Code: 5G155

R-15

III B.Tech. I Semester Supplementary Examinations May 2018
Web Technologies
(Computer Science and Engineering)

Max. Marks: 70   Time: 3 Hours
Answer all five units by choosing one question from each unit (5 x 14 = 70 Marks)
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UNIT-I

1. Write HTMl code to display the table as shown below using necessary properties.

Day	Seminar		
	Schedule		Topic
	Begin	End	
Monday	8:00 a.m.	5:00 p.m.	Introduction to XML. Validity: DTD and Relax NG
Tuesday	8:00 a.m.	11:00 a.m.	XPath
	11:00 a.m.	2:00 p.m.	
	2:00 p.m.	5:00 p.m.	XSL Transformations
Wednesday	8:00 a.m.	12:00 p.m.	XSL Formatting Objects

14 M

OR

2. a) Apply the following Inline CSS rules for two interlinked HTML pages first.html and second.html
    i. In the first page Ordered lists should have a background color of #FFCC99 and unordered lists should have a background color of #CCFFCC. All list elements should be in italics.
    ii. In the second page Links should never show the default underlining and upon hovering they should become neon green (#33ff33).   8M

    b) Describe the Advantages and Disadvantages of Java Script   6M

UNIT-II

3. a) Give the importance of XML Parser using Java Script? Explain   10 M

    b) Describe Document Type Definition   4M

OR

4. a) Explain with examples of Document Object Model(DOM) and SAX   10 M

    b) Discuss on Dynamic Hyper Text Markup Language(DHTML)   4M

UNIT-III

5. a) Illustrate the architecture of JDBC with example   8M

    b) Categorize the various types of Drivers?   6M

OR

6. How to establish the communication between the JAVA program and Database like MySQL? Explain with step wise suitable example   14 M

UNIT-IV

7. a) Define a Cookie? Develop a Cookie program using Servlet?   8M

    b) List out Session Tracking Techniques? Explain at least one Session Tracking Technique.   6M

OR

8. a) Illustrate the usage of getServletConfig () and getServletInfo () methods of a generic servlet with suitable example.   8M

    b) Explain Servlet Life Cycle Methods   6M

UNIT-V

9. a) Write JSP code to demonstrate how JSP declarations are used to define methods and instance variables.   8M

    b) List the importance of Action elements used in constructing JSP Pages.   6M

OR

10. Write JSP code to display all the records of MOVIES table. Assume MOVIES table contains the following fields (MOVIEID, TITLE, DIRECTOR, RELEASEDATE).   14 M

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III B.Tech. I Semester Supplementary Examinations May 2018
Compiler Design
(Computer Science & Engineering)

Max. Marks: 70   Time: 3 Hours

Answer all five units by choosing one question from each unit (5 x 14 = 70 Marks)

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UNIT–I

1. a) Explain the bootstrapping process. What is the advantage of using this process?   7M

   b) Consider the following fragment of C code: float i, j; i=i*70+j+2;

   Write the output at all phases of the compiler for the above C code   7M

OR

2. a) What is the difference between a pass and phase of a compiler   7M

   b) Write a LEX program for identifying the key words and identifiers from the file   7M

UNIT–II

3. a) What is top-down parsing? Explain with an example.   7M

   b) What is backtracking? What is the need of backtracking?   7M

OR

4. Construct predictive parsing table for the grammar

   $E \circledR\ E+T, T \circledR\ TF/F, F \circledR\ F*/a/b$ 14M

UNIT–III

5. a) Distinguish operator precedence and simple precedence parser   7M

   b) Write note on the specification of YACC   7M

OR

6. a) Differentiate between L-attributed and S-attributed grammars   7M

   b) Explain how an L-attribute grammar can be converted into a translation scheme   7M

UNIT–IV

7. a) What is meant by intermediate code generation? Give the benefits of intermediate code generation   7M

   b) Explain about activation record   7M

OR

8. a) Explain various methods of three-address code   7M

   b) Discuss various symbol table organization techniques   7M

UNIT–V

9. a) Explain DAG and its use. Write the procedure to construct the DAG for statement   7M

   b) Explain machine dependent code optimization   7M

OR

10. a) Explain reducible and non-reducible flow graphs with an example   7M

    b) Explain the concept of object code forms   7M

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III B.Tech. I Semester Supplementary Examinations May 2018
Computer Networks
(Common to CSE & IT)

Max. Marks: 70   Time: 3 Hours
Answer all five units by choosing one question from each unit (5 x 14 = 70 Marks)
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UNIT–I

1. a) Explain the characteristics of WAN? Why a WAN is required and what objectives are achieved by having a WAN   8M

   b) Distinguish between Wired and Wireless LANs.   6M

OR

2. a) Compare and contrast TCP/IP and OSI reference models.   7M

   b) Compare and contrast Guided Transmission and Wireless Transmission.   7M

UNIT–II

3. a) Discuss the sliding window protocol in detail.   7M

   b) With an example, illustrate how CRC encoder and decoder will work.   7M

OR

4. a) Explain the working of Carrier Sense Multiple Access protocol.   9M

   b) What kinds of errors can and cannot Vertical Redundancy Check determine   5M

UNIT–III

5. Illustrate the Distance Vector Routing algorithm with a suitable example. What is the serious drawback of Distance Vector Routing algorithm?   14M

OR

6. a) How Random Early Algorithm handles the Congestion problem.   7M

   b) Categorize QoS based on type of network application and what is the impact of QoS on Traffic Shaping.   7M

UNIT–IV

7. a) What are the services provided by the transport layer? Explain various the methods to improve QoS.   7M

   b) Explain TCP proptocol's connection establishment and release.   7M

OR

8. a) Why does UDP exists? How it identifies the destination entities. Justify   7M

   b) What is the role of Bundle Protocol in Transport Layer. Explain with its message format   7M

UNIT–V

9. a) Explain the BitTorrent Protocol used in Application Layer.   7M

   b) Explain the JPEG compression Technique with neat diagrams.   7M

OR

10. a) Compare and contrast H.323 and SIP protocols   7M

    b) Explain the H.323 architectural model for Internet telephony.   7M

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Code: 5G454

R-15

III B.Tech. I Semester Supplementary Examinations May 2018
Data Warehousing and Data Mining
(Information Technology)

Max. Marks: 70   Time: 3 Hours
Answer all five units by choosing one question from each unit (5 x 14 = 70 Marks)
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UNIT–I

1. a) What is data mining? What are the various steps in the process of knowledge discovery? Describe the data mining functionalities and the kind of patterns can be mined?   9M

   b) List out major issues in Data mining and explain in detail.   5M

OR

2. Suppose that the data for analysis includes the attribute age. The age values for the data tuples are 13, 15, 16, 16, 19, 20, 20, 21, 22, 22, 25, 25, 25, 25, 30, 33, 33, 35, 35, 35, 35, 36, 40, 45, 46, 52, 70.

   a. Use smoothing by bin means to smooth the data, using a bin depth of 3. Illustrate your steps.   6M

   b. How might you determine outliers in the data?   5M

   c. What other methods are there for data smoothing?   3M

UNIT–II

3. a) What is a Data Warehouse? Construct and explain 3-tier Data Warehouse Architecture?   10M

   b) Write a short note on Discovery-Driven Exploration of a Data Cube.   4M

OR

4. a) What is strength and weakness of FP in comparison with Apriori?   4M

   b) State Apriori property. Explain Apriori algorithm for discovering frequent itemsets for mining Boolean association rules.   10M

UNIT–III

5. a) Briefly explain the Major Steps of Decision Tree Classification.   7M

   b) What is pruning? What are the *two* common approaches to tree pruning? Explain.   7M

OR

6. a) What are Bayesian Classifiers?   5M

   b) Association rule mining often generates a large number of rules. Discuss effective methods that can be used to reduce the number of rules generated while still preserving most of the interesting rules.   9M

UNIT–IV

7. a) How many types of clustering methods are there? Explain any one partitioning Clustering algorithm.   7M

   b) Explain DBSCAN, density based clustering algorithm to discover cluster with arbitrary shape.   7M

OR

8. a) Compare and Contrast Agglomerative Hierarchical Clustering with Divisive Hierarchical Clustering.   8M

   b) Write short notes on outlier analysis.   6M

UNIT–V

9. Identify various Data Mining Applications which useful for analyzing the data for benefit of society.   14M

OR

10. a) What are the differences between mining techniques of structured data, semi- structured data and unstructured data? Explain.   7M

    b) Describe World Wide Web mining.   7M

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R-15

Code: 5G356

III B.Tech. I Semester Supplementary Examinations May 2018
Microprocessors and Interfacing
(Common to CSE & I T)

Max. Marks: 70   Time: 3 Hours

Answer *all five* units by choosing one question from each unit (5 x 14 = 70 Marks)
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UNIT–I

1. a) Explain the architecture of 8086 Microprocessor with a neat block diagram.   7M

    b) Define addressing modes. Explain the following addressing modes with an example.

        i. Direct Addressing Mode ii. Indexed Addressing Mode iii. Register Indirect Addressing Mode   7M

OR

2. a) Explain the function of the following signals of 8086.   7M

        i. ALE   ii. READY   iii. INTR   iv. M/IO

    b) Explain the following assembler directives with an example.   7M

        i. ASSUME   ii. EQU   iii. PROC   iv. DB

UNIT–II

3. a) Explain different operating modes 8255 PPI.   7M

    b) Difference between I/O mapped I/O and Memory mapped I/O.   7M

OR

4. a) Write a program to display the message "HELLO" using 5 seven segment display.   7M

    b) Interface two 4K X 8 EPROM one chip of 8K X 8 RAM chips with 8086 microprocessor. Select suitable maps.   7M

UNIT–III

5. a) What is an advantage of DMA controlled data transfer over interrupt driven or program controlled data transfer? Why DMA controlled data are transfer faster?   7M

    b) Explain internal block diagram of 8259A.   7M

OR

6. a) Draw and discuss the architecture of 8257   7M

    b) What is interrupt service routine? Explain interrupt vector table.   7M

UNIT–IV

7. a) Explain 8253/54 internal block diagram.   7M

    b) Briefly explain architecture of 8251 USRAT.   7M

OR

8. a) Write a program to transmit 200 bytes of serial data.   7M

    b) Explain TTL to RS232 and RS232 to TTL conversion with circuits.   7M

UNIT–V

9. a) Explain paging and difference between real and protected mode of segmentation.   7M

    b) Explain the salient features of 80386 and 80286 processor.   7M

OR

10. a) What do you mean by a descriptor? Draw and discuss the structure of a general 80286 descriptor.   7M

    b) Explain paging mechanism of 80386.   7M

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III B.Tech. I Semester Supplementary Examinations May 2018

Operating Systems
(Computer Science and Engineering)

Max. Marks: 70   Time: 3 Hours

Answer *all five* units by choosing one question from each unit (5 x 14 = 70 Marks)
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UNIT–I

1. a) Illustrate operating systems structure and generation.   5M

   b) Classify different System Programs.   4M

   c) Implement IPC through message queues.   5M

OR

2. a) Describe process state diagram and associated queues with a neat diagram   7M

   b) Distinguish long term, short term and medium term schedulers.   7M

UNIT–II

3. a) Describe thread issues and thread scheduling.   7M

   b) What is critical section problem? Explain its requirements.   7M

OR

4. a) Design an algorithm for solving 2-process critical section problem.   7M

   b) Summarize atomic transactions.   7M

UNIT–III

5. a) What is safe state? Describe how a safe state ensures deadlock avoidance. 7M

   b) Explain paging memory management technique with example. Mention merits
   and demerits.   7M

OR

6. a) Explore the mechanism of demand paging?   7M

   b) Explain page replacement algorithms with an example.   7M

UNIT–IV

7. a) Write short notes on various Directory structures and their merits, demerits. 7M

   b) Explain layered file system structure   7M

OR

8. a) Summarize tertiary storage structure   7M

   b) What is RAID? Explain various RAID levels.   7M

UNIT–V

9. Explain how I/O requests are transformed to hardware operations   14M

OR

10. a) What are the goals and principles of protection,   7M

    b) Briefly write about program threats and system threats.   7M

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