(DCS / DIT 411)

B.Tech. DEGREE EXAMINATION, MAY - 2015

(Examination at the end of Final Year)

COMPUTER SCIENCE

Paper - I : Object Oriented Analysis & Design

Time : 3 Hours **Maximum Marks : 75**

Answer question No.1 is compulsory ***(5 × 3 = 15)***

Answer ONE question from each unit ***(4 × 15 = 60)***

1) Write a short note on

a) User Requirements.

b) Model consistency.

c) Class Specification.

d) Software Testing.

e) Development Diagrams.

UNIT - I

2) a) What are the basic concepts of object orientation?

b) Discuss the origins of object orientation.

OR

3) a) Briefly explain fact finding techniques.

b) Draw a class diagram for agate ltd.

UNIT - II

4) a) Explain about component based development.

b) Briefly describe about software development patterns.

OR

5) a) How to prepare a state chart. Explain.

b) List out the Qualify Guidelines.

UNIT - III

6) a) What are the major elements of system design?

b) Design for implementation.

OR

7) a) Define user Interface, and its approaches.

b) Explain about standards and legal requirements.

UNIT - IV

8) Discuss about revisable components in detail.

OR

9) What are the system development methodologies. Explain.

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(DCS / DIT 412)

B.Tech. DEGREE EXAMINATION, MAY - 2015

(Examination at the end of Final Year)

COMPUTER SCIENCE

Paper - II : Computer Networks

Time : 3 Hours **Maximum Marks : 75**

Answer question No.1 compulsory

Answer ONE question from each unit

1) Write a short notes on

a) Flooding.

b) HTTP.

c) Digital Signature.

d) IP address.

e) Flow control.

UNIT - I

2) Explain about congestion control in datagram subnets.

OR

3) Discuss (a) IP address. (b) Mobile IP.

UNIT - II

4) Explain the elements of transport protocols.

OR

5) Explain UDP in detail.

UNIT - III

6) Explain electronic mail in detail.

OR

7) Explain about Multimedia.

UNIT - IV

8) Explain PGP and PEM.

OR

9) Explain about one public key algorithm with an example.

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(DCS / DIT 414 E)

B.Tech. DEGREE EXAMINATION, MAY - 2015

(Examination at the end of Final Year)

COMPUTER SCIENCE

Paper - IV : VLSI Design

Time : 3 Hours **Maximum Marks : 75**

Answer question No.1 compulsory ***(15)***

Answer ONE question from each unit ***(4 × 15 = 60)***

1) a) What are the advantages of BiCMOS technology?

b) Define sheet resistance.

c) What are pass transistors?

d) Why is testing needed?

e) Define area capacitance.

f) Give differences between Si and GaAs technology.

UNIT - I

2) a) Explain nMOS fabrication with neat sketches.

b) Explain sheet resistance for different layers.

OR

3) a) Explain BiCMOS technology.

b) What is scaling factor? Explain different scaling models.

UNIT - II

4) a) Explain the array multiplier with neat figure.

b) Explain the structures of different switch logic circuits.

OR

5) a) Explain the parity generator and its advantages.

b) Implement the carry save adder using full adders.

UNIT - III

6) a) Explain the architecture of a general memory cell.

b) Explain Dynamic RAM cell with computation of area and power dissipation.

OR

7) a) Explain the random access memory cell with neat sketch.

b) Compare the ROM and Random access memory according to its area, complexity and power dissipation.

UNIT - IV

8) a) Explain :

i) System-level testing.

ii) Chip-level testing.

b) What is a fault? Explain the different faults occurred in a system.

OR

9) a) What is fault grading? Explain in detail.

b) Explain about following CAD tools.

i) Design rule verification.

ii) Schematic verification.

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(DCS / DIT 414 F)

B.Tech. DEGREE EXAMINATION, MAY - 2015

(Examination at the end of Fourth Year)

COMPUTER SCIENCE

Paper - IV : Image Processing

Time : 3 Hours **Maximum Marks : 75**

Answer question No.1 compulsory ***(15)***

Answer ONE question from each unit ***(4 × 15 = 60)***

1) Write short notes on

a) Quantization.

b) Histogram.

c) Image subtraction.

d) Threshold coding.

e) Lossy compression.

UNIT - I

2) a) What are the fundamental steps in digital image processing.

b) Explain about Image Sensing.

OR

3) a) What are the components of an Image Processing System.

b) Explain the following relationship between pinels

i) Connectivity.

ii) Distance measures.

UNIT - II

4) a) Explain about spatial domain high pass filtering.

b) Explain about frequency domain smoothening filters.

OR

5) a) Explain about histogram equalization.

b) Give the block diagram of Homomorphic filtering and explain.

UNIT - III

6) a) Explain about inverse filtering.

b) Explain about sub-band coding of 2D signal.

OR

7) Explain about wavelet transforms in two dimensions.

UNIT - IV

8) a) Explain the concept of edge linking and boundary detection.

b) Discuss about different image compression models.

OR

9) Explain the detection of discontinuities in detail.

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(DCS / DIT 415 B)

B. Tech. DEGREE EXAMINATION, MAY - 2015

(Examination at the end of Final Year)

COMPUTER SCIENCE

Paper - V : Cryptography and Network Security

Time : 3 Hours **Maximum Marks : 75**

Answer question No. 1 compulsory ***(15)***

Answer ONE question from each unit ***(4 x 15 = 60)***

1) Write a short notes on :

a) Define cryptography.

b) Define fermat's theorem.

c) Define virus.

d) What is the need of Authentication Header.

e) Define trusted system.

Unit - I

2) a) Explain steganography.

b) Explain block cipher modes of operation.

OR

a) Explain different transposition techniques.

b) Explain strength of DES.

Unit – II

3) Explain the Secure Hash Algorithm with a neat block diagram.

OR

a) Explain Authentication requirements and functions.

b) Explain Euclid algorithm.

Unit – III

4) a) Explain Authentication Header.

b) Explain Applications of IP Security.

OR

a) Explain X.509 authentication service.

b) Discuss virus counter measures.

Unit – IV

5) a) Explain secure electronic Transaction.

b) Give the Principle of Firewall Design.

OR

a) Discuss Password Management

b) Explain web security considerations.

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(DCS / DIT 415 E)

B. Tech. DEGREE EXAMINATION, MAY - 2015

(Examination at the end of Final Year)

COMPUTER SCIENCE

Paper – V : Soft Computing

Time : 3 Hours **Maximum Marks : 75**

Answer question No. 1 compulsory ***(15)***

Answer ONE question from each unit ***(4 x 15 = 60)***

1) Discuss about :

a) Hopfield network.

b) Fuzzy reasoning.

c) Cross over.

d) Simulated annealing.

e) Predicate calculus.

Unit - I

2) Explain back propagation network with an example.

OR

3) Explain supervised and unsupervised learning in detail.

Unit - II

4) Explain fuzzy if-then rules.

OR

5) a) Explain – fuzzy decision making with an example.

b) Explain classification and regression tress.

Unit - III

6) a) Explain survival of the fittest with an example.

b) Explain K-Means clustering.

OR

7) Explain Rank-Space method in detail.

Unit - IV

8) Explain semantic networks in detail.

OR

9) Discuss :

a) Frames.

b) Objects.

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(DCS / DIT 421)

B. Tech. DEGREE EXAMINATION, MAY - 2015

(Examination at the end of Final Year)

COMPUTER SCIENCE

Paper - VII : Industrial Management

Time : 3 Hours **Maximum Marks : 75**

Answer question No. 1 compulsory ***(15)***

Answer any four questions ***(4 x 15 = 60)***

1) Write short notes on :

a) Management.

b) Managerial functions.

c) Concept of interest.

d) Leadership.

e) Advertising.

f) Job Analysis.

g) HRP.

h) Scope of MRP.

2) Explain the principles of Scientific Management.

3) Explain the salient features of sole proprietorship.

4) Explain the equivalent cash flow diagram.

5) What are the various types of depreciation.

6) What are the various functions of personnel management?

7) What are the reasons for human resource planning.

8) Explain the economic order Quality models.

9) Explain in detail about marketing management.

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(DCS / DIT 422)

B. Tech. DEGREE EXAMINATION, MAY - 2015

(Examination at the end of Final Year)

COMPUTER SCIENCE

Paper - II : Advanced Computer Architecture

Time : 3 Hours **Maximum Marks : 75**

Answer question No. 1 compulsory ***(15)***

Answer ONE question from each unit ***(4 x 15 = 60)***

1) Write short notes on :

a) SIMD computer.

b) Pipeline processing.

c) Hierarchical bus systems.

d) Cache Coherence.

e) Compilers.

Unit - I

2) What is parallelism? What are the various conditions of parallelism.

OR

3) a) Compare and contrast static interconnection and dynamic interconnection networks.

b) What are the characteristics of SIMD computers?

Unit - II

4) Briefly explain about linear pipeline processor.

OR

5) Discuss about the throughput and efficiency in linear pipeline processor.

Unit - III

6) Explain about multithreaded architectures.

OR

7) Discuss message passing mechanism in detail.

Unit - IV

8) List and explain parallel programming models with examples.

OR

9) Discuss the relation between parallel languages and compilers.

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