(L) 398

7E1721

Roll No. _____ Total No. of Pages: 2

7E1721

B. Tech. VII - Sem. (Main / Back) Exam., January - 2022
Computer Science & Engineering
7CS4 –01 Internet of Things

Time: 3 Hours **Maximum Marks: 120**
Min. Passing Marks: 42

Instructions to Candidates:

Attempt all ten questions from Part A, five questions out of seven questions from Part B and four questions out of five from Part C.

Schematic diagrams must be shown wherever necessary. Any data you feel missing may suitably be assumed and stated clearly. Units of quantities used /calculated must be stated clearly.

Use of following supporting material is permitted during examination. (Mentioned in form No. 205)

1. NIL 2. NIL

PART – A

(Answer should be given up to 25 words only) **[10×2=20]**

All questions are compulsory

Q.1 Define Arduino?

Q.2 List layers of IoT protocol.

Q.3 What are the challenges of IoT?

Q.4 List available wireless communications boards available in Raspberry Pi?

Q.5 What is the difference between M2M and IoT?

Q.6 What is shodan?

Q.7 What is the connection between IoT and sensors in the commercial enterprise?

Q.8 What is the top most layer in IoT architecture?

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Q.9 What are IoT testing tools?

Q.10 Differentiate between Arduino and Raspberry Pi?

PART – B

(Analytical/Problem solving questions) **[5×8=40]**

Attempt any five questions

Q.1 Explain fundamental components of IoT?

Q.2 How can IoT benefit the health care industry? Explain.

Q.3 Define IPv6. What impact could IPv6 have on IoT? Explain.

Q.4 What is REST model? Why it is important? Explain the REST methods.

Q.5 Explain 4 stages of IoT architecture.

Q.6 What is the scale of use of IoT devices in contemporary times.

Q.7 Explain the types of testing in IoT?

PART – C

(Descriptive/Analytical/Problem Solving/Design Questions) **[4×15=60]**

Attempt any four questions

Q.1 Explain –

(a) Tiny OS

(b) Ultrasonic sensor

(c) RIOT OS

Q.2 What are IoT publishers? Explain communication models in IoT.

Q.3 What are the most common IoT application? Explain the characteristics, advantages and disadvantages of IoT.

Q.4 What is SDN? What are the four key characteristics of an SDN architecture? Explain the layers of SDN.

Q.5 What is cloud computing? Why it is used? What are the main advantages of cloud computing? Is cloud computing necessary for IoT? Explain.

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7E1724

Roll No. _____

Total No. of Pages: 2

7E1724

B. Tech. VII - Sem. (Main / Back) Exam., January - 2022
Information Technology
7IT4 –01 Big Data Analytics

Time: 3 Hours

Maximum Marks: 120
Min. Passing Marks: 42

Instructions to Candidates:

Attempt all ten questions from Part A, five questions out of seven questions from Part B and four questions out of five from Part C.

Schematic diagrams must be shown wherever necessary. Any data you feel missing may suitably be assumed and stated clearly. Units of quantities used /calculated must be stated clearly.

Use of following supporting material is permitted during examination. (Mentioned in form No. 205)

1. NIL

2. NIL

PART – A

(Answer should be given up to 25 words only) **[10×2=20]**

All questions are compulsory

Q.1 What is Big Data? How does it work?

Q.2 What are the different platforms to deal with Big Data?

Q.3 What kinds of projects are better suitable for Big Data?

Q.4 Explain the features of Hadoop.

Q.5 What are outliers?

Q.6 What is overfitting?

Q.7 What do you mean by 'Record Reader'?

Q.8 Define the key design principles of pig latin.

Q.9 Explain 3 V's of Big Data.

Q.10 What is partitioning in Hive?

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PART – B

(Analytical/Problem solving questions) **[5×8=40]**

Attempt any five questions

Q.1 What is HDFS? List all the components of HDFS and explain any four components.

Q.2 How does the Hadoop MapReduce data flow work for a word count program? Give an example.

Q.3 Discuss the scripting with Pig Latin in detail.

Q.4 Explain the concept for examining the Hive clients.

Q.5 Differentiate between null writable, object writable and generic writable.

Q.6 Explain the features and benefits of apache HIVE in Hadoop.

Q.7 Discuss the challenges with Big Data. What are the different problems faced in traditional large scale system?

PART – C

(Descriptive/Analytical/Problem Solving/Design Questions) **[4×15=60]**

Attempt any four questions

Q.1 Explain Hadoop AP1 for MapReduce framework. Also explain mapper code.

Q.2 What is the primary purpose of pig in Hadoop architecture? Explain the major components of Pig architecture.

Q.3 Discuss the applying data structure and tools for managing Hadoop data.

Q.4 What is Hadoop Cluster? How does it configure in a system? Also explain configuring XML file.

Q.5 Explain the following –

(a) Building blocks of Hadoop

(b) Raw comparator for speed

(c) Writable interface

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7E1722

Roll No. _____ Total No. of Pages: 2

7E1722

B. Tech. VII - Sem. (Main / Back) Exam., January - 2022

Open Elective - I

7CS6 –60.1 Quality Management/ISO 9000

Time: 3 Hours **Maximum Marks: 120**

Min. Passing Marks: 42

Instructions to Candidates:

Attempt all ten questions from Part A, five questions out of seven questions from Part B and four questions out of five from Part C.

Schematic diagrams must be shown wherever necessary. Any data you feel missing may suitably be assumed and stated clearly. Units of quantities used /calculated must be stated clearly.

Use of following supporting material is permitted during examination. (Mentioned in form No. 205)

1. NIL 2. NIL

PART – A

(Answer should be given up to 25 words only) **[10×2=20]**

All questions are compulsory

Q.1 What do you mean by Juran's philosophy?

Q.2 Describe the term Bench marking.

Q.3 What is QMS and EMS?

Q.4 Explain TQC tools in quality improvement.

Q.5 Define the terms quality audit and quality circles.

Q.6 Describe the method of sampling in quality management.

Q.7 Explain the key points of ISO 9001.

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Q.8 How can we calculate the data by Taguchi method?

Q.9 Define term Hypothesis testing.

Q.10 What are the different types of control charts in quality management?

PART – B

(Analytical/Problem solving questions) **[5×8=40]**

Attempt any five questions

Q.1 What are the main objective and scope of quality management?

Q.2 Explain quality cost.

Q.3 What do you understand by Crosby's quality philosophy? Give one example.

Q.4 What are the benefits of ISO registration?

Q.5 Explain the following terms –

(a) TQM

(b) ANOVA

Q.6 Explain Robust Design for product quality improvement.

Q.7 What do you mean by product reliability analysis?

PART – C

(Descriptive/Analytical/Problem Solving/Design Questions) **[4×15=60]**

Attempt any four questions

Q.1 What are lean fundamentals? Explain it with benefits and implementation.

Q.2 Explain the concept of ISO 9000. Discuss the quality function deployment process.

Q.3 Describe basic statistics of experimental designs with T-test & F-test. Explain Taguchi quality loss function.

Q.4 What philosophical changes might be required to implement a six-sigma process in hospital or government or not-for-profit organization? Are they likely to be easy or difficult?

Q.5 Explain the Deming's management philosophy, why has it been controversial? Describe the key elements of total quality.

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7E1723

Roll No. _____ Total No. of Pages: 2

7E1723

B. Tech. VII - Sem. (Main /Back) Exam., January - 2022

Open Elective - I

7CS6 –60.2 Cyber Security

Time: 3 Hours **Maximum Marks: 120**

Min. Passing Marks: 42

Instructions to Candidates:

Attempt all ten questions from Part A, five questions out of seven questions from Part B and four questions out of five from Part C.

Schematic diagrams must be shown wherever necessary. Any data you feel missing may suitably be assumed and stated clearly. Units of quantities used /calculated must be stated clearly.

Use of following supporting material is permitted during examination. (Mentioned in form No. 205)

1. NIL 2. NIL

PART – A

(Answer should be given up to 25 words only) **[10×2=20]**

All questions are compulsory

Q.1 Define cyber-crime. [2]

Q.2 What is information security? [2]

Q.3 What is Hacking? [2]

Q.4 Define Phishing. [2]

Q.5 What are proxy – servers? [2]

Q.6 Define computer forensics. [2]

Q.7 What is Authentication? [2]

Q.8 Explain IPR. [2]

Q.9 What is social computing? [2]

Q.10 Define Web threats. [2]

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PART – B

(Analytical/Problem solving questions) **[5×8=40]**

Attempt any five questions

Q.1 Give classifications of cybercrimes and explain in detail. [8]

Q.2 What are the various security challenges based by mobile devices? Explain. [8]

Q.3 Explain various organization measures for handling mobile security. [8]

Q.4 Botnets are known to be fuel for cybercrime? Explain with justification. [8]

Q.5 Explain following in detail –

(a) Virus and worms [4]

(b) Trojan horse [4]

Q.6 Explain social computing and the associated challenges for an organization. [8]

Q.7 Explain following in detail –

(a) DOS and DDOS Attacks [4]

(b) SQL Injection [4]

PART – C

(Descriptive/Analytical/Problem Solving/Design Questions) **[4×15=60]**

Attempt any four questions

Q.1 Explain various tools and methods used in cyber-crime in detail. [15]

Q.2 Explain the organization of Information security along with Risk Assessment and Treatment. [15]

Q.3 Explain the following incorporated with cyber-crime –

(a) Registry settings for mobile devices [5]

(b) Authentication service security [5]

(c) Attack vector [5]

Q.4 Explain various web threats along with security and privacy implications for organization. [15]

Q.5 Explain the following in detail –

(a) Keyloggers and Spywares [5]

(b) Cybercrime and the Indian ITA 2000. [5]

(c) Cyber stacking [5]

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7E7031

Roll No. _____

Total No. of Pages: 3

7E7031

B. Tech. VII - Sem. (Main / Back) Exam., March - 2022
Computer Science & Engineering
7CS1A Cloud Computing

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.*

Use of following supporting material is permitted during examination. (Mentioned in form No. 205)

1. NIL

2. NIL

UNIT- I

Q.1 (a) Briefly describe the vision of the cloud computing towards its development in the market. [8]

(b) What is Ubiquitous computing? Also explain the Ubiquitous cloud concept. [8]

OR

Q.1 (a) Write and explain the ethical issues of cloud computing in detail. [8]

(b) Explain the various features characteristics and components of cloud computing system. [8]

[560]

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UNIT- II

Q.2 (a) Explain parallel and distributed programming paradigms in cloud computing using a practical example. [8]

(b) What is HDFS? How it is different from traditional file system? [8]

OR

Q.2 (a) How Hadoop MapReduce works? Explain the working of MapReduce. [8]

(b) What is the need of data centers? Explain by providing case study of any industry or organisation, where data center is used. [8]

UNIT- III

Q.3 (a) What is network virtualization? Describe the various components in network virtualization. [8]

(b) Write short notes on – [2×4=8]

(i) Virtual Cluster & Resource Management

(ii) VMware and KVM hypervisor

OR

Q.3 What is virtualization technology? Explain implementation level of virtualization along with benefits of virtualization and also explain virtualization of data-center. [16]

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UNIT- IV

Q.4 (a) What are the design principles associated with cloud computing security? Explain. [8]

(b) Describe the implementation of cloud security policies. [8]

OR

Q.4 (a) Write short notes on – [2×4=8]

(i) SLA – Service Level Agreements

(ii) Trust Management & Risk Mitigation

(b) Describe the legal issues in cloud computing. [8]

UNIT- V

Q.5 (a) What is Amaron Web Servicer (AWS)? Explain. [8]

(b) What do you understand by federated cloud? Explain using a suitable example. [8]

OR

Q.5 (a) Describe the system architecture of Aneka using a suitable example. [8]

(b) What is Microsoft Azure Design? Explain its components and also explain Google App Engine. [8]

7E7032

Roll No. _____ Total No. of Pages: 2

7E7032

B. Tech. VII - Sem. (Main / Back) Exam., March - 2022
Computer Science & Engineering
7CS2A Information System Security
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.

Use of following supporting material is permitted during examination. (Mentioned in form No. 205)

1. NIL 2. NIL

UNIT- I

Q.1 (a) What is Shannon's theory of Confusion & Diffusion? Explain linear cryptanalysis of DES. [10]

(b) Write short note on Block Cipher modes of operation. [6]

OR

Q.1 (a) Explain the Substitution & Transposition cryptographic technique. [8]

(b) Explain Data Encryption Standard (DES) in detail. [8]

UNIT- II

Q.2 (a) Explain S – box theory in detail. [8]

(b) Explain construction of balanced function for S – box. [8]

OR

Q.2 Write short notes on –

(a) AES [8]

(b) RC6 [8]

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UNIT- III

Q.3 (a) Explain Diffie Hellman Key Exchange Algorithm in detail. [8]

(b) Differentiate between symmetric & asymmetric key cryptography. [8]

OR

Q.3 (a) Discuss "Non is the middle attack" problem. [8]

(b) Explain the Role of RSA algorithm in public key cryptography? [8]

UNIT- IV

Q.4 Why do we need Message authentication? Justify your answer. Explain the concept of MAC and its function and what is hash function? Explain it. [16]

OR

Q.4 (a) What is the property of digital signature? Explain. [8]

(b) Explain MD5 message digest algorithm with its functions. [8]

UNIT- V

Q.5 Draw & explain the various field of authentication header. Also explain the position of authentication header in IPv4 and IPv6 packet format. [16]

OR

Q.5 Write short notes on – (Any Two) [8×2=16]

(a) IP Security Architecture

(b) Encrypted key exchange

(c) Lamport's hash

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7E7033

Roll No. _____ Total No. of Pages: 2

7E7033

B. Tech. VII - Sem. (Back) Exam., January - 2022
Computer Science & Engineering
7CS3A Data Mining & Ware Housing
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.

Use of following supporting material is permitted during examination. (Mentioned in form No. 205)

1. NIL 2. NIL

UNIT- I

Q.1 What is Data Mining? Explain the concept of Data Preprocessing and Data Cleaning in detail. [16]

OR

Q.1 (a) Explain Data Integration and Transformation in data mining. [10]

(b) Write a short note on Data Compression. [6]

UNIT- II

Q. 2 Explain mining multi-dimensional association rules from relational databases. [16]

OR

Q.2 Explain the following in detail - [4×4=16]

(a) Data generalization

(b) Measuring dispersion of data

(c) Analysis of attribute relevance

(d) Apriori algorithm

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UNIT- III

Q. 3 (a) Describe the various issues regarding Classification and Prediction. [8]

(b) Explain K-nearest neighbor classifiers with an example. [8]

OR

Q.3 Explain the following in detail -

(a) Hierarchical Clustering Method [8]

(b) Grid-Based Clustering Method [8]

UNIT- IV

Q. 4 (a) What is Data Warehousing? Describe in brief about data warehouse implementation. [10]

(b) Differentiate between Database System and Data Warehouse. [6]

OR

Q.4 (a) Explain about the Three-Tier Data Warehouse Architecture with a neat diagram. [10]

(b) Write short note on Fact Constellation Schema. [6]

UNIT- V

Q.5 Explain various OLAP functions and tools in detail. [16]

OR

Q.5 Explain the following in detail - [4×4=16]

(a) Data mining interface

(b) Backup and Recovery

(c) Tuning data warehouse

(d) Testing data warehouse

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7E7035

Roll No. _____ Total No. of Pages: 2

7E7035

B. Tech. VII - Sem. (Back) Exam., January - 2022
Computer Science & Engineering
7CS5A Complier Construction

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.

Use of following supporting material is permitted during examination. (Mentioned in form No. 205)

1. NIL 2. NIL

UNIT- I

Q.1 (a) Define the compiler. Explain the phases of compiler. [8]

(b) Differentiate between one pass and multi-pass compiler. [8]

OR

Q.1 (a) Design a lexical analyzer generator and explain it. [10]

(b) What are tokens? [6]

UNIT- II

Q.2 Consider the following grammar G –

$E \rightarrow E + T \mid T$

$T \rightarrow TF \mid F$

$F \rightarrow F * \mid a \mid b$

Construct SLR and LALR parsing table for this grammar. [16]

4)6

OR

Q.2 (a) What is parsing? Explain shift reduce parsing. [8]

(b) What is YACC error handling in LR parsers? [8]

UNIT- III

Q.3 (a) What is the process and importance of intermediate code generation? [8]

(b) Explain L-attributed definitions with a suitable example. [8]

OR

Q.3 Write a program to translate an infix expression into postfix form. Explain syntax directed definition for the same. [16]

UNIT- IV

Q.4 (a) Differentiate between stack allocation and heap allocation strategies. [8]

(b) What do you mean by Nesting depth and Access links? [8]

OR

Q.4 What is symbol table? Explain the data structure used in symbol table. Also explain parameter passing in detail. [16]

UNIT- V

Q.5 (a) Construct a DAG for the basic block whose code is given – [10]

D : = B * C

E : = A+ B

B : = B * C

A : = E – D

(b) Explain the flow graphs in detail. [6]

OR

Q.5 Write short note on – [Any 2] [2×8=16]

(a) Loop optimization

(b) Peephole optimization

(c) Design issues of code generator

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7E7036

Roll No. _____ Total No. of Pages: 2

7E7036

B. Tech. VII - Sem. (Back) Exam., January - 2022
Computer Science & Engineering
7CS6.1A Advance Data Base Management Systems
CS (Old & New), IT (Old)

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.

Use of following supporting material is permitted during examination. (Mentioned in form No. 205)

1. NIL 2. NIL

UNIT- I

Q.1 (a) What are the steps in query processing and optimization? Give block diagram. [8]

(b) Differentiate cost-based and heuristic query optimization with suitable examples. [8]

OR

Q.1 (a) What is external sorting? Explain with a suitable example. [8]

(b) What is a query tree? Discuss the steps in estimating the cost of a query plan. [8]

UNIT- II

Q.2 (a) Differentiate ODBMS, OODBMS and ORDBMS. [8]

(b) What are ADTs? How encapsulation is used to create ADTs? [8]

OR

Q.2 (a) Explain the followings - [8]

(i) Structured Data Types

(ii) Object-OID & Reference Types

(b) Highlight the features of object oriented database. [8]

418.

UNIT- III

Q.3 (a) What do you understand by distributed databases? Give various advantages and disadvantages of DDBMS. [8]

(b) Explain 5-level heterogeneous distributed database architecture. [8]

OR

Q.3 (a) Explain how 2PC ensures transaction atomizing despite the failure in distributed system. [8]

(b) What is a distributed query tree? Explain steps in a distributed query processing. [8]

UNIT- IV

Q.4 (a) What are discretionary access control? Explain Grant and Revoke with suitable examples. [8]

(b) Discuss the role of database administrator in providing security to database. [8]

OR

Q.4 (a) Write SQL statement for the following -

(i) GRANT the SELECT, DELETE and UPDATE authority to user AJAY on EMPLOYEE table. [4]

(ii) REVOKE all privileges on EMPLOYEE table from all users. [4]

(b) What are Mandatory Access Control? Explain polyinstantiation and covert channels w.r.t. MAC protocols. [8]

UNIT- V

Q.5 (a) Explain XML document schema. How elements of XML are defined in a XML schema? [8]

(b) Discuss the system architecture of POSTGRES with suitable diagram. [8]

OR

Q.5 (a) How XML data is stored to create a database? Explain application program interface to XML. [8]

(b) Write the steps for query processing and optimization of POSTGRES. Give diagram. [8]

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7E7052

Roll No. _____ Total No. of Pages: 2

7E7052

B. Tech. VII - Sem. (Back) Exam., March - 2022

Information Technology

7IT4A Internet Programming

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.

Use of following supporting material is permitted during examination. (Mentioned in form No. 205)

1. NIL 2. NIL

UNIT- I

Q.1 Explain the various types of cascading style sheets with an example. [16]

OR

Q.1 List and explain in detail the various XHTML elements and also explain W3C XHTML validation service. [16]

UNIT- II

Q.2 (a) Explain DOM in JavaScript. [8]

(b) Explain JavaScript. How array can be defined with JavaScript? Explain with example. [8]

420

OR

Q.2 (a) Explain XML in detail and also defined advantages in internet technology. [8]

(b) What is DTD? How is it useful for validating XML? Explain with suitable example. [8]

UNIT- III

Q.3 (a) Explain –

(i) DOJO Toolkit [4]

(ii) Apache HTTP Server [4]

(b) Explain multitier application architecture. [8]

OR

Q.3 (a) Differentiate between traditional Web applications and Ajax applications. [8]

(b) What is XMLHTTP request object? Also explain the uses of XMLHTTP request object in AJAX. [8]

UNIT- IV

Q.4 Explain the steps to show the connectivity to a database in ASP.NET in detail. [16]

OR

Q.4 (a) Explain string processing & regular regular expression in PHP. [8]

(b) What is the difference between the GET method ( ) and POST method ( )? [8]

UNIT- V

Q.5 Write short notes on –

(a) JSF components [8]

(b) Java Web Technologies [8]

OR

Q.5 Explain –

(a) NetBeans [8]

(b) Session tracking [8]

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7E7053

Roll No. _____ Total No. of Pages: 2

7E7053

B. Tech. VII - Sem. (Back) Exam., March - 2022

Information Technology

7IT5A Computer Graphics & Multimedia Techniques

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.

Use of following supporting material is permitted during examination. (Mentioned in form No. 205)

1. NIL 2. NIL

UNIT- I

Q.1 (a) Discuss raster scan display system with the help of block diagram. [8]

(b) What is Anti Aliasing? Explain in detail. [8]

OR

Q.1 (a) Explain the interactive picture construction technique. [8]

(b) Discuss various application area of computer graphics. Explain refreshing and flickering. [8]

UNIT- II

Q.2 (a) Discuss Cohan-Sutherland line clipping algorithm with region code. [8]

(b) How homogenous coordinates are useful in transformation? [8]

422

OR

Q.2 (a) Explain flood filling algorithm for area filling. [8]

(b) Derive composite transformation matrix of translation followed by reflection. [8]

UNIT- III

Q.3 (a) Explain properties of Bezier curves. [8]

(b) Discuss geometric and parametric continuing of curves. [8]

OR

Q.3 (a) Explain image space and object space method. [8]

(b) Describe Depth Buffer Algorithm to display visible surfaces of polygon. [8]

UNIT- IV

Q.4 (a) Explain RGB, CMY and HSV color model in detail. [8]

(b) What do you mean by Phong Shading? Explain in detail. [8]

OR

Q.4 (a) Discuss a routine to convert RGB color model to HSV color model. [8]

(b) Write down the illumination model that in corporates diffused and specular reflection. [8]

UNIT- V

Q.5 (a) What is animation? Explain principles of animation. [8]

(b) Write short note on storage and retrieval technologies. [8]

OR

Q.5 What are the challenges faced in animation implementation? Explain the steps in generation of animation. [16]
