7E 4237

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

7E 4237

B.Tech. VII Semester (Main/Back) Examination - 2014

Computer Engg.

7CSI Software Project Management

(Comn.on to 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) Define a project? What are the different stages of project. **(8)**

   b) Define the management spectrum in the following term:
   - i) People
   - ii) Process
   - iii) Product
   - iv) Project

   (8)

OR

1. a) What is W^5HH Principle? Define its importance. **(8)**

   b) What are the relation between the Metrics, Measurements and models. Explain in brief. **(8)**

Unit - II

2. a) Explain various empirical estimation Models. **(8)**

   b) Discuss the principle underlying effective cost estimation. **(8)**

OR

2. a) Differentiate between the COCOMO - I and COCOMO - II model **(8)**

   b) What are the project planning objectives? How can they be achieved? **(8)**

Unit - III

3. a) Discuss the project scheduling Techniques and illustrate their advantages and disadvantages **(8)**

   b) What is a use of tasks set and tasks network? Explain with Example. **(8)**

OR

3. a) Describe the reactive Vs proactive risk strategies in detail. **(8)**

   b) Discuss the Quality concept. What are the different approaches to achieve the quality Goals. **(8)**

Unit - IV

4. a) What is SQA? Define Goals of SQA. **(8)**

   b) Define the Defect Amplification model with diagram. **(8)**

OR

4. a) What is SCM? Explain its need. **(8)**

   b) Explain configuration management for web Engineering **(8)**

Unit - V

5. a) Discuss different steps in project review process **(8)**

   b) What is NAH syndrome? How can organization overcome from the NAH syndrome. **(8)**

OR

5. a) What is project tracking? Illustrate different project tracking techniques in detail. **(8)**

   b) Write short notes on

      i) Risk Related monitoring

      ii) Project Closure analysis **(4×2=8)**

7E 4238

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

7E 4238

B.Tech. VII Semester (Main/Back) Examination - 2014

Computer Engg.

7CS2 Wireless Communication and Network

(Common with 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 are the various techniques possible to improve coverage and capacity in cellular? Discuss cell splitting in brief. **(10)**

   b) Explain the term" Frequency Reuse in cellular network". **(6)**

OR

1. a) Explain different type of interference which present in cellular system with their resultant effect on the system. Also compute SIR in worst case. **(10)**

   b) What is handoff in cellular system? Discuss various handoff strategies. **(6)**

Unit - II

2. a) Why do we need multiple access technique? With all relevant merits. Explain the working of CSMA/CD Technique? **(10)**

   b) How can collision be avoided in data communication? Explain one such protocol. **(6)**

OR

2. a) Describe the GSM Cellular architecture and its various features. What are the various standard used in GSM cellular telephony? **(10)**

   b) Explain the following terms for GSM :

      i) Home location register (HLR).

      ii) Visitor location register (VLR). **(3×2=6)**

Unit - III

3. a) Explain the purpose and meaning of MAC Scheme. Why are MAC scheme necessary for wireless network but not for wired network? **(8)**

   b) What are ad-hoc network? Explain IEEE 802.11 protocol architecture. **(8)**

OR

3. a) What is Bluetooth technology? Explain the packet/frame format for a Bluetooth device. **(8)**

   b) Explain the networking security and linking management for Bluetooth **(8)**

Unit - IV

4. a) Explain the basic purpose of DHCP? How DHCP be used for mobility and support of mobile IP? **(8)**

   b) Explain the concept of Dynamic source routing. **(8)**

OR

4. a) Discuss Implication of mobility in Traditional TCP in brief? **(8)**

   b) Explain classical TCP improvements? **(8)**

Unit - V

5. a) What are the primary goal of the WAP forum effort and how are they reflect in the initial WAP architecture. **(8)**

   b) Explain the architecture of Wireless application protocol also wireless transport layer security? **(8)**

OR

5. a) What is common synchronization, framework useful? What problems remain? **(8)**

   b) Describe the file system which support for mobility in wireless communication? (8)

7E 4239

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

7E 4239

B.Tech. VII Semester (Main/Back) Examination - 2014

Computer Sc. & Engineering

7CS3 Compiler 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.)*

Unit - I

1. a) Why do we need syntax trees when constructing compilers?

   b) What are the fundamental differences between parse trees and abstract syntax tree?

OR

1. a) How can we represent trees as terms? Illustrate your explanation with an example

   b) Explain the various compiler phares in brief with suitable example.

Unit - II

2. Let G be a formal grammer with nonterminal symbols S, T, E and E^1, terminal symbol 'x', '+', and '$', start symbol S, and the following production rule :

$$S \rightarrow E\$$$
$$E \rightarrow TE'$$
$$E' \rightarrow +TE'$$
$$T \rightarrow X$$

   a) Construct an LL(0) parse table for the grammar calculate FIRST and FOLLOW Sets as needed .

b) Use the parse table to recognize the sentence x+x. Show the stack and the remaining input after each step.

OR

2. Let G be a formal grammar with nonterminal symbol S,T and E, terminal x,+ and $, start symbol S, and the following production rules

$S \rightarrow E\$$

$E \rightarrow T+E$

$E \rightarrow T$

$T \rightarrow X$

a) Explain the role of the terminal symbol $

b) Construct a LR(0) parse table for the grammar.

c) What Kind of Conflict does the resulting parse table contain?

d) Explain two stratigies to resolve this conflict.

Unit - III

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

$S \rightarrow bD$

$D \rightarrow 0D$

$D \rightarrow 1D$

$D \rightarrow 0$

$D \rightarrow 1.$

a) Is G regular ? Why (not)?

b) Turn G Systematically into a finite automation?

OR

3. a) Explain the Syntax Directed Translation Schemes in details.

b) What is the process and importance of intermediate code Generation.

Unit - IV

4. a) Explain the various strategies of symbol table creation and organization.

b) What are Activation trees and Activation Records. Explain the Data Access process without out Nested procedures.

OR

4. Write short notes on

a) Nesting depth and Access links.

b) Data structures used in symbol table.

c) Static Verses Dynamic Storage allocation.

Unit - V

5. Consider the expression (left to right Scanning). (a/b*c) + (a/b)- (b+(a*b)) (a*b)

a) Draw the Abstract tree of the above expression.

b) Draw the DAG of the above expression.

c) Generate three address code from the DAG

OR

5. a) What are the various issues in design of code generator, loop optimization?

b) What are the Advantages of DAG? Explain the peephole optimization.

c) Explain the steps required for code generation from DAG.

7E 4240

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

7E 4240

B.Tech. VII Semester (Main/Back) Examination - 2014

Computer Engg.

7CS4 Computer Aided Design For VLSI

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. Explain design stages of a microelectronic circuit in detail **(16)**

OR

1. Briefly describe complexity in microelectronic circuit design also explain semicustom design style of microelectronic circuit **(16)**

Unit-II

2. Explain Boolean functions and its derivatives also find out cofactor consensus and smoothing of equation f = ab+bc+ca with respect to 'C' **(16)**

OR

2. a) Explain Data flow and sequencing graph with the help of an example **(8)**

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

Unit-III

3. a) What is synchronization problem? Explain **(6)**

   b) Explain scheduling in pipelined circuit in detail. **(10)**

OR

3. a) What is the need of scheduling in Architectural synthesis? Explain **(7)**

   b) Explain list scheduling with the required algorithms in detail **(9)**

Unit-IV

4. Explain Resource sharing and Binding in sequencing graphs for resource dominated circuits in detail. **(16)**

OR

4. Write short notes on the following :
   a) Functions with multi valued logic **(8)**
   b) Positional cube Notations **(8)**

Unit-V

5. a) Explain simulated Annealing in detail **(8)**
   b) Describe floor planning with its goals and objectives **(8)**

OR

5. Write short notes on
   a) Circuit extraction and Design Rule Checking **(6)**
   b) Left edge algorithm **(5)**
   c) Channel Routing algorithm **(5)**

7E 4241

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

7E 4241

B.Tech. VII Semester (Main/Back) Examination - 2014

Computer Engg.

7CS5 Computer Graphics & Multimedia Techniques

(Common to 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 the importance and utility of a display processor in a computer graphics system? **(8)**

   b) Highlight the features of a standard computer graphics system with an example? **(8)**

OR

1. a) What are the general application of computer graphics? **(8)**

   b) Explain Raster scan system. **(8)**

Unit - II

2. a) Prove that 2D rotation and scaling are commutative if $S_x = S_y$ or if $\theta = n\pi$ for integer and that otherwise they are not commutative i.e., $S(S_x, S_y).R(\theta) = R(\theta).S(S_x, S_y)$ only if $S_x = S_y$ or $\theta = n\pi$. **(8)**

   b) Write a polygon Clipping algorithm to Clip a polygon against rectangular Clipping area. **(8)**

OR

2. a) What is homogeneous Co-ordinates? Discuss the composite transformation matrices for two successive translations and scaling. **(8)**

   b) Explain perspective projection and vanishing point with example. **(8)**

Unit - III

3. During area filling one start with a point inside the program region and point it outwards towards boundary. Which fill algorithm is this? Explain it showing how 8-connected approach fills complex figures? **(16)**

OR

3. a) Describe Z buffer algorithm for visible surface detection. Also explain backface detection method. **(8)**

   b) What are different types of coherences which may be useful in visible surface determination? How can these be used? Explain. **(8)**

Unit - IV

4. Explain the following : **(16)**

   a) Diffuse reflection and specular reflection

   b) Phong shading

   c) Ray Tracing

   d) RGB and CMY colour models

OR

4. Write short note on the following : **(16)**

   a) Binary ray tracing tree

   b) Antialiased ray tracing.

Unit - V

5. a) What is the use of compression technique in computer graphics? Explain JPEG. **(8)**

   b) Explain TIFF file format **(8)**

OR

5. What is Animation? What are the challenges faced in its implementation? Write the steps in generation of animation. **(16)**

7E 4243

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

7E 4243

B.Tech. VII Semester (Main/Back) Examination - 2014

Computer Sc. & Engineering

7CS6.2 Data Mining and War e Housing

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 do you mean by data mining Describe it and Differentiate between data ware house and data mining. **(8)**

   b) What do you mean by data processing ? and write short notes on the following

   i) Regression

   ii) Clustering **(8)**

OR

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

   b) Explain Data discretization and Concept hierarchy generation. **(8)**

Unit - II

2. Write short notes on

   i) Quartiles

   ii) Range

   iii) Outliers

   iv) Boxplots **(16)**

OR

2. Write short notes on

   i) Generaiized association rules

   ii) Multilevel association rules **(16)**

Unit - III

3. a) What are the different categories of classification rules. (8)

   b) What do you mean by information gain and how it is calculated (8)

OR

3. a) What are the different classification techniques (8)

   b) what are advantages and disadvantages of decision tree approach over other approaches of data mining. (8)

Unit - IV

4. a) What is data warehousing? And explain the architecture of data warehousing? (8)

   b) What are the different data processing models (8)

OR

4. a) Explain multidimensional model of a data warehouse. (8)

   b) Write short notes on

      i) Star schema

      ii) Snone flake schema (8)

Unit - V

5. What do you mean by Aggregation? and explain different aggregate functions. (16)

OR

5. a) Explain in brief how the OLAP handles aggregation

   b) Write short note on

      i) ROLAP

      ii) OLAP

      iii) MOLAP

      iv) HOLAP (16)

7E 5100

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

7E 5100

B.Tech. VII Semester (Main/Back) Examination - 2014

Information Technology

7IT4 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.)*

Unit - I

1. a) Explain XHTML & Also Explain W3C XHTML Validation Services? **(8)**

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

OR

1. Explain cascading style sheets (CSS) & explain all possible methods to use CSS in HTML. **(16)**

Unit - II

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)**

OR

2. a) Explain all events in Java Script? **(8)**

   b) Explain Dom (Document Object Model) in Java Script. **(8)**

Unit - III

3. Write down about the following **(6+6+4)**

   i) Microsoft internet information Services

   ii) Apache HTTP Server

   iii) HTTP Transactions

OR

3. a) Explain the Uses and advantages of Ajax in internet technology. (8)

b) Explain an example of ajax using the XML Http Request Object (8)

Unit - IV

4. a) What is a regular expression? Explain Regular expression Used in PHP. (8)

b) Explain String Processors in PHP. (8)

OR

4. Write down about the following:

i) Cookies in PHP (6)

ii) Session tracking in PHP (5)

iii) Operators Used in PHP (5)

Unit - V

5. Write short notes on the following

i) Session tracking in Java web technology (8)

ii) XML name space and XML naming Rules (2×4)

OR

5. Write Short Notes on the Following

i) JSF Components (8)

ii) W3C XML Schema document (8)

7E 5099

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

7E 5099

B.Tech. VII Semester (Main/Back) Examination - 2014

Information Tech

7IT3 Data Mining & Ware Housing

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) Describe the major elements and different levels of analysis in data mining. **(8)**

   b) Explain the terms missing value, Noisy Data and Data cleaning. **(8)**

OR

1. a) What is data integration and transformation. Explain with Example. **(8)**

   b) Explain data cube aggregation in brief **(8)**

Unit - II

2. Define the association rule mining How market basket analysis forms the association rules? Discuss basic concepts. **(16)**

OR

2. a) What is mining association rule? Explain. **(8)**

   b) Describe the techniques to improve the efficiency of mining association rules. **(8)**

Unit - III

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

   b) What is back propagation Neural Network topology? How it is used in Classification? **(8)**

OR

3. a) Differentiate between feed forward and feedback system . **(8)**

b) Explain the Hierarchical techniques which are well suited for many clustering application. (8)

Unit - IV

4. a) Define the data ware housing and its basic characteristics and also discuss the features of sybase systems. (8)

b) What are the design considerations for data warehouse? (8)

OR

4. a) What are the data visualization principles? Explain Also Explain the cube grade problem. (8)

b) Describe the genetic algorithms as datamining techniques. (8)

Unit - V

5. a) What are the different security issues in data ware housing? (8)

b) With relevant example discuss the need of back - up and recovery with respect to data warehouse. (8)

OR

5. a) Write short note on the OLAP tools. (8)

b) Explain testing data quality using cross - footing technique. (8)

7E 5101

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

7E 5101

B.Tech. VII Semester (Main/Back) Examination, 2014

Information Tech.

7IT6.2 Intelligence Systems

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 an "Artificial Intelligence and Artificial Intelligence techniques"? Briefly Explain how Artificial Intelligence techniques can be represented. List out some of Task domain of Artificial Intelligence. **(8)**

   b) What is production System? Discuss characteristics of production system. Explain control strategies in brief. **(8)**

OR

1. Explain Simple hill climbing and Steepest Ascent Hill climbing. What are the Drawbacks of these strategies and how to deal with these problems? **(16)**

Unit - II

2. a) Discuss the concept of knowledge representation and knowledge mapping in an Intelligent System. **(8)**

   b) Explain the algorithm of predicate logic **(8)**

OR

2. a) What are the various approaches & issues in Knowledge representation Techniques. Explain them. **(8)**

   b) What is reasoning? Differentiate between forward and backward reasoning. Which one of these two is more efficient and why? **(2+2+1+3=8)**

Unit - III

3. a) Explain the minimax search procedure and alpha-beta cutoff with Suitable example. **(8+8=16)**

OR

3. a) Write short notes on "Hierarchical planning and Reactive System" In brief. **(4+4=8)**

   b) What are the components of planning System? Describe various types of planning System? **(3+5=8)**

Unit - IV

4. a) Describe any two of the following
   i) Learning in problem solving.
   ii) Explanation based learning.
   iii) Learning from example. **(8+8=16)**

OR

4. a) Explain the back propagation of error in multilayer neural networks. Also explain the major application area of neural network? **(8+8=16)**

Unit - V

5. a) Explain the basic architecture of an expert system. Also give its applicability in Different areas with suitable examples. **(8)**

   b) Explain the difference between an expert system & knowledge base system. **(8)**

OR

5. a) Write Short note on (any four)
   i) Fuzzy logic concepts
   ii) Fuzzy controllers
   iii) Knowledge Acquisition
   iv) Basic operators in Genetic algorithm.
   v) ANT algorithm **(4x4=16)**