

**[B19HS3101]**  
**SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE (A)**  
**III B. Tech I Semester (R19) Regular Examinations**  
**MANAGERIAL ECONOMICS AND FINANCIAL ACCOUNTANCY**  
**Common to CE & IT**  
**MODEL QUESTION PAPER**

**TIME: 3 Hrs.**

**Max. Marks: 75 M**

Answer **ONE Question** from **EACH UNIT**

All questions carry equal marks

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S.No.	Question / Problem	CO	KL	M
	UNIT-I			
1.	Define Managerial Economics and Explain its nature and scope	CO1	K2	15
	OR			
2.	What do you mean by Elasticity of demand? Explain in detail about degrees of Price elasticity of Demand?	CO1	K2	15
	UNIT-II			
3.	Define Cost & classify the Elements of Cost?	CO2	K2	15
	OR			
4.	How do you calculate BEP? What are its Assumptions and Applications?	CO2	K3	15
	UNIT-III			
5.	What are Market Structures and explain the features of Perfect Competition?	CO3	K2	15
	OR			
6.	Why is pricing significant in the context of business? Describe any four pricing practices?	CO3	K2	15
	UNIT-IV			
7.	Describe about the Importance of Accounting and types of accounts	CO4	K2	15
	OR			
8.	From the following Trail Balance of Suresh as at December 31, 2013, prepare Trading, Profit and Loss Account for the year ended December 31, 2013 and a Balance Sheet as on that date:	CO4	K3	15
	Dr. (Rs.) <span style="float: right;">Cr. (Rs.)</span>			

	Purchases of materials 32,000 Productive wages 13,000 Sales 60,000 Salaries 4,000 Travelling expenses 1,000 Carriage inwards 550 Insurance 300 Commission 650 Rent and rates 1,000 Cash in hand 350 Cash at bank 5,550 Repairs 600 Sundry expenses 110 Mortgage 6,100 Buildings 8,000 Machinery 3,000 Furniture 1,000 Stock on hand (1.1.2013) 11,500 Capital 21,310 Sundry debtors 9,000 Sundry creditors 4,200  91,610 91,610			
	Adjust the following: (a) Prepaid rent Rs. 100 (b) Depreciate the following: <ul style="list-style-type: none"> <li>• Buildings @ 10per cent per annum</li> <li>• Machinery @ 20 per cent per annum</li> <li>• Furniture @ 15 per cent per annum</li> </ul> (c) Provide for bad debts Rs. 100 (d) Outstanding insurance Rs. 50 (e) Closing stock Rs. 12,000			
	UNIT-V			
9.	Explain about capital and the sources available for raising finance	CO5	K2	15
	OR			
10.	Explain about the concept and causes of depreciation. Evaluate the straight-line method and diminishing balance methods.	CO5	K2	15

**[B19 IT 3101]**  
**III B.Tech I Semester (R19) Regular Examinations**  
**COMPUTER NETWORKS**  
 (Information Technology)  
**MODEL QUESTION PAPER**

**TIME: 3Hrs.**

**Max. Marks:75**

**Answer ONE Question from EACH UNIT.**  
**All questions carry equal marks.**

<b>UNIT-I</b>				CO	KL	M
1.	(a).	List the components of data communication ,describe each component		CO1	K3	7M,
	(b).	Explain TCP/IP Protocol suite		CO1	K2	8M,
<b>(OR)</b>						
2.	(a).	Explain OSI model with neat diagram		CO1	K3	8M,
	(b).	Explain physical structures of networks		CO1	K2	7M,
<b>UNIT-II</b>						
3.	(a).	Describe Circuit Switching		CO2	K2	7M.
	(b).	Describe Guided Media in physical layer		CO2	K2	8M,
<b>(OR)</b>						
4.	(a).	Explain unguided media		CO2	K2	7M,
	(b).	Describe Packet Switching		CO2	K2	8M,
<b>UNIT-III</b>						
5.	(a).	Explain CRC with suitable example		CO3	K2	8M,
	(b).	Describe data link addressing in detail		CO3	K3	7M,
<b>(OR)</b>						
6.	(a).	Describe DLC Services		CO3	K3	7M,
	(b).	Describe Data Link Layer Protocols		CO3	K2	8M,
<b>UNIT-IV</b>						
7.	(a).	Discuss about HDLC configuration and transfer modes		CO4	K2	8M,
	(b).	Discuss about i)TDMA ii)CDMA		CO4	K2	7M,

<b>(OR)</b>					
8.	(a).	What is channelization? Describe briefly about FDMA	CO4	K2	7M,
	(b).	Discuss about i)ALOHA ii)CSMA/CA	CO4	K2	8M,
<b>UNIT-V</b>					
9.	(a).	Discuss about Ethernet and IEEE802.11 Architecture	CO5	K2	8M,
	(b).	Discuss about MAC Sublayer	CO5	K2	7M,
<b>(OR)</b>					
10.	(a).	Describe Bluetooth Architecture with neat sketch	CO5	K2	7M,
	(b).	Describe i) Gigabit Ethernet ii) 10 Gigabit Ethernet	CO5	K2	8M,

[B19 IT 3102]

III B. Tech I Semester (R 19) Regular Examinations

**COMPILER DESIGN**

(Information Technology)

**MODEL QUESTION PAPER**

**TIME: 3Hrs.**

**Max. Marks:75**

Answer **ONE Question** from **EACH UNIT**.

All questions carry equal marks.

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<b>UNIT-I</b>					
1.	(a).	Write about phases of compiler in detail.	CO1	K2	7M
	(b).	Write a mechanism for converting the NFA to DFA	CO1	K2	8M
<b>(OR)</b>					
2.	(a).	What is Symbol Table and explain the process of symbol table management	CO1	K2	7M
	(b).	Write about Language Processors & its functionality.	CO1	K2	8M
<b>UNIT-II</b>					
3.	(a).	Write about ll(1) parsing mechanism	CO2	K2	7M
	(b).	Explain the rules to calculate first & follow. Calculate the first & follow for given grammar symbols. $E \rightarrow E+E/E*E/(E)/a/bc$	CO2	K3	8M
<b>(OR)</b>					
4.	(a).	Write about LR(0) item set	CO2	K2	7M
	(b).	Implement CLR parser for the given grammar $S \rightarrow AB, A \rightarrow aaA \mid \epsilon, B \rightarrow Bb \mid \epsilon$	CO2	K3	8M
<b>UNIT-III</b>					
5.	(a).	Explain evaluation Orders for SDD's	CO4	K2	7M
	(b).	Construct the SDD tree for the given expression evaluation $X=(a+b)*c*d-(x+g)$	CO4	K3	8M
<b>(OR)</b>					
6.	(a).	Explain about syntax tree & dag representation of intermediate code	CO4	K2	7M

	(b)	Explain intermediate code for while loop & for loop.	CO4	K2	8M
<b>UNIT-IV</b>					
7.	(a).	Write about Run time storage methods.	CO3	K2	7M
	(b)	How to implement peep hole optimization.	CO3	K3	8M
<b>(OR)</b>					
8.	(a)	What is flow graph? Implement the mechanism to construct flow graph.	CO4	K2	7M
	(b)	Discuss about simple code generation algorithm.	CO4	K2	8M
<b>UNIT-V</b>					
9.	(a).	Explain the principle sources of optimization.	CO3	K2	7M
	(b)	Explain various methods of machine independent optimization.	CO3	K2	8M
<b>(OR)</b>					
10	.	Explain the global data flow analysis	CO 3	K2	15M

**[B19 IT 3103]**  
**III B. Tech I Semester (R 19) Regular Examinations**  
**ARTIFICIAL INTELLIGENCE**  
 (Information Technology)  
**MODEL QUESTION PAPER**

**TIME: 3Hrs.**

**Max. Marks:75**

Answer **ONE Question** from **EACH UNIT**.  
 All questions carry equal marks.

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			CO	KL	M
<b>UNIT-I</b>					
1	a)	List out various applications of AI.	1	2	7
	b)	What are the advantages & disadvantages of AI?	1	3	8
<b>OR</b>					
2	a)	Elaborate the implementation of Tic-Tac-Toe game with 3 approaches.	1	3	8
	b)	Categorize intelligent systems based on their working principle.	1	3	7
<b>UNIT-II</b>					
3	a)	Write the productions involved in solving a Water-Jug Problem.	2	3	7
	b)	Elaborate the working of A* Algorithm with an example.	2	3	8
<b>OR</b>					
4	a)	Explain the procedure to implement Hill Climbing.	2	3	7
	b)	Discuss the implementation of all the exhaustive searches with examples.	2	3	8
<b>UNIT-III</b>					
5	a)	Trace the Resolution Algorithm by taking an example.	3	3	7
	b)	Discuss the procedure of converting WFF to the clause form.	3	3	8
<b>OR</b>					

6	a)	Explain Propositional Calculus (PC).	3	2	7
	b)	Explain Propositional Logic (PL).	3	2	8
<b>UNIT-IV</b>					
7	a)	Discuss the procedure to represent knowledge using Semantic Network.	4	3	7
	b)	How do you represent visiting a restaurant in the form of a Script? Explain	4	3	8
<b>OR</b>					
8	a)	Write the significance of using CYC in capturing human commonsense database.	4	3	7
	b)	Write about Conceptual Dependency theory. How it will be used for Knowledge Representation?	4	3	8
<b>UNIT-V</b>					
9	a)	Differentiate Expert Systems versus Traditional Systems.	5	3	7
	b)	Write the significance of Bayes's theorem in AI	5	3	8
<b>OR</b>					
10	a)	Explain Dempster-Shafer Theory	5	3	7
	b)	Explain the significance of various Fuzzy Set Operations.	5	3	8

[B19 IT 3104]

**III B. Tech I Semester (R 19) Regular Examinations  
DESIGN AND ANALYSIS OF ALGORITHMS**

(Information Technology)

**MODEL QUESTION PAPER**

**TIME: 3Hrs.**

**Max. Marks:75**

Answer **ONE Question** from **EACH UNIT**.

All questions carry equal marks.

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			<b>CO</b>	<b>KL</b>	<b>M</b>
<b>UNIT-I</b>					
1	a)	Define algorithm. Explain asymptotic notations Big O, Omega, and Theta.	CO1	K3	8
	b)	Write an algorithm for matrix multiplication and find its time complexity.	CO1	K2	7
<b>OR</b>					
2	a)	What is an articulation point? Explain the procedure to determine bi-connected components in the graph with example.	CO1	K5	7
	b)	Write an algorithm for BFS. Explain with example.	CO1	K4	8
<b>UNIT-II</b>					
3	a)	Explain divide-and-conquer technique. Write a recursive algorithm for finding the maximum and minimum element from the list.	CO2	K4	7
	b)	Illustrate the tracing of Quick Sort algorithm for the following set of numbers 25, 10, 72, 18, 40, 11, 64, 58, 32, 9	CO2	K4	8
<b>OR</b>					
4	a)	Find the optimal solution of the knapsack instance $n = 7$ , $M = 15$ , $(p_1, p_2, \dots, p_7) = (10, 5, 15, 7, 6, 18, 3)$ and $(w_1, w_2, \dots, w_7) = (2, 3, 5, 7, 1, 4, 1)$ .	CO2	K2	8
	b)	What is job sequencing with deadlines problem? Let $n=5$ , profit $(10, 3, 33, 11, 40)$ and deadlines $(3, 1, 1, 2, 2)$ respectively. Find the optimal solution using greedy method.	CO2	K3	7

UNIT-III																																		
5	a)	For the given cost matrix, obtain an optimal cost tour using dynamic programming <div style="text-align: center;"> <table border="1"> <tr><td>0</td><td>10</td><td>15</td><td>20</td></tr> <tr><td>5</td><td>0</td><td>9</td><td>10</td></tr> <tr><td>6</td><td>13</td><td>0</td><td>12</td></tr> <tr><td>8</td><td>8</td><td>9</td><td>0</td></tr> </table> </div>	0	10	15	20	5	0	9	10	6	13	0	12	8	8	9	0	CO 3	K3	7													
0	10	15	20																															
5	0	9	10																															
6	13	0	12																															
8	8	9	0																															
	b)	What is graph coloring? Write an algorithm for it and explain with an example.	CO3	K2	8																													
OR																																		
6	a)	Using dynamic programming, solve the following knapsack instance n=4, m=5, (W1, W2, W3, W4)=(2, 1, 3, 2), (P1, P2, P3, P4)=(12, 10, 20, 15).	CO3	K2	8																													
	b)	Explain Multistage graphs with example. Write multistage graph algorithm to forward approach.	CO3	K4	7																													
UNIT-IV																																		
7	a)	What is backtracking? Apply backtracking to solve the instance of the sum of subset problem n=6, d=30, S={5, 10, 12, 13, 15, 18}	CO3	K4	7																													
	b)	Explain backtracking concept. Illustrate N queens problem using backtracking to solve 4-Queens problem.	CO3	K4	8																													
OR																																		
8	a)	State travelling salesperson problem. Apply Branch and Bound algorithm to solve the TSP instantiated by the following cost matrix. <div style="text-align: center;"> <table border="1"> <tr><td><math>\infty</math></td><td>20</td><td>30</td><td>10</td><td>11</td></tr> <tr><td></td><td>15</td><td><math>\infty</math></td><td>16</td><td>4</td><td>2</td></tr> <tr><td></td><td>3</td><td>5</td><td><math>\infty</math></td><td>2</td><td>4</td></tr> <tr><td></td><td>19</td><td>6</td><td>18</td><td><math>\infty</math></td><td>3</td></tr> <tr><td></td><td>16</td><td>4</td><td>7</td><td>16</td><td><math>\infty</math></td></tr> </table> </div>	$\infty$	20	30	10	11		15	$\infty$	16	4	2		3	5	$\infty$	2	4		19	6	18	$\infty$	3		16	4	7	16	$\infty$	CO3	K4	8
$\infty$	20	30	10	11																														
	15	$\infty$	16	4	2																													
	3	5	$\infty$	2	4																													
	19	6	18	$\infty$	3																													
	16	4	7	16	$\infty$																													
	b)	Explain FIFO Branch and Bound	CO3	K2	7																													
UNIT-V																																		
9	a)	Explain the classes of NP-Hard and NP-complete.	CO4	K4	8																													
	b)	State and prove Cook's theorem.	CO4	K2	7																													
OR																																		
10	a)	Apply the Rabin-Karp algorithm to search for the pattern AABA in the text A A B A A C A A D A A B A A B A	CO4	K3	7																													
	b)	Apply the Knuth-Morris-Pratt matching to search for the pattern BAOBAB in the text BESS_KNEW_ABOUT_BAOBABS	CO4	K3	8																													

**[B19 IT 3105]**  
**III B. Tech I Semester (R 19) Regular Examinations**  
**FUNDAMENTALS OF IMAGE PROCESSING**  
 (Information Technology)  
**MODEL QUESTION PAPER**

**TIME: 3Hrs.**

**Max. Marks:75**

Answer **ONE Question** from **EACH UNIT**.  
 All questions carry equal marks.

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			<b>CO</b>	<b>KL</b>	<b>M</b>
<b>UNIT -1</b>					
1	A	What is meant by digital image processing? What are the applications of it?	CO1	K2	8
	B	Explain Non uniform sampling is useful for what type of images. Give reasons.	CO1	K2	7
<b>OR</b>					
2	A	Explain in detail about Discrete Cosine Transform and specify its properties	CO1	K2	8
	B	Is fast algorithm is applicable for computation of Hadamard transform, if so what are the problems encountered in implementation.	CO1	K2	7
<b>UNIT -II</b>					
3	A	Explain briefly about Median filter processing and Spatial domain high pass filtering.	CO2	K2	8
	B	What is a histogram of an image? Sketch histograms of basic image types.	CO2	K1	7
<b>OR</b>					
4	A	Describe briefly about Ideal High Pass Filter and Butterworth High Pass filter.	CO2	K1	8
	B	Explain in detail smoothing spatial filters and nonlinear order static spatial filters.	CO2	K2	7
<b>UNIT -III</b>					
5	A	Discuss and Explain , Relation with inverse filtering and Iterative Wiener filters	CO3	K2	8



	B	Explain different noise models.	CO3	K2	7
<b>OR</b>					
6	A	What is Image Restoration? How do filters help in image restoration?	CO3	K2	8
	B	What is a notch filter and explain its operation.	CO3	K2	7
<b>UNIT -IV</b>					
7	A	What is the need for image compression? Explain advantages of data compression.	CO4	K2	8
	B	Explain the schematics of image compression standard JPEG.	CO4	K2	7
<b>OR</b>					
8	A	What is compression system model? Draw and explain a general compression system model.	CO4	K2	8
	B	Explain about different compression standards.	CO4	K2	7
<b>UNIT -V</b>					
9	A	What is segmentation? Write in detail the applications of segmentation.	CO5	K3	8
	B	Explain briefly the segmentation techniques that are based on finding the regions.	CO5	K2	7
<b>OR</b>					
10	A	Explain about different color models.	CO5	K2	8
	B	Explain thresholding related to image segmentation.	CO5	K2	7

**[B19 IT 3107]**

**III B. Tech I Semester (R 19) Regular Examinations  
SCRIPTING LANGUAGES  
(Information Technology)  
MODEL QUESTION PAPER**

**TIME: 3Hrs.**

**Max. Marks:75**

Answer **ONE Question** from **EACH UNIT**.

All questions carry equal marks.

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			CO	KL	M
<b>UNIT-I</b>					
1	a)	What is PERL debugger and what are several ways to call the debugger? Explain in detail	CO5	K1	15
<b>OR</b>					
2	a)	Briefly explain the regular expressions in Perl.	CO5	K1	8
	b)	Write a short note on modules, objects in Perl.	CO5	K1	7
<b>UNIT-II</b>					
3	a)	What are the security Issues in PERL.	CO5	K1	8
	b)	Explain the features of PHP.	CO2	K1	7
<b>OR</b>					
4	a)	How can you create functions in PHP.	CO2	K2	8
	b)	Explain about arrays, list, hashes in PERL	C05	K2	7
<b>UNIT-III</b>					
5	a)	Write a PHP code for browser Redirection using GET & POST Methods.	CO2	K2	8
	b)	Explain parameters in openssl_encrypt() and openssl_decrypt() in PHP	CO3	K1	7
<b>OR</b>					
6	a)	Describe PHP authentication and its methodologies.	CO3	K2	15

UNIT-IV					
7	a)	Describe briefly about namespaces in TCL?	CO4	K2	7
	b)	Explain about Recursion and Procedures in TCL with example?	CO4	K2	8
OR					
8	a)	Write TCL code for Modifying Strings to lower, to upper, trim and format	CO4	K3	7
	b)	What are the Patterns available in TCL	CO4	K3	8
UNIT-V					
9	a)	What is Exception Handling? How do you achieve it in Python?	CO5	K2	8
	b)	Write the differences between list and set in Python?	CO6	K2	7
OR					
10	a)	Describe classical webservice architecture with neat sketch	CO6	K1	8
	b)	Explain the built-in function and methods in python	CO6	K1	7

[B19 IT 3108]

III B. Tech I Semester (R 19) Regular Examinations

COMPUTER GRAPHICS

(Information Technology)

MODEL QUESTION PAPER

TIME: 3Hrs.

Max. Marks:75

Answer **ONE Question** from **EACH UNIT**.

All questions carry equal marks.

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UNIT -I			CO	K L	M
1	A	What is the role of digital to analog converter (DAC)? Where is it placed in video display devices?	CO1	K2	8
	B	Explain the mechanism of increasing the colors/gray levels without increasing the frame buffer memory.	CO1	K2	7
OR					
2	A	Draw the flow chart for Bresenham's incremental circle algorithm in the first octant.	CO1	K2	8
	B	Discuss about the reflections required for generating the complete circle using the first octant of the origin centered circle.	CO1	K3	7
UNIT -II					
3	A	Discuss about the basic transformations on object.	CO2	K1	8
	B	Discuss about reflection & shearing	CO2	K1	7
OR					
4	A	Explain the approaches followed in Cohen-Sutherland line clipping algorithms.	CO2	K1	8
	B	Explain with an example for Sutherland-Hodgeman Polygon clipping algorithm.	CO2	K2	7
UNIT -III					
5	A	Distinguish between isometric, parallel projections.	CO3	K2	8
	B	Explain with a neat sketch, how the view plane is defined with respect to centre of	CO3	K2	7

		projections and the object defined is 3-D space			
<b>OR</b>					
6	A	Explain about B-spline curves .	CO3	K2	8
	B	Explain about Beizer curves.	CO3	K2	7
<b>UNIT -IV</b>					
7	A	Explain about different colour models in brief.	CO4	K2	8
	B	Write short notes on computer Animation.	CO4	K2	7
<b>OR</b>					
8	A	What is OPENGL? With the help of Block Diagram explain Library organization of OpenGL.	CO4	K1	8
	B	Explain structure of OPENGL Programme.	CO4	K3	7
<b>UNIT -V</b>					
9	A	Explain about different shading models.	CO5	K3	8
	B	Explain a method to add texture and shades to objects.	CO5	K2	7
<b>OR</b>					
10	A	Explain techniques for adding shadows of objects.	CO5	K2	8
	B	Write over view of ray tracing	CO5	K2	7

[B19 IT 3109]

**III B. Tech I Semester (R 19) Regular Examinations**  
**R PROGRAMMING**  
 (Information Technology)  
**MODEL QUESTION PAPER**

**TIME: 3Hrs.**

**Max. Marks:75**

Answer **ONE Question** from **EACH UNIT**.

All questions carry equal marks.

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			CO	KL	M
<b>UNIT-I</b>					
1	a)	“R operates in two modes”. Interpret with an example	CO1	K3	8
	b)	Explain various mechanisms to subset numeric and character vectors in R?	CO1	K2	7
<b>OR</b>					
2	a)	Create an array and a matrix and demonstrate their indexing mechanisms.	CO1	K5	7
	b)	Define a List and create a list to show heterogeneous data type storage ability.	CO1	K4	8
<b>UNIT-II</b>					
3	a)	What is recursion? Write a simple R code to print GCD of two numbers using recursion.	CO2	K4	7
	b)	Develop R code using 'for' to print elements of a sequence, vector, array and matrix.	CO2	K4	8
<b>OR</b>					
4	a)	List the arithmetic and Boolean operators in R along with their possible result.	CO2	K2	8
	b)	Interpret the passing of default value for arguments in R.	CO2	K3	7
<b>UNIT-III</b>					
5	a)	Examine the use of functions for statistical distribution.	CO3	K3	7
	b)	How do you apply order and sort functions on vectors and data frames?	CO3	K2	8
<b>OR</b>					
6	a)	Explain about any four linear algebra functions with example.	CO3	K2	8
	b)	Summarize the setoperations over two vectors.	CO3	K4	7

<b>UNIT-IV</b>												
7	a)	Generate 20 random numbers and plot using scatter plot with title and labels using R.	CO3	K4	7							
	b)	Write an R code to generate Bar plot of temperature from air quality dataset.	CO3	K4	8							
<b>OR</b>												
8	a)	Compare various plot functions available in R with an emphasis on data distribution.	CO3	K4	8							
	b)	Write the syntax to write plot to a file in various file formats.	CO3	K2	7							
<b>UNIT-V</b>												
9	a)	Find the least square regression line for the given data and estimate sales in year 2020.	CO4	K4	8							
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Year (X)</th> <th>2015</th> <th>2016</th> <th>2017</th> <th>2018</th> <th>2019</th> </tr> </thead> <tbody> <tr> <td style="text-align: left;">Sales(Y) in Cr.</td> <td>12</td> <td>19</td> <td>29</td> <td>37</td> <td>45</td> </tr> </tbody> </table>				Year (X)	2015	2016	2017	2018	2019	Sales(Y) in Cr.
Year (X)	2015	2016	2017	2018	2019							
Sales(Y) in Cr.	12	19	29	37	45							
	b)	Explain about Random Forest in detail.	CO4	K2	7							
<b>OR</b>												
10	a)	Compare correlation and covariance measures of dataset features.	CO4	K3	7							
	b)	Differentiate between simple linear and multiple linear regressions.	CO4	K3	8							

**[B19 IT 3201]**  
**III B. Tech II Semester (R 19) Regular Examinations**  
**DATA WAREHOUSING AND DATA MINING**  
 (Information Technology)  
**MODEL QUESTION PAPER**

**TIME: 3Hrs.**

**Max. Marks:75**

Answer **ONE Question** from **EACH UNIT**.

All questions carry equal marks.

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			<b>CO</b>	<b>K L</b>	<b>M</b>												
<b>UNIT - I</b>																	
<b>1.</b>	<b>a).</b>	Differentiate between operational database systems and data warehouses.	CO1	K2	7M												
	<b>b).</b>	Explain with an example, the three schemas for multi dimensional data models.	CO1	K3	8M												
<b>OR</b>																	
<b>2.</b>	<b>a).</b>	Explain OLAP operations with an example.	CO1	K3	8M												
	<b>b).</b>	Explain the design process of a data warehouse.	CO1	K2	7M												
<b>UNIT - II</b>																	
<b>3.</b>	<b>a).</b>	Compute the median and standard deviation for the following values of percentage of fat of different persons: 9.5, 26.5, 7.8, 17.8, 31.4, 25.9, 27.4, 27.2, 31.6, and 42.5.	CO2	K3	7M												
	<b>b).</b>	Explain $\chi^2$ test for correlation of numerical data with and apply on the following example.	CO2	K3	8M												
		<table border="1" style="width: 100%; border-collapse: collapse; margin-left: 20px;"> <thead> <tr> <th style="width: 30%;">Education/Political Affiliation</th> <th style="width: 30%;">Republican</th> <th style="width: 30%;">Democrat</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">HS</td> <td style="text-align: center;">17</td> <td style="text-align: center;">42</td> </tr> <tr> <td style="text-align: center;">BA</td> <td style="text-align: center;">28</td> <td style="text-align: center;">35</td> </tr> <tr> <td style="text-align: center;">MA</td> <td style="text-align: center;">32</td> <td style="text-align: center;">32</td> </tr> </tbody> </table>				Education/Political Affiliation	Republican	Democrat	HS	17	42	BA	28	35	MA	32	32
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HS	17	42															
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MA	32	32															

OR																	
4.	a).	Normalize the following group of data: 200,300,400,600 and 1000 using a) min-max normalization by setting min=0 and max=1, b) z-score normalization, and c) normalization by decimal scaling.	CO2	K3	7M												
	b).	Explain with an example, proximity measures for binary attributes.	CO2	K3	8M												
UNIT - III																	
5.	a).	Consider the following transactions. Consider $min\_sup=60\%$ and $min\_conf=80\%$ . Find all frequent itemsets using Apriori algorithm.	CO3	K3	9M												
	<table border="1"> <thead> <tr> <th>TID</th> <th>Items Bought</th> </tr> </thead> <tbody> <tr> <td>T100</td> <td>{ I1, I2, I3, I4, I5, I6 }</td> </tr> <tr> <td>T200</td> <td>{ I8, I3, I4, I5, I6 }</td> </tr> <tr> <td>T300</td> <td>{ I1, I7, I4, I5 }</td> </tr> <tr> <td>T400</td> <td>{ I1, I7, I8, I4, I6 }</td> </tr> <tr> <td>T500</td> <td>{ I8, I2, I2, I4, I5, I6 }</td> </tr> </tbody> </table>					TID	Items Bought	T100	{ I1, I2, I3, I4, I5, I6 }	T200	{ I8, I3, I4, I5, I6 }	T300	{ I1, I7, I4, I5 }	T400	{ I1, I7, I8, I4, I6 }	T500	{ I8, I2, I2, I4, I5, I6 }
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b).	Explain with an example, closed frequent and maximal frequent itemsets.	CO3	K3	6M													
OR																	
6.	a).	What is a misleading association rule? Explain with an example, the use of the measure <i>Lift</i> to avoid misleading strong association rules.	CO3	K3	7M												
	b).	Explain with an example, the mining of multilevel association rules with uniform and reduced supports.	CO3	K3	8M												
UNIT - IV																	
7.	a).	Explain Decision Tree Induction Classifier.	CO4	K3	8M												
	b).	Explain the working of Naïve Bayesian classifier.	CO4	K2	7M												
OR																	
8.	a).	Explain the classifier performance evaluation measures accuracy and error rate and calculate the values for the following data.	CO4	K3	7M												
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b).	Explain briefly, various methods to improve classification accuracy.	CO4	K2	8M													
UNIT - V																	
9.	a).	Explain the process of clustering using DBSCAN algorithm.	CO5	K2	8M												
	b).	Explain how the quality of clustering do is measured using extrinsic methods.	CO5	K2	7M												
OR																	
10.	a).	Explain the general principle of hierarchical clustering. Explain briefly about dendrogram representation.	CO5	K2	8M												
	b).	Explain briefly statistical and proximity-based methods to detect outliers.	CO5	K2	7M												

**[B19 IT 3202]**  
**III B. Tech II Semester (R 19) Regular Examinations**  
**WEB TECHNOLOGIES**  
 (Information Technology)  
**MODEL QUESTION PAPER**

**TIME: 3Hrs.**

**Max. Marks:75**

Answer **ONE Question** from **EACH UNIT**.

All questions carry equal marks.

\*\*\*\*\*

		<b>UNIT-I</b>	<b>CO</b>	<b>KL</b>	<b>M</b>
1	a)	Create a simple HTML page which demonstrates the use of the various types of lists. Try adding a definition list which uses an unordered list to define terms.	CO1	K3	7M
	b)	Show how group and alignment of table rows and columns is achieved using HTML.	CO1	K2	8M
<b>OR</b>					
2	a)	Compare and contrast HTML and DHTML.	CO1	K3	7M
	b)	Explain the various ways you can reference a color in CSS.	CO1	K2	8M
<b>UNIT-II</b>					
3	a)	Write a java script to validate a form consisting of a username. Also navigate to another web page after validation.	CO2	K3	8M
	b)	Explain AngularJS Form Controllers with an examples	CO2	K2	7M
<b>OR</b>					
4	a)	How do you create a simple server in Node.js that returns Hello World?	CO2	K2	7M
	b)	Write a java script to determine whether a given number is an 'ARMSTRONG NUMBER' or not. [Eg: 153 is an Armstrong number, since sum of the cube of the digits is equal to the number i.e., $13 + 53 + 33 = 153$ ]	CO2	K3	8M
<b>UNIT-III</b>					
5	a)	What is a valid XML and well formed XML	CO3	K2	7M
	b)	Explain the four possible keywords in a DTD declaration with suitable examples.	CO3	K2	8M
<b>OR</b>					
6	a)	Explain the advantages of XML schemas over DTDs.	CO3	K2	7M
	b)	What are the advantages and disadvantages of Ajax? What are all the technologies used by Ajax? Explain.	CO3	K2	8M
<b>UNIT-IV</b>					
7	a)	Write the steps to run basic PHP?write any four string function s in php	CO3	K2	7M
	b)	Explain different types of arrays in php with example?	CO3	K2	8M
<b>OR</b>					
8	a)	Write a PHP script to connect to MySQL database and insert records into table	CO3	K3	7M

	b)	Explain predefined and user defined functions in PHP with an example.	CO3	K2	8M
<b>UNIT-V</b>					
9	a)	Explain about arrays creation, manipulation functions that support by RUBY with example.	CO3	K2	7M
	b)	Explain about life cycle of Servlet	CO3	K2	8M
<b>OR</b>					
10	a)	Explain hashes and classes in ruby with suitable examples.	CO3	K3	8M
	b)	Write the significance of Singleton Method in Ruby with an example.	CO3	K2	7M

**[B19 IT 3203]**

**III B. Tech II Semester (R 19) Regular Examinations**

**ADVANCED COMPUTER NETWORKS**

(Information Technology)

**MODEL QUESTION PAPER**

**TIME: 3Hrs.**

**Max. Marks:75**

Answer **ONE Question** from **EACH UNIT**.

All questions carry equal marks.

			<b>CO</b>	<b>K L</b>	<b>M</b>
<b>UNIT -1</b>					
1	A	Give the Design Issues of Network layer and Compare Virtual Circuit & Datagram Networks.	CO1	K4	8
	B	Describe Class -full Classification of IPV4	CO1	K4	7
<b>OR</b>					
2	A	Explain Header format of IPV4?	CO1	K2	8
	B	Explain ICMP V4.	CO1	K2	7
<b>UNIT -II</b>					
3	A	Discuss about Routing Algorithm and Differentiate Distance vector routing, Link state Routing.	CO2	K2	8
	B	Describe about Shortest Path Routing and flooding.	CO2	K2	7
<b>OR</b>					
4	A	Explain about Hierarchical Routing with example.	CO2	K2	8
	B	Explain BGP.	CO2	K2	7
<b>UNIT -III</b>					
5	A	Discuss Advantages of IPV6 over IPV4 and Describe the frame format of IPV6.	CO3	K2	8
	B	Discuss about TCP Services, TCP header format.	CO3	K1	7
<b>OR</b>					
6	A	Describe Flow control, Error control in TCP Protocol	CO3	K2	8
	B	Discuss about UDP Services, UDP Header Format.	CO3	K1	7
<b>UNIT -IV</b>					
7	A	Describe SCTP services and features.	CO4	K2	8
	B	Explain SCTP packet format.	CO4	K2	7
<b>OR</b>					
8	A	Differentiate SCTP and TCP.	CO4	K2	8
	B	Explain SCTP Quality of service.	CO4	K1	7
<b>UNIT -V</b>					



9	A	What is Domain name system? Describe about Namespace, Name servers.	CO5	K2	8
	B	Discuss about HTTP protocol.	CO5	K2	7
<b>OR</b>					
10	A	Discuss Email Services and architecture, message transfer, delivery.	CO5	K2	8
	B	Describe MIME (Multipurpose Internet Mail Extensions) message format	CO5	K2	7