A05701

2

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December/January 2013/14

WEB TECHNOLOGIES

(Computer Science and Engineering)

Time: 3 hours

Max Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Write about Apache web server installation procedure.
(b) How to access WAMP server in LAN or WAN?
- 2 (a) Explain briefly about servelets and JSP.
(b) What are disadvantages of servelets and JSP?
- 3 (a) Explain about character classes.
(b) Discuss various string manipulation functions.
- 4 (a) What is the use of 'this' variable? Explain.
(b) What is function overriding? Explain with example.
- 5 Explain the following functions with examples:
(a) getdate()
(b) microtime()
(c) strtotime()
(d) idate()
- 6 (a) Explain briefly about the GET and POST methods.
(b) Write a program to differentiate GET and POST methods.
- 7 (a) Explain about the most common method to retrieve the row from database in PHP.
(b) Explain briefly the three components of MVC architecture.
- 8 (a) What is SimpleXML? What are the advantages of SimpleXML?
(b) Explain briefly the function simplexml_load_file() with example.

Code: 9A05701

3

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December/January 2013/14

WEB TECHNOLOGIES

(Computer Science and Engineering)

Time: 3 hours

Max Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 (a) What is a web server?
(b) Mention any three web servers and explain them.
- 2 What is the impact of programming on web environments? Explain with an example.
- 3 Explain the following with examples:
 - (a) String length.
 - (b) String position.
 - (c) String comparison.
 - (d) String search.
- 4 (a) How can you know whether the object is a descendent of a class or not? Explain.
(b) Write a PHP program that creates a stop watch using classes.
- 5 What are cookies? What are the advantages and disadvantages of cookies?
- 6 How can we prevent multiple submissions of a form on client side? Explain with example.
- 7 Explain the following functions:
 - (a) Mysql_num_rows ()
 - (b) Mysql_real_escape_string()
- 8 (a) Explain briefly about Ajax? What are the advantages of Ajax?
(b) Explain briefly the function simplexml_load_string() with example.

Code: 9A05701

4

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December/January 2013/14

WEB TECHNOLOGIES

(Computer Science and Engineering)

Time: 3 hours

Max Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 Explain in detail Apache web server and its installation procedure.
- 2 (a) Explain how to install and configure PHP.
(b) What makes PHP a choice among other scripting languages?
- 3 (a) How to define constants in PHP? Explain with an example.
(b) Explain call by value and call by reference with an example program.
- 4 (a) What is function overriding? Explain.
(b) What is the need of a destructor in class?
- 5 Explain the following functions with examples:
(a) date_sunrise()
(b) gmmktime()
(c) strftime()
(d) time()
- 6 (a) What are the disadvantages of redisplaying forms without previous information and error messages?
(b) Explain briefly the different constraints in uploading a file.
- 7 Write a PHP script to retrieve and display results from the databases.
- 8 What are the advantages of Ajax? Write a Ajax PHP script to demonstrate how web page can fetch information from a database.

Code: 9A05702

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December/January 2013/14

SOFTWARE TESTING

(Common to CSE & IT)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Give differences between functional testing and structural testing.
(b) Specify on which factors the importance of bugs depends and give the metrics for it.
(c) Briefly explain the various consequences of bugs.
(d) What are the remedies for test bugs?
- 2 (a) Explain about path instrumentation. How are link counters useful in path instrumentation method?
(b) Write about implementation of path testing and what are the various applications of path testing.
- 3 (a) Write about KV charts. Explain them with three and four variables.
(b) Obtain the simplified expressions in SOP for the following Boolean function using Karnaugh maps:
(i) $F(A, B, C, D) = \sum (7, 13, 14, 15)$
(ii) $F(W, X, Y, Z) = \sum (2, 3, 12, 13, 14, 15)$
- 4 Explain the domain boundary bugs for two dimensional domains.
- 5 (a) Implementation of a transaction flow is usually implicit in the design of the systems control structure and database, explain.
(b) Discuss about sensitization and instrumentation based on transaction flows.
- 6 (a) Whether all predicates are restricted to binary truth value or not? Explain.
(b) Illustrate the applications of decision tables.
- 7 Explain state graphs with implementation.
- 8 (a) Write the partitioning algorithm.
(b) Write an algorithm for all pairs of paths using matrix operations.

Code: 9A05702

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December/January 2013/14

SOFTWARE TESTING

(Common to CSE & IT)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 Define testing and explain the purpose of testing.
- 2 (a) How a programs control structure can be represented graphically? Explain with the help of diagrams.
(b) How a flowchart differs from a control flow graph?
(c) Explain about multi entry and multi exit routines and fundamental path selection criteria.
- 3 Write short notes on the following:
(a) Transaction dispatcher
(b) Self test support
(c) Transaction control block
- 4 Classify what can go wrong with boundaries then define a test strategy for each case in domain testing.
- 5 Write short notes on:
(a) Path products
(b) Path expressions
(c) Path sums
(d) Path loops
- 6 (a) Write about KV charts. Explain them with three or four variables.
(b) Obtain the simplified expressions in SOP for the following Boolean functions using Karnaugh maps:
(i) $F(A, B, C, D) = \sum (7, 13, 14, 15)$
(ii) $F(W, X, Y, Z) = \sum (2, 3, 12, 13, 14, 15)$
- 7 (a) Write an algorithm for node reduction.
(b) Illustrate the applications of node reduction algorithm.
- 8 Write relative merits and demerits of different graph matrix representations.

Code: 9A05702

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December/January 2013/14

SOFTWARE TESTING

(Common to CSE & IT)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 List out various dichotomies and explain.
- 2 Describe the following concepts:
 - (a) Predicates
 - (b) Predicate expression
 - (c) Predicate coverage
 - (d) Achievable paths
- 3 (a) Implementation of a transaction flow is usually implicit in the design of the systems control structure and database, explain.
(b) Discuss about sensitization and instrumentation based on transaction flows.
- 4 Why the domain testing is easy for one dimension and difficult for two dimensions?
- 5 (a) Define structured code. Explain lower path count arithmetic.
(b) What is the looping probability of a path expression? Write arithmetic rules and explain with an example.
- 6 (a) Minimize the function using Karnaugh map method:
$$F(A, B, C, D) = \sum(1, 2, 3, 8, 9, 10, 11, 14) + \sum d(7, 15)$$

(b) Demonstrate by means of truth tables the validity of the following theorems of Boolean algebra.
 - (i) Associative laws
 - (ii) Demorgan's theorems for three variables
 - (iii) Distributive law over +
- 7 What are the principles of test case design? Explain.
- 8 (a) Write about building tools of graph matrices.
(b) What are relations and give their properties?

Code: 9A05702

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December/January 2013/14

SOFTWARE TESTING

(Common to CSE & IT)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 What are domain bugs? How to test them?
- 2 Discuss about different kinds of predicate blindness.
- 3 Name and explain data flow testing strategies.
- 4 (a) Explain nice and ugly domains.
(b) Describe the interior point, boundary point and extreme point.
- 5 (a) Define structured code. Explain lower path count arithmetic.
(b) What is the looping probability of a path expression? Write arithmetic rules and explain with an example.
- 6 (a) Write Boolean algebra rules. Illustrate the rules with path expressions.
(b) Use a Karnaugh map to minimize $F = AB'C'D' + A'B'C'D + A'BCD + ABD + B'CD' + A'BC'D$
- 7 (a) Differentiate between good state graphs and bad state graphs.
(b) What are principles of state testing? Explain its advantages and disadvantages.
- 8 (a) Define structured code. Explain lower path count arithmetic.
(b) What is the looping probability of a path expression? Write arithmetic rules and explain with an example.

GRID & CLUSTER COMPUTING

(Computer Science & Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 (a) What is distributed computing? Explain briefly about the architecture of distributed applications.
(b) How to choosing a paradigm for an application in distributed computing?
- 2 What is parallel computing? Explain briefly about parallel programming models.
- 3 (a) Discuss the major trends in computing that have led to the emergence of cluster computing.
(b) Explain cluster architecture.
- 4 (a) Explain briefly about open grid services architecture.
(b) Explain briefly about service – oriented grid computing.
- 5 (a) Explain briefly about web services architecture.
(b) Explain briefly about OGS architecture.
- 6 (a) Explain OGSA platform components.
(b) Explain open grid services infrastructure.
- 7 Explain briefly about Globus GT3 toolkit.
- 8 (a) Explain about WSDL and SOA.
(b) Discuss OGSi.NET frame work.

GRID & CLUSTER COMPUTING

(Computer Science & Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Summarize the data requirements in early grid solutions.
(b) Describe the common requirements and specific details of grid computing architectures.
- 2 (a) Describe the design issues and the architecture of cluster computing systems.
(b) Discuss the major trends in computing that have led to the emergence of cluster computing.
- 3 Discuss some of the issues involved in the design and implementation of distributed shared memory system.
- 4 (a) Explain about cluster computing.
(b) Explain cluster architecture.
(c) What are the applications of cluster?
- 5 (a) What are the OGSA platform components?
(b) Explain about open grid service architecture.
- 6 Explain briefly about Globus GT3 toolkit.
- 7 Explain briefly about OGSI.NET middleware technology.
- 8 (a) Explain about WSDL and SOA.
(b) What are the strategies for developing parallel applications?

GRID & CLUSTER COMPUTING

(Computer Science & Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions

All questions carry equal marks

- 1 (a) Describe the common requirements and specific details of grid computing architecture.
(b) Write the collective layer services in a grid computing system.
- 2 (a) What are the strategies for developing parallel applications?
(b) What are the factors that differentiate among different clusters?
- 3 (a) Give comparison of the programming and performance on shared memory architecture and distributed memory architecture.
(b) Explain about parallel computing models.
- 4 How the grid services architecture is merging with web services architecture? Explain it.
- 5 (a) What are the OGSA platform components? Explain it.
(b) Explain briefly about NanOS cluster operating system.
- 6 (a) What are the goals of OGSI and OGSA?
(b) Summarize the data requirements in early grid solutions.
- 7 (a) Explain about WSDL and SOA.
(b) Discuss OGSI.NET frame work.
- 8 Explain following:
 - a) Strengths and weaknesses of distributed computing.
 - b) Application of cluster computing.
 - c) Grid services.

GRID & CLUSTER COMPUTING

(Computer Science & Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions

All questions carry equal marks

- 1 (a) What are the strengths and weakness of distributed computing?
(b) Write the collective layer services in a grid computing system.
- 2 (a) Describe the design issues and the architecture of cluster computing systems.
(b) Discuss the major trends in computing that have led to the emergence of cluster computing.
- 3 (a) Discuss different models or strategies for parallelization of applications.
(b) Give comparison of the programming and performance on shared memory architecture and distributed memory architecture.
- 4 (a) What are the OGSA platform components? Explain it.
(b) Explain briefly about NanOS cluster operating system.
- 5 (a) Explain briefly about open grid services architecture.
(b) Explain briefly about service – oriented grid computing.
- 6 (a) What are the GT3 security services?
(b) What is the Globus GT3 toolkit? Explain it.
- 7 Explain about WSDL and SOA.
- 8 Explain briefly about OGSI.NET frame work.

Code: 9A05704

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December/January 2013/14

ADVANCED COMPUTER ARCHITECTURE

(Computer Science & Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 Write short notes on:
 - (a) Parallel random access machines (PRAM).
 - (b) STMD super computer.

- 2 Define speed up. How Amdahl's law be used to find the speed up of a computer system.

- 3
 - (a) Briefly explain about linear pipeline processors.
 - (b) Discuss about the through put and efficiency in linear pipeline processors.

- 4 Describe the three generations of multi computers. Explain it briefly.

- 5
 - (a) Explain briefly about the CM-S network architecture.
 - (b) Briefly explain the characteristics of CRAY.

- 6
 - (a) Explain about relaxed memory consistency.
 - (b) Explain about the standard dash multiprocessor.

- 7
 - (a) Discuss various limitations of ILP construction level parallelism.
 - (b) Write short notes on branch prediction.

- 8 Differentiate between implicit and explicit parallelism with a neat sketch.

Code: 9A05704

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December/January 2013/14

ADVANCED COMPUTER ARCHITECTURE

(Computer Science & Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Compare and contrast static connection networks and dynamic connection networks.
(b) What are the characteristics of the SIMD computers?
- 2 (a) What was Amdahl's law? Explain with example.
(b) What are the critical goals in the instruction set, primarily from the compiler view point?
- 3 (a) Discuss about the multifunctional arithmetic pipelines.
(b) What is cache? Explain various cache addressing models.
- 4 (a) Write short notes on flow control strategies.
(b) Explain cache coherence and how this problem can be avoided.
- 5 (a) Explain briefly about the CM-2 architecture.
(b) Describe multi pipeline networking.
- 6 Write about the concept of multithreading.
- 7 (a) What is an operand forwarding? Explain briefly.
(b) Explain about branch prediction.
- 8 Differentiate between implicit and explicit parallelism with a neat sketch.

Code: 9A05704

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December/January 2013/14

ADVANCED COMPUTER ARCHITECTURE

(Computer Science & Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Differentiate between multiprocessor and multi computers.
(b) Write short notes on role of compilers.
- 2 (a) Write short notes on harmonic mean performance.
(b) Differentiate between RISC and CISC.
- 3 (a) Write short notes on shared memory.
(b) What is cache? Explain various cache addressing models.
- 4 (a) What is a multistage network? Explain the different types of multistage network.
(b) Compare the performance of a multiple bus multiprocessors crossbar switch and with multiport memory.
- 5 Discuss about the compound vector processing in detail.
- 6 (a) Explain distributed coherent caches.
(b) Explain fine-grain parallelism.
- 7 (a) What do you mean by thread level parallelism?
(b) Write short notes on record buffer.
- 8 Explain the threads in parallel systems.

Code: 9A05704

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December/January 2013/14

ADVANCED COMPUTER ARCHITECTURE

(Computer Science & Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 What is parallelism? What are the various conditions of parallelism?
- 2 (a) Explain about the applications models of parallel computers.
(b) Describe serves dimensions of an instruction set architecture.
- 3 Write short notes on:
(a) Linear pipeline processors.
(b) Collision – free scheduling.
- 4 (a) Explain briefly about the message passing mechanism.
(b) Describe virtual channels.
- 5 (a) Discuss the characteristics of vector processing.
(b) Explain briefly about CM-5 network architecture.
- 6 (a) Discuss about the scalable coherence interface.
(b) Write about notes on evolution of data flow computers.
- 7 Explain about the Toma sulo's algorithm in detail.
- 8 Describe hardware and software parallelism with an example.

Code: 9A05706

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December/January 2013/14

DATA WAREHOUSING AND DATA MINING

(Computer Science and Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Draw and explain the architecture of typical data mining system.
(b) Differentiate OLTP and OLAP.
- 2 (a) Briefly discuss the data smoothing techniques.
(b) Explain about concept hierarchy generation for categorical data.
- 3 Write the syntax for the following data mining primitives:
(a) Task-relevant data
(b) Concept hierarchies
- 4 (a) How can we specify a data mining query for characterization with DMQL?
(b) Describe the transformation of a data mining query to a relational query.
- 5 (a) Explain the basic concept of association rule mining and a road map of it.
(b) Briefly explain about constraint based association mining.
- 6 Discuss about back propagation classification.
- 7 (a) Differentiate agglomerative and divisive hierarchical clustering.
(b) What advantages does STING offer over other clustering methods?
(c) Describe statistical approach of model based clustering method.
(d) Explain deviation based outlier detection.
- 8 (a) What is information retrieval? What methods are there for information retrieval?
(b) What is sequential pattern mining? Explain.
(c) Discuss about mining the webs link structures to identify authoritative web pages.

Code: 9A05706

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December/January 2013/14

DATA WAREHOUSING AND DATA MINING

(Computer Science and Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Describe three challenges to data mining regarding data mining methodology and user interaction issues.
(b) Draw and explain the three-tier architecture of a data warehouse.
- 2 (a) Briefly discuss about data integration.
(b) Briefly discuss about data transformation.
- 3 (a) Briefly discuss about task relevant data specification.
(b) Explain the syntax for task relevant data specification.
- 4 (a) How can we specify a data mining query for characterization with DMQL?
(b) Describe the transformation of a data mining query to a relational query.
- 5 (a) Write the FP growth algorithm. Explain.
(b) Discuss about ARCS.
- 6 (a) Give the algorithm to generate a decision tree from the given training data.
(b) Explain the concept of integrating data warehousing techniques and decision tree induction.
(c) Describe multilayer feed-forward neural network.
- 7 (a) What is cluster analysis? What are some typical applications of clustering? What are some typical requirements of clustering in data mining?
(b) Define data matrix and dissimilarity matrix. Discuss about interval-scaled variables.
- 8 Each scientific or engineering discipline has its own subject index classification standard that is often used for classifying documents in its discipline.
(a) Design a web document classification method that can take such a subject index to classify a set of web documents automatically.
(b) Discuss how to use web linkage information to improve the quality of such classification.
(c) Discuss how to use web usage information to improve the quality of such classification.

Code: 9A05706

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December/January 2013/14

DATA WAREHOUSING AND DATA MINING

(Computer Science and Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Explain data mining as a step in the process of knowledge discovery.
(b) Differentiate operational database systems and data warehousing.
- 2 (a) Discuss in detail about data transformation.
(b) Explain about concept hierarchy generation for categorical data.
- 3 (a) Discuss the importance of establishing a standardized data mining query language.
(b) What are some of the potential benefits and challenges involved in such a task?
(c) List and explain a few of the recent proposals in this area.
- 4 Write a detailed note on the following:
(a) Attribute oriented induction.
(b) Efficient implementation of attribute oriented induction.
- 5 (a) Explain about iceberg queries with example.
(b) Can we design a method that mines the complete set of frequent item sets without candidate generation? If yes, explain with example.
- 6 (a) Why is tree pruning useful in decision tree induction? What is a drawback of using a separate set of samples to evaluate pruning?
(b) How rough set approach and fuzzy set approaches are useful for classification? Explain.
- 7 (a) Give an example of how specific clustering methods may be integrated, for example, where one clustering algorithm is used as a preprocessing step for another.
(b) Write CURE algorithm and explain.
- 8 (a) Explain about multidimensional analysis and descriptive mining of complex data objects.
(b) Describe similarity search in time series analysis.
(c) What are cases and parameters for sequential pattern mining?

Code: 9A05706

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December/January 2013/14

DATA WAREHOUSING AND DATA MINING

(Computer Science and Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Discuss about concept hierarchy.
(b) Briefly explain about classification of database systems.
- 2 Explain various data reduction techniques.
- 3 The four major types of concept hierarchies are: schema hierarchies, set-grouping hierarchies, operation derived hierarchies and rule based hierarchies.
(a) Briefly define each type of hierarchy.
(b) For each hierarchy type, provide an example.
- 4 (a) What is concept description? Explain.
(b) What are the differences between concept description in large data bases and OLAP?
- 5 (a) What is an iceberg query? Give an example.
(b) Explain about mining distance based association rules.
(c) How are meta rules useful? Explain with example.
- 6 (a) Why naive Bayesian classification called "naive"? Briefly outline the major ideas of naive Bayesian classification.
(b) Define regression. Briefly explain about linear, non-linear and multiple regressions.
- 7 (a) What is cluster analysis? What are some typical applications of clustering? What are some typical requirements of clustering in data mining?
(b) Discuss about model based clustering methods.
- 8 Explain the following:
(a) Mining time series and sequence data.
(b) Mining text databases.

Code: 9A05708

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December/January 2013/14

NETWORK MANAGEMENT SYSTEMS

(Common to CSE, IT and CSS)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 Explain about the protocol data unit communication model between end systems.
- 2 Explain in detail about organization and information model.
- 3 (a) Explain the changes made to the system group as well as SNMP group in SNMP V2.
(b) Describe the following with a suitable examples:
 - (i) SNMP trap (4)
 - (ii) SNMP trap (5)
 - (iii) SNMP trap (6)
- 4 Explain in detail about RMON SMI and MIB.
- 5 Generate an ASN.1 object group macro for the address translation group in SNMP V2 implementation.
- 6 (a) Compare the functionalities of TMN functional architecture and TMN physical architecture.
(b) Explain about TMN information architecture.
- 7 (a) What are the sub-classes of the logical element? Explain them.
(b) Explain briefly about CIM object manager and protocol provider.
- 8 (a) Explain about network management tools.
(b) Explain about network statistics measurement system.

Code: 9A05708

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December/January 2013/14

NETWORK MANAGEMENT SYSTEMS

(Common to CSE, IT and CSS)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Explain the internet configuration for a TCP/IP based networks.
(b) Explain about the gateway communication to a proprietary sub network.
- 2 Describe the SNMP get next request with indices.
- 3 (a) Explain the various functions associated with RMOM1 MIB.
(b) Explain the different stages in remote network monitoring management information base.
- 4 (a) Give the complete list of services provided by TMN.
(b) Give brief description about management service architecture of TMN.
- 5 Explain the SNMP V2 conformance statements with suitable example.
- 6 (a) Explain the operations system for traffic measurement.
(b) Give brief description about functional NMS configuration.
- 7 (a) Give brief description about enterprise management solutions.
(b) Explain the low-end system management.
- 8 (a) Explain the simplified WBEM CIM core model.
(b) What are the sub classes of the logical element? Explain them.

Code: 9A05708

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December/January 2013/14

NETWORK MANAGEMENT SYSTEMS

(Common to CSE, IT and CSS)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 What is mean by MIB? Give the genetic representation of range information.
- 2 Explain the TMN conceptual model with neat diagram.
- 3 Explain case histories of networking and management.
- 4 What are the operations of SNMP? Explain about the genetic maps involved.
- 5 Describe the SNMP V2 network management architecture on multiple transport domains.
- 6 (a) What enhancements are made to RMON2 MIB group? Explain it.
(b) Explain the new data types defined in RMON1 textual conventions.
- 7 Generate an ASN.1 object group macro for the address translation group in SNMP V2 implementation.
- 8 Explain the evolution of internet management documents related to SNMP V1.

Code: 9A05708

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December/January 2013/14

NETWORK MANAGEMENT SYSTEMS

(Common to CSE, IT and CSS)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 Explain the SNMPV2 conformance statements with suitable example.
- 2 Explain current status and future of network management.
- 3 (a) What are the advantages of using CIM in WBEM?
(b) List and explain the various components of web based enterprise management.
- 4 (a) Compare the functionalities of TMN functional architecture and TMN physical architecture.
(b) Discuss about the implementation issues of TMN.
- 5 Describe the SNMP GET NEXT REQUEST with indices.
- 6 Explain in detail the desktop management interface.
- 7 What are the different network statistics measurement systems? Explain them in detail.
- 8 (a) List and explain the various components of web based enterprise management.
(b) Give brief description about CIMOM.

Code: 9A05709

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December/January 2013/14

INFORMATION SECURITY

(Common to CSE and CSS)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Explain the characteristics of computer intrusion.
(b) List and explain the three pillars of security in detail.
- 2 (a) What the goals of virus and describe how each goal can be addressed?
(b) Demonstrate incomplete mediation flaws security implication with a real example.
- 3 (a) Explain Diffie-Hellman key exchange algorithm with an example.
(b) What are the requirements for using public-key certificate scheme?
- 4 What is one-way authentication? Explain the approaches for one-way authentication.
- 5 (a) Explain the environmental shortcomings of Kerberos version 4.
(b) Describe the functionalities provided by S/MIME in detail.
- 6 (a) Give the formats of IPSec AH and explain each field.
(b) What is a cookie? ISAKMP mandates that cookie generation satisfy three basic requirements. What are they? Explain.
- 7 (a) With a neat diagram show how messages are exchanged by the client and server during the handshake protocol.
(b) What are the business requirements for SET?
- 8 (a) Explain in detail the password selection strategies.
(b) With the neat diagrams, explain the three common firewall configurations.

Code: 9A05709

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December/January 2013/14

INFORMATION SECURITY

(Common to CSE and CSS)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Explain the relationship between a threat, vulnerability and a control.
(b) What is Caesar cipher? Give example. Explain about its cryptanalysis.
- 2 (a) What is a trapdoor? Give examples. What are its causes?
(b) How to identify potential covert channels? Explain.
- 3 (a) Explain various ways of achieving message authentication.
(b) Write briefly on public key cryptanalysis.
- 4 (a) Explain the asymmetric encryption approaches for one way authentication.
(b) What are the properties a digital signature should have?
- 5 (a) List the requirements of Kerberos.
(b) Give the general format of PGP messages and explain each field.
- 6 (a) What are the selectors that determine an SPD entry?
(b) Explain how authentication header provides support for data integrity and authentication of IP packets.
- 7 (a) Compare SSL and TLS.
(b) Explain in detail how payment processing is done in SET.
- 8 (a) What are the measures used for intrusion detection?
(b) Discuss in detail the three firewall configurations.

Code: 9A05709

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December/January 2013/14

INFORMATION SECURITY

(Common to CSE and CSS)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Briefly describe hardware vulnerabilities.
(b) Illustrate columnar transposition cipher with an example.
- 2 (a) Define buffer overflows attacks. Give an example. What are its security implications?
(b) Explain how to create covert channels.
- 3 With neat diagrams, explain the variety of ways in which a hash code is used to provide message authentication. How does a hash function differ from MAC?
- 4 (a) "Digital signatures are analogous to hand written signatures". How?
(b) Explain the proposal by Needham and Schroeder for secret key distribution.
- 5 (a) Draw the diagram to depict the overview of Kerberos and explain.
(b) Discuss the significance of key identifiers in a PGP message.
- 6 (a) Explain how IP traffic is related to specific security associations.
(b) What is meant by clogging attack? Is Oakley protocol vulnerable to such an attack? If so, how? If not, why?
- 7 (a) What are the two levels of alerts? What action is taken by SSL when a fatal level is received?
(b) List the sequence of events that are required for a secure electronic transaction.
- 8 (a) Discuss the techniques for learning passwords.
(b) Explain the concept of trusted systems.

Code: 9A05709

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December/January 2013/14

INFORMATION SECURITY

(Common to CSE and CSS)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Describe the Shannon's characteristics of "good" ciphers.
(b) What is salami attack? Explain.
- 2 Write notes on the following:
 - (a) Code red worm
 - (b) Trapdoors
 - (c) Covert channels
- 3 (a) What requirements must a public key cryptosystems fulfill to be a secure algorithm?
(b) Explain key distribution using public key cryptography.
- 4 (a) What is digital signature? Explain the benefits of digital signature.
(b) Explain the symmetric encryption approaches for authentication and key exchange using timestamps.
- 5 (a) What is radix64 conversion? Why is it useful for an email application?
(b) Describe the five header fields defined in MIME.
- 6 (a) Give the format of ESP packet and mention the significance of various fields.
(b) List any eight ISAKMP payload types and describe them.
- 7 (a) Discuss how SSL record protocol provides confidentiality and message integrity for SSL connections.
(b) Explain the construction of a dual signature.
- 8 (a) Who is an intruder? Discuss about the intrusion techniques.
(b) Discuss the different types of firewall.

MANAGERIAL ECONOMICS & FINANCIAL ANALYSIS

(Common to CSE, IT and CSS)

Time: 3 hours

Max Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 Explain the nature of problems studied in managerial economics. What is the importance of the study of such problems in business management?
- 2 What is elasticity of demand? Explain how elasticity of demand is useful for decision making.
- 3 Explain the concepts of breakeven point, margin of safety, angle of incidence and managerial significance of BEA.
- 4 Define perfect competition market. Compare and contrast between perfect competition and monopoly.
- 5 Define Indian co-operative societies. Explain its merits and demerits.

- 6 XYZ Co. is considering the purchase of machine. Two machines A and B each costing Rs.50,000 is available. Earnings after taxes are expected to be as under:

Year	1	2	3	4	5
Machine 'A'	5,000	15,000	20,000	30,000	20,000
Machine 'B'	15,000	20,000	25,000	15,000	10,000

Estimate the two alternatives according to:

- (a) Payback method, and
 - (b) NPV method a discount rate of 10% is to be used.
- 7 Journalize the following transactions:

a.	Started business with a capital of Rs.2,00,000
b.	He paid into the Bank Rs.15,000
c.	He purchased goods for cash Rs.50,000
d.	He withdraw cash from Bank for office use Rs.8,000
e.	He sold goods for cash Rs.6,000 to Y
f.	He purchased furniture for cash Rs.2,000 from Chan dram & Co.
g.	He purchased goods from M on credit for Rs.4,000
h.	He paid wages Rs.3,000 for installation of a new plant purchased for Rs.10,000
i.	He used goods valued at Rs.200 of the business for his domestic purpose
j.	He sold goods to K for Rs.2,000 and received a cheque.
 - 8 Discuss the importance of ratio analysis for inter firm and intra-firm comparison, including circumstances responsible for its limitations, if any?

MANAGERIAL ECONOMICS & FINANCIAL ANALYSIS

(Common to CSE, IT and CSS)

Time: 3 hours

Max Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 Define the law of demand. What are its exceptions? Explain.
- 2 What is forecasting demand? How correlation and regression methods can be used for forecasting demand?
- 3 A firm has two products B and C. The particulars of the price per unit, variable cost per unit and percentage of share in the total sales volume are given in the following table:

Products	Selling Price	Variable Cost	% of share
B	Rs 400.00	Rs 160.00	30
C	Rs 500.00	Rs 200.00	50

The total fixed costs during the year amount to Rs.10,00,000. The total volume of sales is Rs.80,00,000. The company wants to drop product B as it is yielding less contribution per unit. Instead, it wants to add product D. If D is added, the new fixed cost is likely to be up by 10% and the sales volume is likely to increase by 5%. Do you recommend for adding product D?

- 4 What is a market? Explain, in brief, the different market structures.
- 5 Explain the salient features, type's merits and limitations of partnership firm.
- 6 (a) What is the importance of capital?
(b) What factors determine the working capital requirements of a company?
- 7 (a) Define accounting and explain its functions?
(b) Explain classification of accounts with suitable examples?
- 8 The following is the balance sheet of Sri Anurag enterprises as on 31st Dec 2007.

Liabilities	Rs.	Assets	Rs.
Share capital	2,00,000	Buildings	2,00,000
Reserve fund	50,000	Machinery	1,50,000
Profit balance	30,500	Stock on hand	1,00,000
Bank loan	1,50,000	Sundry debtors	60,000
Sundry creditors	70,000	Cash on hand	20,500
Provision for Tax	30,000		
	5,30,000		5,30,000

You are required to comment on liquidity and solvency position of the concern.

MANAGERIAL ECONOMICS & FINANCIAL ANALYSIS

(Common to CSE, IT and CSS)

Time: 3 hours

Max Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 Define managerial economics. Explain its relation with other disciplines.
- 2 From the following data, using method of least squares, estimate the sales for the years 2011 and 2013.

Year	2001	2003	2005	2007	2009	2009
Sales (Rs. in Lakhs)	1400	1000	1700	1800	2000	2100

- 3 Write short notes on:
- Margin of safety.
 - Assumptions of BEA.
 - Contribution.
- 4 Briefly explain the following:
- Sealed bid pricing.
 - Peak load pricing.
 - Skimming pricing.
- 5
- Discuss the factors affection the choice of from of business organization.
 - Define partnership and explain its features and advantages.
- 6
- What are the factors determining the fixed capital requirements?
 - Compare and contrast NPV and ARR methods of capital investment appraisal methods.

- 7 Journalise the following transactions:

October 1	Bought goods worth Rs.1600 from Kamal
5	Purchases goods worth Rs.1400 from surrender
8	Dividend received worth Rs.1500
13	Returned goods worth Rs.160 to surrender
16	Sold goods to Bharani for Rs.1000 allowing 10% trade discount
20	Bharani returned goods worth Rs.200
23	Sold goods to Rao Rs.1,600
26	Interest allowed worth of Rs.100
29	Cash received Rs.4000, and interest received worth Rs.1000 from Ramana
31	Salaries paid for cheque worth Rs.2,500

- 8 What are the purpose and limitations of ratio analysis?

Code: 9AHS401

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December/January 2013/14

MANAGERIAL ECONOMICS & FINANCIAL ANALYSIS

(Common to CSE, IT and CSS)

Time: 3 hours

Max Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 Briefly explain the following:
 - (a) Demand.
 - (b) Demand determinants.
 - (c) Demand exceptions.
- 2 Write short notes on:
 - (a) Survey methods.
 - (b) Statistical methods of forecasting demand.
- 3 A company makes a single product with a sales price of Rs.120 and a variable cost of Rs.54 per unit. Fixed costs are Rs.13,20,000. Calculate:
 - (a) Number of units to break even.
 - (b) Sales at breakeven point.
 - (c) Contribution to sales ratio (in terms of percentage).
 - (d) What number of units will need to be sold to achieve a profit of Rs.4,20,000?
 - (e) What level of sales will achieve a profit of Rs.5,60,000?
 - (f) Given an decrease in variable cost by 15% per unit, and increase in the fixed costs by Rs.1,20,000 per annum, what will be the new BEP in terms of units and sales volume.
- 4 Define market. Distinguish between perfect and imperfect markets.
- 5 What is the need of public enterprises? Explain the recent achievement of public enterprises.
- 6 An organization has three project proposals P, Q and R in hand. The cash flow from each project has been given below.

Year	Annual cash inflow in rupees		
	P	Q	R
1	2000	4000	6000
2	4000	4000	4000
3	6000	4000	2000

Each project has an economic life of 3 years and each project requires an investment of Rs. 9700. The total cash inflow from each project during its economic life is Rs.12,000. Determine the best project proposal based on NPV criteria assuming a rate of interest of 10%.

- 7 (a) What is 'Journal entry' and describes its importance in account books?
(b) Explain the basic accounting concepts and convention give examples.
- 8 What is meant by ratio analysis? Explain briefly various techniques of ratio analysis.
