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7E7031

Roll No. _____ [Total No. of Pages : 2

7E7031

B.Tech. VII semester (Main/Back) Examination, Nov. 2019
Computer Sc. & Engg.
7CS1A Cloud Computing

Time : 3 Hours **Maximum Marks : 80**

Min. Passing Marks : 26

Instructions to Candidates:

*Attempt any **five questions**, selecting **one question** from **each unit**. All Questions carry **equal** marks. (Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly). Units of quantities used/calculated must be stated clearly.*

UNIT - I

1. a) What are the risk in the Migration into Cloud? Also explain the process steps used in the migration into cloud. **(8)**

   b) What are the ethical issues in cloud computing? **(4)**

   c) Briefly describe the vision of the cloud computing towards its development in the market. **(4)**

(OR)

1. a) Describe the reasons for customer to prefer cloud computing over the traditional computing in owned infrastructure. **(8)**

   b) What are the enabling technologies for cloud computing? Explain networking support for cloud computing. **(8)**

UNIT - II

2. a) Differentiate between public, private and hybrid cloud according to their functionality. **(6)**

   b) What is need of data centres? Explain by providing case study of any industry where data centre is used. **(6)**

   c) Explain the features provided by Google App Engine. **(4)**

(OR)

2. a) Explain the concept of parallel and distributed programming paradigms in cloud computing. (6)

b) Explain various service layers in layered architecture of cloud with help of a neat and labelled diagram. (6)

c) Explain the working of Map Reduce. (4)

UNIT - III

3. a) Explain the virtualization of CPU in details. (8)

b) What do you mean by hypervisor? Explain different types of hypervisors. (8)

(OR)

3. a) Explain the differences between emulation, native virtualization and host virtualization. (8)

b) What do you mean by virtualization of memory and I/O devices? Explain in details. (8)

UNIT - IV

4. a) Explain the cloud security requirements and give fundamental model for cloud information security. (4)

b) Describe all the possible attacks that can be used to disrupt the cloud. (8)

c) Explain different legal issues in cloud computing. (4)

(OR)

4. a) Explain business continuity planning and Disaster recovery Planning. (6)

b) Explain security challenges and security architecture in cloud computing. (6)

c) Explain service level agreements in short, (4)

UNIT - V

5. a) Describe the amazon EC2 and its features. (6)

b) Illustrate the Aneka cloud application platform in respect of private cloud. (4)

c) What are Dropbox and iCloud? Explain the applications of both. (6)

(OR)

5. a) Compare Amazon, Azure and Google app Engine. (6)

b) Describe some example of CRM and ERP based on cloud computing. (6)

c) Explain Cloud federation in details. (4)

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7E7051

Roll No. _____ [Total No. of Pages : 2

7E7051

B.Tech. VII -Semester (Main&Back) Examination, Nov. - 2019
Information Technology
7IT1A Software Project Management

Time : 3 Hours **Maximum Marks : 80**
Min. Passing Marks : 26

Instructions to Candidates:

*Attempt any **five** questions, selecting **one** question from **each unit**. All Questions carry **equal** marks. (Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly). Units of quantities used/calculated must be stated clearly.*

Unit - I

1. a) Define the following terms with respect to software project management.
   i) The people
   ii) The project
   iii) The process
   iv) The product **(8)**

   b) What do you understand by W^5HH principle? Explain the significance of this principle in software project management. **(8)**

OR

1. a) Describe the role of project management in software development. **(8)**

   b) What are the software metrics? Explain the metrics in the process and project domain. **(8)**

Unit - II

2. a) Define software estimation? **(4)**

   b) Assume that the size an organic type software product has been estimated to be 64,000 lines of source code and the average salary of the software engineer is Rs. 45,000/ per month. Calculate the efforts required to develop the software product and the nominal development time. **(12)**

OR

2. a) Write the short note on estimation for object oriented projects. **(4)**

b) Consider the below data :

User Input = 35

User Output = 40

User Inquiries = 50

User Files = 6.

External interface = 4

Compute function point when all complexity adjustment factor (CAF) and weighting factors are average. **(12)**

Unit - III

3. a) Describe the role of project scheduling in development of a software project. **(8)**

b) Explain earned value analysis in brief. **(8)**

OR

3. a) Explain quantitative approaches to quality management. **(8)**

b) Write the short note on :

i) Reactive V/S proactive Risk

ii) The RMMM plan

iii) Defect prevention planning.

iv) Risk projection **(4×2=8)**

Unit - IV

4. What do you understand by software quality? Describe the concept of quality control and also explain quality and productivity factors. **(16)**

OR

4. What is configuration management? Explain different functions of configuration management. Give the schematic of changes to software components and reason for making changes to software. **(16)**

Unit - V

5. Write the short note on :

i) Review planning

ii) Risk - Related monitoring

iii) Actual v/s estimated analysis of efforts

iv) NAH syndrome **(4×4=16)**

OR

5. What is project closure analysis? Explain the role of project closure analysis and performance closure analysis in software project management in details? **(16)**

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7E7032

Roll No. _____ [Total No. of Pages : 2

7E7032

B.Tech. VII - Sem. (Main/Back) Examination, Nov. - 2019
Computer Science And Engineering
7CS2A Information System Security
Common For CS, IT

Time : 3 Hours **Maximum Marks : 80**
Min. Passing Marks : 26

Instructions to Candidates:

*Attempt any **five** questions, selecting **one** question from **each unit**. All questions carry **equal** marks. (Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.*

UNIT - I

1. Explain differential and linear cryptanalysis of DES. **(16)**

OR

1. a) What is Shannon's theory of confusion and diffusion? Explain fiestel structure of Block ciphers. **(10)**

   b) Write short note on triple DES. **(6)**

UNIT - II

2. a) Write and explain the design criterian of S - Box in detail. **(10)**

   b) Explain Construction of Balanced function for S - Box. **(6)**

OR

2. a) Explain RC.6 algorithm for information system security. **(8)**

   b) Write short note on propagation and non linearity of S - Box. **(8)**

UNIT - III

3. a) Discuss security analysis of RSA algorithm along with its application. **(8)**

   b) Explain Diffie Hellman key exchange algorithm in detail. **(8)**

OR

3. a) Explain Public key cryptosystems along with its principles. (10)

b) Write short note on X.509. (6)

UNIT - IV

4. Explain following in detail.

a) SHA (8)

b) MD5 (8)

OR

4. a) Explain symmetric and Asymmetric Authentication. (10)

b) Explain authentication protocols for digital signatures. (6)

UNIT - V

5. a) Explain the architecture of IP security in detail. (10)

b) Write short note on Encrypted key exchange. (6)

OR

5. Explain following in detail.

a) Encapsulation security payload in transport and Tunnel mode with multiple Security Association. (10)

b) Lamport's Hash. (6)

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7E7033

Roll No. _____ [Total No. of Pages : 2

7E7033

B.Tech. VII - Semester(Main/Back) Examination, Nov.-2019
Computer Science. AND Engineering
7CS3A Data Mining and Ware Housing
(Common for CS, IT)

Time : 3 Hours **Maximum Marks : 80**
Min. Passing Marks : 24

Instructions to Candidates:

*Attempt any **five questions**, selecting **one question** from **each unit**. All questions carry **equal** marks. (Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly). Units of quantities used/calculated must be stated clearly.*

UNIT - I

1. a) What is Data mining? Describe it and differentiate between data warehouse and data mining. **(8)**

   b) Explain data discretization and concept hierarchy generation? **(8)**

(OR)

1. Explain the following terms : **(4×4=16)**

   a) Data Cleaning.

   b) Data Reduction.

   c) Data Transformation.

   d) Noisy data.

UNIT - II

2. a) Explain the data mining association Rules in detail? **(8)**

   b) Explain the "Apriori algorithm" in detail? **(8)**

(OR)

2. a) Explain different graph display of basic statistical class description? **(8)**

   b) Explain the different types of databases in details. **(8)**

Unit - III

3. a) Explain the different classification techniques. (8)

   b) Explain the hierarchical clustering application. (8)

(OR)

3. Write short note on following :

   a) Genetic algorithm.

   b) Multi layer feed - forward neural network. (2×8=16)

Unit - IV

4. a) Explain Multi dimensional model of a data warehouse? (8)

   b) Explain 3 - Tier architecture of data warehouse? (8)

(OR)

4. Write short note on following : (4×4=16)

   a) Star schema

   b) Data cubes

   c) Snow flake

   d) Data mining

Unit - V

5. a) Explain the concept of tuning data warehouse and testing data warehouse. (8)

   b) Explain the advantages and disadvantages of OLAP. (8)

(OR)

5. Write short note on following : (4×4=16)

   a) MOLAP

   b) HOLAP

   c) ROLAP

   d) Backup and Recovery

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7E7034

Roll No. _____ [Total No. of Pages : 2

7E7034

B.Tech. VII Semester(Main/Back) Examination,Nov. - 2019
Computer Sc. & Engg.
7CS4A Computer Aided Design for VLSI

Time : 3 Hours **Maximum Marks : 80**

Min. Passing Marks : 26

Instructions to Candidates:

*Attempt any **five** questions, selecting **one** question from **each unit**. All questions carry **equal** marks. (Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly). Units of quantities used/calculated must be stated clearly.*

UNIT - I

1. a) Explain different design styles of microelectronic circuit design with examples. Also write the differences between full custom design and standard cell based design. **(8)**

   b) What is Moor's law? What do you understand by circuit and optimization? Explain its need and process. **(8)**

(OR)

1. a) Explain different programmable logic devices and their applications. Explain FPGA with its architecture. **(10)**

   b) What are the four phases of microelectronic circuit and optimization? What do you mean by CAD for VLSI? **(6)**

UNIT - II

2. a) What is optimization? Explain the different optimization techniques for digital circuits. **(8)**

   b) Explain Bryant's reduction algorithm in detail. **(8)**

(OR)

2. a) What is Binary decision diagram? Explain Robot algorithm. **(8)**

   b) Explain data flow and sequencing graph with example. **(8)**

UNIT - III

3. a) Explain ASAP scheduling algorithm with an example. **(8)**

   b) Write short note on force directed and multiprocessor scheduling. **(8)**

(OR)

3. a) Explain ALAP scheduling algorithm with an example. **(8)**

   b) Explain Heuristic scheduling algorithm with examples, show optimum schedule under resource constraints. **(8)**

UNIT - IV

4. a) Explain resource sharing and resource binding. What are compatibility and conflict graphs? **(8)**

   b) Explain register sharing and bus sharing with the help of example. **(8)**

(OR)

4. a) Discuss the exact logic minimization with an example. **(8)**

   b) Write short note on positional cube notations. **(8)**

UNIT - V

5. a) Define floor planning. Write goals and objectives of floor planning. **(8)**

   b) Write short notes on the following :

      i) clock routing and power routing.

      ii) channel routing algorithm. **(8)**

(OR)

5. a) Write short notes on : **(8)**

      i) Design rule checking

      ii) Interactive improvement algorithms.

   b) Explain physical design cycle with appropriate diagram. **(8)**

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7E7052

Roll No. _____ [Total No. of Pages : 2

7E7052

B.Tech. VII- Semester (Main/Back) Examination, Nov. 2019
Information Technology
7IT4A Internet Programming

Time : 3 Hours **Maximum Marks : 80**
Min. Passing Marks : 26

Instructions to Candidates:

*Attempt any **five questions**, selecting **one question** from **each unit**. All Questions carry **equal** marks. Schematic diagrams must be shown wherever necessary. Any data you feel missing suitable be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.*

UNIT - I

1. a) What are the different text flow media types in CSS? Explain one in detail. **(8)**

   b) Explain the following attributes of TABLE tag with suitable example.
   ALIGN, WIDTH, BORDER, CELLPADDING, COLSPAN, ROWSPAN, CELL SPACING. **(8)**

(OR)

1. a) What is Cascading Style Sheet (CSS)? Explain the advantages of Cascading Style Sheet in html documents. **(8)**

   b) What is Box Model? Explain with suitable example. **(8)**

UNIT - II

2. a) Why need of Java Script language in web pages? Write advantages of Java Script. **(8)**

   b) Write a Java Script program to find the greatest integer number among three numbers using function and math object. Integer numbers should be read from keyboard. **(8)**

(OR)

2. a) What do you mean by well formed XML document? What are the parsing techniques of XML? Discuss about them. **(8)**

   b) What is Document Type Definitions (DTDs)? Explain the working of Document type Definitions using suitable example. **(8)**

UNIT - III

3. a) Describe the difference between traditional web applications and Ajax based web applications. **(8)**

   b) Explain the following :

      i) Client side scripting Vs Server side scripting. **(4)**

      ii) Dojo toolkit. **(4)**

(OR)

3. a) Explain XmlHttp Request object with their properties and methods. **(8)**

   b) Describe the Multi Tier Application Architecture. **(8)**

UNIT - IV

4. a) Describe how cookies can be used to store information on a computer and how the information can be retrieved a PHP script. Assume that cookies are not disabled an the client. **(8)**

   b) Write a PHP program to store page view count in session, to increment the count on each refresh, and to show the count on web pages. **(8)**

(OR)

4. a) What is the basic difference ASP and ASP.NET? Explain the provider model for ASP.NET 2.0. **(8)**

   b) What is regular expression? Explain regular expression used in PHP. **(8)**

UNIT - V

5. How JSP page translate into servlets? Describe all standard action elements and all scripting elements used in JSP? **(16)**

(OR)

5. a) Explain JSP components in detail with a suitable example? **(8)**

   b) Write short note on Session tracking on Java web technology. **(8)**

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7E7035

Roll No. _____ [Total No. of Pages : 3

7E7035

B.Tech. VII - Semester (Main / Back) Examination, Nov. - 2019
Computer Science & Engg.
7CS5A Compiler Construction

Time : 3 Hours **Maximum Marks : 80**
Min. Passing Marks : 26

Instructions to Candidates:

*Attempt any **five** questions, selecting **one** question from **each unit**. All questions carry **equal** marks. (Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly). Units of quantities used / calculated must be stated clearly.*

UNIT - I

1. a) Explain the different phases of compiler design with the help of suitable diagram. [8]

   b) Explain the following terms :

      i) Translators, compilers, interpreters

      ii) Bootstrapping. [4]

   c) Illustrate the translation of the following statement on all phase of compiler

      A : = B*C+D/E. [4]

(OR)

   a) Explain the following terms in brief

      i) Input buffering

      ii) Functions of lexical analyzer [8]

   b) Construct minimum state DFA's for following regular expression.

      i) $(a/b)*a(a/b)$

      ii) $(a/b)*a(a/b)(a/b)$

      iii) $(a/b)*a(a/b)(a/b)(a/b)$ [8]

UNIT- II

2. a) Explain top down and bottom up parsing technique in detail. [8]

   b) Construct an LL(O) parse table for the grammar calculate FIRST and FOLLOW sets as needed? [8]

(OR)

   a) What do you mean by context free grammar? Give distinction between regular and context free grammar and limitations of context free grammar. [8]

   b) Show whether the following grammar is LL(1) or not

$E \rightarrow TE / + TE / \in$

$T \rightarrow FT / * FT / \in$

$F \rightarrow (E) / id$

And explain the model of a predictive parser. [8]

UNIT - III

3. a) Write a program to translate an infix expression into postfix form. Also write syntax directed definition for the same? [10]

   b) Write specifications of a simple type checker with example? [6]

(OR)

   a) Explain the syntax Directed translation schemes in detail. [8]

   b) What is the process and importance of intermediate code generation? [8]

UNIT - IV

4. Write short notes on:

   i) Symbol Table

   ii) Storage allocation strategies

   iii) Activation Record

   iv) Parameter passing. [16].

(OR)

Explain the following in detail?

   i) Nesting depth and access links.

   ii) Data structures used in symbol table.

   iii) Static versus dynamic storage allocation.

   iv) Activation Trees. [16]

UNIT - V

5. i) Construct the DAG and generate the code for given block.

d; = b+c

e: = a*b

b: = b-c

a: = e*d [10]

ii) What is peephole optimization? Explain it? [6]

(OR)

a) Construct the tree for following expression and apply labelling algorithm for ordering.

$x*(y+z) - z/(u-v)$ [10]

b) Explain the basic block and control flow graph? [6]

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7E7053

Roll No. _____ [Total No. of Pages : 2

7E7053

B.Tech. VII- Semester (Main&Back) Examination, Nov. - 2019
Information Technology
7IT5A Computer Graphics & Multimedia Techniques

Time : 3 Hours **Maximum Marks : 80**
Min. Passing Marks : 26

Instructions to Candidates:

*Attempt any **five questions**, selecting **one** question from **each unit**. All Questions carry **equal** marks. (Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly). Units of quantities used/calculated must be stated clearly.*

UNIT - I

1. a) Explain the following terms in context of display device.
   i) Flickering
   ii) Refreshing
   iii) Interlacing
   iv) Resolution **(8)**

   b) Go through steps of Bresenharm's line drawing algorithm for the line segment between end points (21,12) to (29,16). **(8)**

(OR)

1. a) What do you mean by computer graphics system? Define aspect ratio. What do mean by pixel and frame buffer. **(8)**

   b) Explain the architecture of random scan system. **(8)**

UNIT - II

2. a) What do you mean by homogeneous co - ordinates? How these co - ordinates are useful in transformation? **(8)**

   b) Explain cohen - sutherland line clipping Algorithm with region code details? **(8)**

(OR)

2. a) Write down inverse transformation and composite transformation. (8)

b) What is the difference between scaling and Rotation? What is the need of transformation between coordinate system? (8)

UNIT - III

3. a) Explain Depth - Buffer Algorithm to display visible surface of Polygen? (8)

b) Short note on :-

a) B - spline curves

b) Bezier - Curves. (8)

(OR)

3. a) Explain scan line Algorithm. (8)

b) What is perspective representation? Explain various types of perspective projection? (8)

UNIT - IV

4. a) Explain in brief about RGB, CMY and HSV color model. (8)

b) Explain the depth comparison method for displaying the visible surface of a given polyhedron. (8)

(OR)

4. a) Write and explain sutherland - Hodgeman polygon clipping. (8)

b) Write short notes on

i) Ray tracting

ii) Specular reflection. (8)

UNIT - V

5. a) What are Multimedia authoring tools? (8)

b) Explain the different types of data compression technology? (8)

(OR)

5. Write a short note on :

i) Animation techniques.

ii) Architectural and telecommunication considerations. (16)

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7E7036

Roll No. _____ [Total No. of Pages : 2

7E7036

B.Tech. VII- Semester (Main/Back) Examination, Nov. - 2019
Computer Sc. and Engg.
7CS6.1A Advance Data Base Management Systems
CS (Old and New), IT (Old)

Time : 3 Hours **Maximum Marks : 80**
Min. Passing Marks : 26

Instructions to Candidates:

*Attempt any **five questions**, selecting **one question** from **each unit**. All Questions carry **equal** marks. (Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly). Units of quantities used/calculated must be stated clearly.*

UNIT - I

1. a) How will you estimate the cost of a plan? Explain. **(8)**

   b) What is meant by enumeration of alternative plans? Explain. **(8)**

(OR)

1. a) How will you translate a SQL query into relational algebra? Explain with example. **(8)**

   b) What is system catalog in a Relational DBMS? Explain. **(8)**

UNIT - II

2. a) Explain Encapsulation in object databases. **(8)**

   b) What are the different operations applied on structured data in object databases? **(8)**

(OR)

2. a) Describe a database design of an ORDBMS. **(8)**

   b) What are the implementation challenges of ORDBMS? Explain. **(8)**

Unit - III

3. a) How data are stored in distributed DBMS? Explain with an example. **(8)**

   b) What is the need of distributed recovery? Explain. **(8)**

(OR)

3. a) Explain how a distributed catalog is maintained? **(8)**

b) Describe parallel query optimization with a suitable example. **(8)**

UNIT - IV

4. a) What are the covert channels? Explain. **(8)**

b) Explain mandatory access control with an example. **(8)**

(OR)

4. a) What do you understand by Discretionary access control? Explain. **(8)**

b) What are DOD security levels? Explain. **(8)**

UNIT - V

5. a) What is meant by SQL extensions? Explain. **(8)**

b) What are XML applications? Explain. **(8)**

(OR)

5. a) Explain storage and indexing in POSTGRES. **(8)**

b) Describe structure of XML data. **(8)**

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7E7056

Roll No. _____ [Total No. of Pages : 2]

7E7056

B.Tech. VII - semester (Main & Back) Examination, Nov. - 2019
Information Technology
7IT6.1A Advance Data Base Management Systems

Time : 3 Hours **Maximum Marks : 80**
Min. Passing Marks : 26

Instructions to Candidates:

*Attempt any **five questions**, selecting **one** question from **each unit**. All questions carry **equal** marks. (Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly). Units of quantities used/calculated must be stated clearly.*

UNIT - I

1. a) Explain different steps of query processing with suitable example. **(8)**

   b) What is External sort - Merge technique? Explain with a proper example. **(8)**

(OR)

1. a) What is Heuristic optimization? Define its advantages over cost - least optimization. **(8)**

   b) What is materialized view? Define the significance of view maintenance in materialized view. **(8)**

UNIT - II

2. a) Examine which of the following schedules are serializable? Also state the order in which the transactions should be executed to be successful.

   $S_1 : r_2(A)\ r_1(B)\ w_2(A)\ r_2(B)\ r_3(A)\ w_1(B)\ w_3(A)\ w_2(B)$

   $S_2 : r_2(A)\ r_1(B)\ w_2(A)\ r_3(A)\ w_1(B)\ w_3(A)\ r_2(B)\ w_2(B)$ **(10)**

   b) Explain the ACID properties of transaction. Explain the usefulness of each. **(6)**

(OR)

2. a) What are the different levels of isolations in DBMS? Describe in detail. **(8)**

   b) Differentiate between conflict vs. view serializability. Also give examples. **(8)**

UNIT - III

3. a) Define two - phase locking protocol with suitable examples. **(10)**

   b) Explain different schemes of deadlock prevention. **(6)**

(OR)

3. a) Explain Timestamp - ordering protocol in detail. **(8)**

   b) State different types of failure classifications. **(4)**

   c) Describe shadow paging recovery scheme. **(4)**

UNIT - IV

4. a) What is Embedded SQL? Explain in detail with example. **(8)**

   b) What are SQL Trigger? Define need of SQL Trigger. **(8)**

(OR)

4. a) What do you mean by a view? Why views are used in SQL? Give examples. **(8)**

   b) What is the need of Integrity constraints in DBMS? Define various types of it. **(8)**

UNIT - V

5. a) Describe different methods of distributed data storage. **(8)**

   b) How deadlocks are handle in distributed database systems? **(8)**

(OR)

5. Explain the followings with reference to distributed database systems :

   a) Query processing.

   b) Concurrency control

   c) Global vs. Local Transactions. **(4+6+6)**

7E7038

Roll No. _____ [Total No. of Pages : 2

7E7038

B.Tech. VII Semester (Main/Back) Examination, Nov. - 2019
Computer Sc. and Engg.
7CS6.3 A Data Compression Techniques

Time : 3 Hours **Maximum Marks : 80**

Min. Passing Marks : 26

Instructions to Candidates:

*Attempt any **five** questions, selecting **one** question from **each unit**. All questions carry **equal** marks. (Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.*

Unit - I

1. a) Explain Data compression. Compare lossy and lossless compression. **(8)**

   b) Describe Kraft - Mc Millan inequality. **(8)**

(OR)

1. a) Explain Huffman coding. Also write down its Encoding Algorithm. **(8)**

   b) What is Rice Code? Explain in detail. **(8)**

Unit - II

2. a) Describe move - to - front encoding. **(8)**

   b) Differentiate T.4 and T.6 facsimile encoding. **(8)**

(OR)

2. a) Explain Arithmetic coding in detail. Also write down its algorithm. **(8)**

   b) What is Dictionary coding? Compare and construct LZ77 and LZ78. **(8)**

Unit - III

3. a) Explain Rate Distortion Theory and its uses in detail. **(8)**

   b) Give the difference between uniform - Quantization and Non - Uniform Quantization. **(8)**

(OR)

3. a) Give the difference between vector - Quantization and Scalar Quantization. (8)

b) Explain lattice algorithm and give the advantage of lattice algorithm. (8)

Unit - IV

4. a) Define the steps required in DPCM - compression of images and video signals. (8)

b) Discuss differential encoding? (8)

(OR)

4. a) Define the performance Measurement of Delta Modulation. (8)

b) Write short note on the following :

i) Z - transform

ii) DCT (8)

Unit - V

5. a) Explain multi - resolution analysis and scaling function of wavelets. (8)

b) Discuss the basic algorithm for sub - band coding. (8)

(OR)

5. a) What is filter? Write down some filters used in sub - band coding. (8)

b) Discuss various MPEG standards. (8)