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7E7036

Roll No. _____ Total No of Pages: 3

7E7036

B. Tech. VII Sem. (Main / Back) Exam., Nov. – Dec. - 2018
Computer Science & Engineering
7CS6.1A /7IT6.1 (O) Advance Database Management Systems
CS (Old & 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.

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

1. NIL 2. NIL

UNIT- I

Q.1 (a) Define query optimization and explain its significance for DBMS. [8]

(b) Explain the term system catalog. Also explain how catalog are stored? [8]

OR

Q.1 (a) Explain the role of relational algebra equivalences in query optimization. [8]

(b) Write short note on: [4×2=8]

(i) Cost of plan estimation

(ii) Enumeration of alternative plan

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UNIT- II

Q.2 (a) Compare ORDBMS and OODBMS with various database system? [8]

(b) Discuss and design differences of a relational database and an object database. [8]

OR

Q.2 (a) What are different structured data types available in object database system? [8]

(b) Write short note on – [4×2=8]

(i) ORDBMS implementation challenges

(ii) Encapsulation and ADT's

UNIT- III

Q.3 (a) What is distributed DBMS? Explain its architecture? [8]

(b) How can we evaluate and optimize queries over distributed data? [8]

OR

Q.3 (a) What is concurrency control? What are the recovery techniques to overcome from concurrency? [8]

(b) Write short note on – [4×2=8]

(i) Distributed catalog management

(ii) Parallel query optimization

UNIT- IV

Q.4 (a) What is database security? Explain secrecy, integrity and availability within database security. [8]

(b) Explain the DOD security levels for database system. [8]

OR

Q.4 (a) Explain the role of the database administrator with respect to security? [8]

(b) Write short note on – [4×2=8]

(i) Access control

(ii) Security in statistical database

UNIT- V

Q.5 (a) What is POSTGRES user interface? Explain its architecture. [8]

(b) Explain in brief query processing optimization and system architecture. [8]

OR

Q.5 (a) Explain transaction management with various key notation. [8]

(b) Write short note on – [4×2=8]

(i) Types of XML documents

(ii) XML applications

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7E4241

Roll No. _____ Total No of Pages: 3

7E4241

B. Tech. VII Sem. (Back) Exam., Nov. – Dec. - 2018
Computer Science & Engineering
7CS5 (O) Computer Graphics and 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.

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

1. NIL 2. NIL

UNIT- I

Q.1 (a) Explain storage cathode ray tube with neat diagram. [8]

(b) Describe the steps in Mid-Point circle algorithm. [8]

OR

Q.1 (a) What is scan conversion? What are the major disadvantages of scan conversion? [8]

(b) Write short notes on the following - [2×4=8]

(i) Flicking

(ii) Interactive display

(iii) Resolution

(iv) Display Processor

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UNIT- II

Q.2 (a) Define composite transformation? Explain it with the help of example. [8]

(b) Define Boundary fill algorithm with the help of example. [8]

OR

Q.2 (a) What is the role of homogeneous coordinates in 2D transformation? Explain with the help of example. [8]

(b) Define & explain the following by giving example. [4×2=8]

(i) Point Clipping

(ii) Line Clipping

UNIT- III

Q.3 (a) Explain B – Spline curve in detail. [8]

(b) Describe Area based algorithm. [8]

OR

Q.3 (a) Differentiate Image space method and Object space method. [8]

(b) Write short notes on the following - [4×2=8]

(i) Non – Parametric representation

(ii) Bezier curve

UNIT- IV

Q.4 (a) What do you mean by CMY color model? Differentiate it with RGB color model. [8]

(b) Write short notes on the following - [4×2=8]

(i) Ray tracing

(ii) Gouraud Shading

OR

Q.4 (a) Describe simple recursive ray tracing without antialiasing. [8]

(b) Write short notes on the following: [8]

(i) Diffuse reflection

(ii) HSV

UNIT- V

Q.5 (a) What do you mean by Multimedia? Explain its techniques in detail. [8]

(b) Explain the following - [4×2=8]

(i) TIFF

(ii) SCSI

OR

Q.5 (a) What are the different types of data compression technique? Explain it. [8]

(b) What do you mean by animation? Explain it's steps in detail. [8]

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7E4238

Roll No. _____ Total No of Pages: 3

7E4238

B. Tech. VII Sem. (Back) Exam., Nov. – Dec. - 2018
Computer Science & Engineering
7CS2 (O) Wireless Communication & Networks
Common with 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.

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 multipath and fading? Explain the effect of multipath and fading in mobile communication. [10]

(b) Explain cell splitting and cell sectoring. Explain the concept of cell cluster. [6]

OR

Q.1 (a) Compare 1G, 2G and 3G. [6]

(b) What is Hand off? Compare soft hand off, hard hand off and umbrella cell hand off approach? [10]

UNIT- II

Q.2 (a) Explain GPRS Architecture Reference model with suitable diagram. [8]

(b) What is CSMA? Differentiate between collision detection and collision avoidance. [8]

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OR

Q.2 (a) Differentiate between exposed node problem and Hidden node problem in wireless communication? How it can be solved? [8]

(b) Compare Aloha, CSMA and DAMA? [8]

UNIT- III

Q.3 (a) What is Bluetooth Technology? Explain the IEEE 802.15.1 Bluetooth frame format. [8]

(b) Describe the important features of wireless LAN technology. [8]

OR

Q.3 (a) Explain the terms with respect to IEEE 802.11 LAN standard – [8]

(i) Access point

(ii) Distributed system

(iii) Extended service set

(iv) Basic service set

(b) Describe the MAC management and its function. [8]

UNIT- IV

Q.4 (a) Explain the concept of Mobile TCP. Also explain Indirect TCP and snooping TCP. [8]

(b) Explain the following terms with respect to mobile IP entities – [8]

(i) Home address

(ii) Home network

(iii) Foreign Agent

(iv) Home Agent

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OR

Q.4 (a) What is the difference between AODV and standard distance vector Algorithm? [8]

(b) What is DHCP? Explain the basic DHCP configuration and its application? [8]

UNIT- V

Q.5 (a) What is WAP push? How is push different from pull? [8]

(b) Discuss file system in mobile environment. Briefly explain the Coda File System. [8]

OR

Q.5 Write the short notes on the following – (any four) [4×4=16]

(a) HTML

(b) HTTP

(c) WML Script

(d) WWW

(e) WAP

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7E7031

Roll No. _____ Total No of Pages: 2

7E7031

B. Tech. VII Sem. (Main / Back) Exam., Nov. – Dec. - 2018
Computer Science & Engineering
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.

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

1. NIL 2. NIL

UNIT- I

Q.1 (a) Explain the various features, characteristics and components of cloud computing system. [8]

(b) Explain briefly about who get benefits from cloud computing. [8]

OR

Q.1 (a) Explain the types of cloud service development in detail. [8]

(b) Explain Ethical issues in cloud computing. [8]

UNIT- II

Q.2 (a) Explain the architecture of cloud computing in detail. [10]

(b) Explain parallel and distributed programming paradigms in cloud computing. [6]

OR

Q.2 (a) Explain models of cloud computing in detail. [8]

(b) Explain Google APP engine. [8]

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UNIT- III

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

(b) Explain virtualization tools and mechanisms. [8]

OR

Q.3 Write short notes - [4×4=16]

(a) KVM
(b) Memory
(c) I/O devices
(d) Virtualization of data – center

UNIT- IV

Q.4 (a) Explain Security Policies for cloud computing. [8]

(b) Explain cloud computing Security Architecture. [8]

OR

Q.4 Write short notes – [4×4=16]

(a) BCP
(b) SLA
(c) Trust management
(d) Threats in cloud

UNIT- V

Q.5 (a) What are the features of Amazon Simple DB? [8]

(b) Explain the data analysis application of cloud computing. [8]

OR

Q.5 Explain –

(a) CRM and ERP [5]
(b) Federated Cloud [5]
(c) Business Application for Cloud [6]

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7E7032

Roll No. _____ Total No of Pages: 3

7E7032

B. Tech. VII Sem. (Main / Back) Exam., Nov. – Dec. - 2018
Computer Science & Engineering
7CS2A Information System Security
Common with 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.

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

1. NIL 2. NIL

UNIT- I

Q.1 (a) Explain Shannon's theory of confusion and diffusion in detail. [10]

(b) What is substitution ciphers? Explain. [6]

OR

Q.1 (a) What is Feistel block cipher? How it is worked? [6]

(b) What is Cryptanalysis? Explain stream ciphers and block ciphers with suitable example. [10]

S33

UNIT- II

Q.2 (a) Explain the role of propagation and non-linearity in information theory. [8]

(b) Describe substitution box in detail. Why is it so important? [8]

OR

Q.2 (a) How many Boolean functions are there with domain x^n {0, 1}? [6]

(b) Explain the encryption and decryption process of AES with suitable example. [10]

UNIT- III

Q.3 (a) What is the man in the middle attack problem in Diffie Hellman key exchange algorithm? Explain with example. [8]

(b) Use the modular exponential algorithm to calculate 4^2 mod 8. [4]

(c) Write short note on public key. [4]

OR

Q.3 (a) Explain the format of X. 509 authentication certificate. [8]

(b) Write short note on -

(i) Security of R S A [4]

(ii) Discrete logarithm [4]

UNIT- IV

Q.4 (a) What is digital signature? Explain R S A based digital signature. [8]

(b) What is Birthday attack? Explain Brute – force attacks on Hash function. [8]

OR

Q.4 (a) Describe Massage authentication code. How it is different from encryption? [8]

(b) Why we need SHA? Explain the working of SHA – 1. [8]

UNIT- V

Q.5 (a) Explain Lamport's Hash Protocol. [8]

(b) Write short note on -

(i) P G P [4]

(ii) Encrypted key exchange. [4]

OR

Q.5 (a) Draw the & p security authentication herder and explain the functions of each field. [8]

(b) What encryption algorithm does PGP use? How do we create a PGP file? [8]

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7E7034

Roll No. _____ Total No of Pages: 3

7E7034

B. Tech. VII Sem. (Main / Back) Exam., Nov. – Dec. - 2018
Computer Science & Engineering
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.
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 Moore's law, locate the present status on it, predict its validity in near future. [8]

(b) What is cell based design style? Explain in terms of library binding. [8]

OR

Q.1 (a) Describe computer – aided synthesis and optimization. [8]

(b) Explain the design flow process of microelectronic circuit with diagram. [8]

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UNIT- II

Q.2 (a) Explain Bryant's reduction algorithm in detail. [8]

(b) Explain scheduling in pipelined circuit in detail. [8]

OR

Q.2 What is binary decision diagram? Explain ROBDD algorithm with an example. [16]

UNIT- III

Q.3 (a) Explain the force directed and multiprocessor scheduling. [8]

(b) What is synchronization problem? [8]

OR

Q.3 Discuss following scheduling with the help of suitable diagrams:

(a) ASAP [8]

(b) ALAP [8]

UNIT- IV

Q.4 Discuss Quine – McCluskey algorithm for two – level logic minimization problem. [16]

OR

Q.4 (a) Write short notes on the following -

(i) Binding Variable to Registers [8]

(ii) Functions with multivalued logic [8]

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UNIT- V

Q.5 Write short notes on -

(a) Floor plan [8]

(b) Placement [8]

OR

Q.5 Write short notes on -

(a) Global Routing Methods [8]

(b) Channel Routing Algorithms [8]

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7E7035

Roll No. _____ Total No of Pages: 4

7E7035

B. Tech. VII Sem. (Main / Bank) Exam., Nov. – Dec. - 2018
Computer Science & Engineering
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.

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

1. NIL 2. NIL

UNIT- I

Q.1 (a) Explain the following terms –

(i) Translators, Compilers and Interpreters [4]

(ii) Bootstrapping [4]

(b) Illustrate the translation of the following statement on all phase of compiler- [8]

A: = B * C + D / E

OR

Q.1 (a) How can we represent tree as terms? Illustrate your explanation with an example. [8]

(b) Explain the various compiler phrases in brief with suitable example. [8]

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UNIT- II

Q.2 (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 [8]

$E \rightarrow T\ E / +\ T\ E / \varepsilon$

$T \rightarrow F\ T / *\ F\ T / \varepsilon$

$F \rightarrow (E) / id$

And explain the model of a predictive parser.

OR

Q.2 Write down a short note on the following –

(a) Operator precedence parser for regular expression. [4]

(b) Difference between bottom up and top down parsing with suitable example. [4]

(c) YACC error handling in LR parser. [4]

(d) Context free grammar. [4]

UNIT- III

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

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OR

Q.3 Let G be a formal grammar with nonterminal symbol S and D, terminal symbol 'b', '0' and '1', start symbol S, and the following production rule. [16]

$S \rightarrow bD$

$D \rightarrow 0D$

$D \rightarrow 1D$

$D \rightarrow 0$

$D \rightarrow 1$

(a) Is G regular? Why (not)?

(b) Turn G systematically into a finite automation.

UNIT- IV

Q.4 (a) Explain the various strategies of symbol table creation and organization. [8]

(b) What are Activation trees and Activation Records? Explain the Data Access process without out Nested procedures. [8]

OR

Q.4 Write short notes on – [16]

(a) Nesting depth and Access links

(b) Data structures used in symbol table

(c) Static versus Dynamic storage allocations

S40

UNIT- V

Q.5 (a) Construct a DAG for the basic block whose code is given below: [8]

D : = B * C

E : = A + B

B : = B * C

A : = E – D

(b) What is Peephole optimization? Explain it. [8]

OR

Q.5 (a) Explain in brief the various issues of design of code generator. [8]

(b) Explain the basic block and control flow graph. [8]

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7E7033

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7E7033

B. Tech. VII Sem. (Main / Bank) Exam., Nov. – Dec. - 2018

Information Technology

7IT3A Data Mining & Ware Housing

Common with 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.

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

1. NIL 2. NIL

UNIT- I

Q.1 (a) Discuss the concept of hierarchy generation with detailed analysis. [8]

(b) Describe the Data mining functionalities. [8]

OR

Q.1 (a) What do you mean by Data Reduction and what are the different process of data reduction? [8]

(b) What is Data Integration and Transformation? [8]

S42

UNIT- II

Q.2 Explain the concepts of Data Association and Data Generalization in detail along with analysis of attribute relevance. [16]

OR

Q.2 (a) Explain different graph display of basic statistical class description. [8]

(b) What is Market Basket Analysis? How is it used? Explain. [8]

UNIT- III

Q.3 (a) What is Bayesian classification? How it classifies the input data? [8]

(b) Describe the ID3 algorithm of the decision tree construction. [8]

OR

Q.3 (a) What do you mean by information gain and how it is calculated? [8]

(b) Describe the various types of density based methods and grid based methods in detail. [8]

UNIT- IV

Q.4 (a) What are the steps of planning a Data warehouse? [8]

(b) Discuss the Meta data and state, how it is useful? [8]

OR

Q.4 Explain in brief –

(a) Data warehouse v/s Data mart [8]

(b) Cube grade problem [8]

S43

UNIT- V

Q.5 (a) Differentiate between ROLAP and MOLAP. [8]

(b) How can we control the aggregation problem and what do you mean by denormalization? [8]

OR

Q.5 (a) Explain Security issues in Data warehousing. [8]

(b) What do you mean by recovery of Data warehouse explain its testing and strategy? [8]

7E7051

Roll No. _____ Total No of Pages: 3

7E7051

B. Tech. VII Sem. (Main / Back) Exam., Nov. – Dec. - 2018

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.

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 W^5HH Principle? Define its importance. [8]

(b) Describe process and program management rules in detail. [8]

OR

Q.1 (a) What are the relation between the Metrics, Measurements and Models? Explain in brief. [8]

(b) Give the metrics for software quality also explain how a software metrics program is established. [8]

545

UNIT- II

Q.2 What is empirical estimation? Explain COCOMO (Constructive Cost Model) with the help of appropriate example. [16]

OR

Q.2 Explain different approaches used in estimation in detail also give the role of expert judgment in estimation. [16]

UNIT- III

Q.3 (a) Write short note on quality process planning. [8]

(b) Describe the Reactive V/S Proactive Risk strategies. [8]

OR

Q.3 (a) Discuss the project scheduling technique and illustrate their advantages and disadvantages. [8]

(b) Explain Quantitative approaches used to measure quality with its types. [8]

UNIT- IV

Q.4 (a) What is SQA? Define Goals of SQA. [8]

(b) Explain Statistical Software Quality Assurances. [8]

OR

Q.4 What is the basic requirement of Software Configuration Management (SCM) system? How do you plan and organize for an SCM? [16]

S46

UNIT- V

Q.5 (a) Explain Reviews and NAH syndrome? [8]

(b) Explain various tracking in project monitoring and control. [8]

OR

Q.5 (a) Discuss different steps in brief review process. [8]

(b) Write short notes on -

(i) Risk Related Monitoring [4]

(ii) Project closure analysis [4]

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7E7052

Roll No. _____ Total No of Pages: 3

7E7052

B. Tech. VII Sem. (Main / Back) Exam., Nov. – Dec. - 2018

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 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) Explain XHTML & Also explain W3C XHTML Validation Services? [8]

(b) Write down the list and tables used in XHTML. [8]

OR

Q.1 What is Cascading Style Sheet? Describe in detail. [16]

UNIT- II

Q.2 (a) Explain Java Script in brief. How function can be declared and defined in Java Script. [8]

(b) Explain XML and its advantages in Internet technology. [8]

S48

OR

Q.2 (a) Explain all events in Java Script. [8]

(b) Explain DOM (Document Object Model) in Java Script. [8]

UNIT- III

Q.3 Write short note on -

(a) Microsoft internet information service. [8]

(b) Create a full scale Ajax-enabled application. [8]

OR

Q.3 (a) Explain an example of Ajax using the XML Http Request object. [8]

(b) Explain the uses and advantages of Ajax in Internet technology. [8]

UNIT- IV

Q.4 Write down about the following -

(a) Cookies in PHP [4]

(b) Session tracking in PHP [4]

(c) Operators used in PHP [4]

(d) PHP basics [4]

OR

Q.4 (a) How can we encrypt the username and password using PHP? [4]

(b) What are different types of errors in PHP? [4]

(c) What are the types of inheritance in PHP? Describe. [4]

(d) What is the use of friend function? Describe. [4]

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UNIT- V

Q.5 How we create and run a simple application in Net Beans? Describe with suitable example. [16]

OR

Q.5 Write short note on the following – [16]

(a) Session tracking in Java Web technology

(b) XML name space and XML naming rules

(c) JSF Component

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7E7053

Roll No. _____ Total No of Pages: 3

7E7053

B. Tech. VII Sem. (Main / Back) Exam., Nov. – Dec. - 2018
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.

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 the Scan Conversion? Explain Raster Scan system with the help of block diagram. [8]

(b) What is the importance and utility of a display processor in a computer graphics system? [8]

OR

Q.1 (a) What is graphics? Explain random scan display device system with help of block diagram. [8]

(b) Explain basic principle to draw a circle. Also explain mid-point circle algorithm. [8]

537

UNIT- II

Q.2 (a) What is the need of Transformation b/w Coordinate Systems? Explain with example. [8]

(b) Explain Bresenham's line drawing algorithm. Also write its procedure in any programming language. [8]

OR

Q.2 (a) Write down Composite transformation & Inverse transformation. [8]

(b) What is translation, rotation & scaling? Explain with examples. [8]

UNIT- III

Q.3 Implement depth buffer algorithm to display visible surfaces of a given polyhedron. [16]

Is there any relation in definition of the object and storage requirements of the depth buffer? Explain.

OR

Q.3 Write a procedure to display 2D, cubic Bezier curve given a set of 4 control point in XY plane. [16]

UNIT- IV

Q.4 Write a routine to convert RGB color model to HSV color model. [16]

OR

Q.4 Explain Phong and Fast Fast Phong shading using a suitable object. [16]

552

UNIT- V

Q.5 What is Animation? What are the challenges faced in its implementation? Write the steps in generation of animation. [16]

OR

Q.5 Which type of consideration are there in Architectural & telecommunication? Explain multimedia input/output technologies? [16]

SS3

7E7054

Roll No. _____ Total No of Pages: 2

7E7054

B. Tech. VII Sem. (Main / Back) Exam., Nov. – Dec. - 2018
Information Technology
7IT6.2A Intelligent 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.

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

1. NIL 2. NIL

UNIT- I

Q.1 (a) Differentiate between knowledge base system and database system. [8]

(b) What do you understand about LISP programming language? Why LISP used for AI. [8]

OR

Q.1 (a) What is AI? Explain its origin and its various applications. [8]

(b) What do you mean by knowledge manipulation? Explain how uncertainty is managed in AI. [8]

UNIT- II

Q.2 (a) Explain the Inference Rules for knowledge representation. [8]

(b) What are the advantages of Fuzzy logic control over artificial neutral network? [8]

OR

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Q.2 (a) What are Semantics? Explain the semantic rules for statement? Also describe the properties of statements. [8]

(b) Draw the block diagram of Fuzzy logic. Explain the concept of fuzzy logic control in brief. [8]

UNIT- III

Q.3 (a) What are the different control strategies used in knowledge organization? [8]

(b) What is knowledge? Differentiate procedural and declarative knowledge in detail. [8]

OR

Q.3 (a) What is knowledge management in organisation? Explain with a suitable example. [8]

(b) Explain any matching technique used in knowledge organisation. [8]

UNIT- IV

Q.4 (a) Explain with the help of suitable example "Rule based" knowledge system architecture. [8]

(b) What do you understand about the non – production knowledge system architecture. [8]

OR

Q.4 Briefly explain about uncertainly knowledge system building tools in knowledge system architecture. [16]

UNIT- V

Q.5 Briefly explain the following terms with suitable examples:

(a) Expert System [8]

(b) Learning by induction [8]

OR

Q.5 What do you mean by knowledge acquisition? What are the different issues should be considered for planning knowledge acquisition? [16]
