

REG: A22



SREENIDHI INSTITUTE OF SCIENCE AND TECHNOLOGY
 Autonomous Institution
 Yamnampet, Ghatkesar, Hyderabad – 501 301.

FIRST MID EXAMINATION, APRIL 2024

Course: B. Tech II Year II SEM

Subject: Python Programming - QFC02

Date : 06/05/2024 (EN) 06/05/2024 (SFN)

Branch: CSE, IT, ECE, CS & DOT

Time : 2 Hours

Max Marks: 30

Part – A
 (Compulsory Short answers) **6X 2 = 12 Marks**

| S.No | Coverage | | BCLL | CO(s) | Marks |
|------|---------------|---|------|-------|-------|
| 1 | From Unit-I | List out membership operators in python with examples? | L1 | CO1 | 2 |
| 2 | From Unit-I | Write the syntax to create a file “file1.txt” in read, write and append modes | L1 | CO1 | 2 |
| 3 | From Unit-II | Develop the string s=“SNIST” in reverse order without using string method | L4 | CO2 | 2 |
| 4 | From Unit-II | Differences between list and tuple | L4 | CO2 | 2 |
| 5 | From Unit-III | Write any four methods from random module with example | L1 | CO3 | 2 |
| 6 | From Unit-III | Define package and write about how to create a package in python | L1 | CO3 | 2 |

Part – B
 Answer any THREE out of the **FOUR** questions **3X 6 = 18 Marks**

| S.No | Coverage | | BCLL | CO(s) | Marks |
|-------|---------------|--|------|-------|-------|
| 7 | From Unit-I | a) Write a python program to display all lines of file which start with T(Alphabet) | L1 | CO1 | 3 |
| | | b) Demonstrate history and feature of python programming language | L3 | CO1 | 3 |
| 8 | From Unit-II | a) Discuss the following list methods i) insert ii) pop iii) append iv) extend | L2 | CO2 | 3 |
| | | b) Design a python program to swap keys and values in dictionary | L6 | CO2 | 3 |
| 9 | From Unit-III | a) Develop a python program to generate 5-digit OTP and 10-digit password by using random module | L4 | CO3 | 3 |
| | | b) Write a python program to demonstrate try-except-else and finally | L1 | CO3 | 3 |
| 10 a) | From Unit-I | Write a python program demonstrates the division obtained by students in 6 subjects | L1 | CO1 | 2 |
| b) | From Unit-II | Develop a python program that calculates the sum of all elements in a list using list methods | L4 | CO2 | 2 |
| c) | From Unit-III | Write short note on math module | L1 | CO3 | 2 |

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FIRST MID EXAMINATION, APRIL 2024

Course: B.Tech II Year II SEM

Branch: (CSE, IT & EEE)

Subject: Probability and Statistics

Time : 2 Hours

Date : 25.04.2024 (AN)

Max Marks: 30

Part - A
(Compulsory Short answers) 6X 2 = 12 Marks

| S.No | Coverage | | BCLL | CO(s) | Marks |
|------|----------|--|------|-------|-------|
| 1 | Unit-I | Write the properties of normal distribution. | L1 | CO-1 | 2 |
| 2 | Unit-I | If a Poisson distribution is such that $\frac{3}{2} P(X = 1) = P(X = 3)$, find $P(X \geq 1)$. | L2 | CO-1 | 2 |
| 3 | Unit-II | Find the value of the finite population correction factor for $N = 2000$, $n=28$ | L1 | CO-2 | 2 |
| 4 | Unit-II | A random sample of 400 items is found to have mean 82 and S.D of 18. Find the Maximum error of estimation at 95% confidence. | L1 | CO-2 | 2 |
| 5 | Unit-III | Explain types of error | L2 | CO-3 | 2 |
| 6 | Unit-III | The average mark scored by 32 boys is 72 with a Standard deviation of 8, While that for 36 girls is 70 with a Standard deviation of 6. Find the test statistic Z_{cal} for concerned test of hypothesis. 1.154 | L3 | CO-3 | 2 |

Part - B
Answer any THREE out of the FOUR questions 3X 6 = 18 Marks

| S.No | Coverage | | BCLL | CO(s) | Marks | | | | | | | | | | | | | | | | | | |
|----------|-----------------------------|--|----------|--------------|--------|-------|--------|----------|---|---|---|------|---|---|----|----|----|-------|--------|----------|----|------|---|
| 7 | Unit-I 3.6G 3.404 | A random variable X has the following probability function <table border="1"> <tr> <td>X</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td> </tr> <tr> <td>P(X)</td><td>0</td><td>K</td><td>2K</td><td>2K</td><td>3K</td><td>K^2</td><td>$2K^2$</td><td>$7K^2+K$</td> </tr> </table> Find (i) the value of K (ii) Mean (iii) Variance | X | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | P(X) | 0 | K | 2K | 2K | 3K | K^2 | $2K^2$ | $7K^2+K$ | L3 | CO-1 | 6 |
| X | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | | | | | | | | |
| P(X) | 0 | K | 2K | 2K | 3K | K^2 | $2K^2$ | $7K^2+K$ | | | | | | | | | | | | | | | |
| 8 | Unit-II | a) Explain briefly the types of estimation. b) Construct the possible samples of size 2 by without replacement from the population 2, 3, 6, 8 and 11 (i) The population mean and standard deviation 5.76 $M=6$ (ii) The mean of sampling distribution of means $\sigma^2 = 10.8$ | L2 L3 | CO-2 CO-2 | 3 3 | | | | | | | | | | | | | | | | | | |
| 9 | Unit-III | a) Explain the procedure for testing of hypothesis for single mean. b) A coin was tossed 400 times and returned heads 216 times. Test the hypothesis that the coin is unbiased. Use a 0.05 Level of significance. | L2 L4 | CO-3 CO-3 | 3 3 | | | | | | | | | | | | | | | | | | |
| 10 a) | Unit-I | The mean of Binomial distribution is 3 and the variance is 9/4. Find $P(x \geq 7)$ 0.2631 | L3 | CO-1 | 2 | | | | | | | | | | | | | | | | | | |
| b) | Unit-II | A random sample of size 144 is taken from an infinite population having the mean 75 and variance 225. Find the probability that the sample mean will lie between 72 and 77. 0.937 | L2 | CO-2 | 2 | | | | | | | | | | | | | | | | | | |
| c) | Unit-III | A sample of 400 items is taken from a population whose standard deviation is 10. The mean of the sample is 40. Test whether the sample has come from a population with mean 38. $t = 2.4$ | L3 | CO-3 | 2 | | | | | | | | | | | | | | | | | | |



SREENIDHI INSTITUTE OF SCIENCE AND TECHNOLOGY

Autonomous Institution

Yamnampet, Ghatkesar, Hyderabad - 501 301.

REG: A22

FIRST MID EXAMINATION, APRIL 2024

Course: B. Tech II Year BSEM

Branch: CSE/IT/CS/DS/AI/ML/IoT

Subject: Database Management Systems

Time : 2 Hours

Date : 30.04.2024 (FN)

Max Marks: 30

Part - A

(Compulsory Short answers) 6X 2 = 12 Marks

| S.No | Coverage | | BCLL | CO(s) | Marks |
|------|---------------|--|------|-------|-------|
| 1 | From Unit-I | List out ACID properties. Explain Atomicity. | L1 | CO1 | 2 |
| 2 | From Unit-I | Differentiate between Procedural DML and Non-Procedural DML. | L4 | CO1 | 2 |
| 3 | From Unit-II | Define the following terms i. Relational Schema ii. Relational Instance iii. Relational degree iv. Relational cardinality. | L1 | CO2 | 2 |
| 4 | From Unit-II | Describe Generalization and specialization in Class hierarchy of ER Models | L2 | CO2 | 2 |
| 5 | From Unit-III | List and explain different types of OUTER JOIN operations in SQL | L2 | CO2 | 2 |
| 6 | From Unit-III | Write the different ways to stop the insertion of NULL values in database table. Also write how to compare NULL values. | L1 | CO2 | 2 |

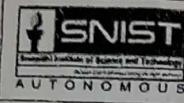
Part - B

Answer any THREE out of the FOUR questions 3X 6 = 18 Marks

| S.No | Coverage | | BCLL | CO(s) | Marks |
|-------|---------------|---|------|-------|-------|
| 7 | From Unit-I | Explain the different Levels of Abstraction. What is Data Independence? Explain the types of Data Independence. | L2 | CO1 | 6 |
| 8 | From Unit-II | With suitable examples explain various operations in relational algebra. | L2 | CO2 | 6 |
| 9 | From Unit-III | For the given relations Sailors (Sid:Integer, Sname:String, age:Float, rating:Float) Reserves(Sid:Integer, Bid:Integer, Rdate:Date) Boats(Bid:Integer, Bname:String, color:String) Write the queries in SQL 1. Find the color of boat named 'Interlake' 2. Find the name of sailor who has reserved red boat but not the green boat. 3. Find the name of sailor who have reserved at least two boats. | L3 | CO2 | 6 |
| 10 a) | From Unit-I | What is Database Model? List out different database Models. | L1 | CO1 | 2 |
| b) | From Unit-II | Write the syntax for enforcing primary key and foreign key constraints in SQL. | L1 | CO2 | 2 |
| c) | From Unit-III | Explain different Aggregate functions in SQL. | L2 | CO2 | 2 |

*H. P. Patel**V. Dalle*

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Yamnampet, Ghatkesar, Hyderabad - 501 301.

FIRST MID EXAMINATION, MAY 2024

Course: B.Tech II Year II SE Branch: CSE/IT/ECM/CS/AIML/DS/IOT

Subject: BEFA

Date : 06.05.2024 (AN)

Time : 2 Hours

Max Marks: 30

Part - A

(Compulsory Short answers)

6X 2 = 12 Marks

| S.No | Coverage | | BCLL | CO(s) | Marks |
|------|---------------|---|------|-------|-------|
| 1 | From Unit-I | List out any 5 demand determinants. | L1 | CO1 | 2 |
| 2 | From Unit-I | Mention the different types of elasticity of demand. | L1 | CO1 | 2 |
| 3 | From Unit-II | Write a note on isoquants and isocosts. | L2 | CO2 | 2 |
| 4 | From Unit-II | What is marginal cost? <i>MC</i> | L2 | CO2 | 2 |
| 5 | From Unit-III | Mention the different types of competition. | L1 | CO3 | 2 |
| 6 | From Unit-III | Bring out the difference between market penetration and market skimming strategy. | L4 | CO3 | 2 |

Part - B

Answer any THREE out of the FOUR questions

3X 6 = 18 Marks

| S.No | Coverage | | BCLL | CO(s) | Marks |
|-------|---------------|---|------|-------|-------|
| 7 | From Unit-I | Explain the different demand forecasting methods. | L2 | CO1 | 6 |
| 8 | From Unit-II | Explain the different internal and external economies of scale. | L2 | CO2 | 6 |
| 9 | From Unit-III | Discuss the features of a perfect market. | L2 | CO3 | 6 |
| 10 a) | From Unit-I | Describe the scope of business economics. | L2 | CO1 | 2 |
| b) | From Unit-II | Explain the different types of costs. | L2 | CO2 | 2 |
| c) | From Unit-III | List out the pricing strategies. | L1 | CO3 | 2 |

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FIRST MID EXAMINATION, APRIL 2024**Course: B.Tech II Year II SEM****Branch: CSE, IT, DS****Subject: CO****Time : 2 Hours****Date : 25.04.2024 FN****Max Marks: 30****Part - A****(Compulsory Short answers)****6X 2 = 12 Marks**

| S.No | Coverage | | BCLL | CO(s) | Marks |
|------|----------|--|------|-------|-------|
| 1 | Unit-4 | Draw the flag format of 8086 and mention control flags. | L1 | CO-4 | 2 |
| 2 | Unit-4 | Generate physical address for the given CS=6005h, IP=1111h & SS= 4005h, SP=2222h | L4 | CO-4 | 2 |
| 3 | Unit-5 | Distinguish between Procedures and macros. | L1 | CO-5 | 2 |
| 4 | Unit-5 | Develop an ALP for subtracting 03h from 05h and find the Square of the Result. | L1 | CO-5 | 2 |
| 5 | Unit-6 | Define ALE, identify multiplexing pins of 8086 for address and data | L2 | CO-6 | 2 |
| 6 | Unit-6 | Define HOLD, HLDA, mention any two features of 8086. | L3 | CO-6 | 2 |

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Part - B**Answer any THREE out of the FOUR questions 3X 6 = 18 Marks**

| S.No | Coverage | S.L | BCLL | CO(s) | Marks |
|----------|----------|---|------|-------|-------|
| 7 | Unit-4 | Explain about addressing modes of 8086 | L3 | CO-4 | 6 |
| 8 | Unit-5 | a) Expand DB,DW,DD,DT, define INT3h 2M b) Write an ALP for average of series of numbers 4M | L5 | CO-5 | 6 |
| 9 | Unit-6 | a) Draw the Pin diagram of 8086. 3M b) Explain about minimum mode operation for Read cycle. 3M | L2 | CO-6 | 6 |
| 10 a) | Unit-4 | Draw the architecture of 8086 with neat diagram. | L3 | CO-4 | 2 |
| b) | Unit-5 | Develop an ALP for Adding 03h,04h, and find the Square of the Result | L2 | CO-5 | 2 |
| c) | Unit-6 | Define CLK, RESET, READY, pins of 8086. | L3 | CO-6 | 2 |

Hemanth / Dinesh / Sravani / Nithin / Vipul / Suresh /



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FIRST MID EXAMINATION, APRIL 2024

Course: B.Tech II Year II SEM

Branch: ALL

Subject: Environmental Science (9HC04)

Time : 2 Hours

Date : 30-04-2024(AN)

Max Marks: 30

Part – A

(Compulsory Short answers) **6X 2 = 12 Marks**

| S.No | Coverage | | BCLL | CO(s) | Marks |
|------|----------|--|------|-------|-------|
| ✓1 | Unit-I | What is biological nitrogen fixation? | L1 | CO-1 | 2 |
| ✓2 | Unit-I | Predict the path of biomagnifications. | L4 | CO-1 | 2 |
| ✓3 | Unit-II | Outline over-exploitations of natural resources. | L1 | CO-2 | 2 |
| ✓4 | Unit-II | Compare exhaustible and inexhaustible resources. | L3 | CO-2 | 2 |
| 5 | Unit-III | List various biodiversity conservation methods. | L2 | CO-3 | 2 |
| 6 | Unit-III | Why is biodiversity so important and worthy of protection? | L3 | CO-3 | 2 |

Part – B

Answer any **THREE** out of the **FOUR** questions **3X 6 = 18 Marks**

| S.No | Coverage | | BCLL | CO(s) | Marks |
|------|----------|--|------|-------|-------|
| ✓7 | Unit-I | What is ecosystem? Discuss structure of forest ecosystem. | L1 | CO-1 | 6 |
| ✓8 | Unit-II | Illustrate about alternate energy resources. | L2 | CO-2 | 6 |
| ✓9 | Unit-III | Interpret various levels of biodiversity. <i>genetic, species, ecosystem</i> | L5 | CO-3 | 6 |
| 10a | Unit-I | How do plants absorb nitrogen? | L1 | CO-1 | 2 |
| b | Unit-II | Differentiate renewable resources from non-renewable resources. | L2 | CO-2 | 2 |
| c | Unit-III | Summarize hot spots of biodiversity. | L2 | CO-3 | 2 |

**SECOND MID EXAMINATION, JULY 2024**

Course: B. Tech II Year II SEM **Branch:** IT,CSE,ECM,CS,IoT
Subject: Python Programming (9FC02) **Time :** 2 Hours
Date : 24.07.2024 (FN) **Max Marks:** 30

Part – A

(Compulsory Short answers) **6X 2 = 12 Marks**

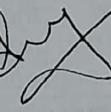
| S. No | Coverage | | BCLL | CO(s) | Marks |
|-------|--------------|---|------|-------|-------|
| 1 | From Unit-IV | Demonstrate the difference between overloading and overriding in Python. | L3 | CO4 | 2M |
| 2 | From Unit-IV | Differentiate between searching and matching. | L4 | CO4 | 2M |
| 3 | From Unit-V | Write a command to copy contents of one file to a different file. | L3 | CO5 | 2M |
| 4 | From Unit-V | Mention few methods related to the concept of Directories in Python. | L1 | CO5 | 2M |
| 5 | From Unit-VI | Explain the difference between Numpy and Scipy libraries and which is the best out of them? | L2 | CO6 | 2M |
| 6 | From Unit-VI | Write a simple GUI program in Python to display a text using Tkinter module. | L3 | CO6 | 2M |

Part – B

Answer any THREE out of the FOUR questions **3X 6 = 18 Marks**

| S.No | Coverage | | BCLL | CO(s) | Marks |
|------|--------------|---|------|-------|-------|
| 7 | From Unit-IV | a) Write Python script to Store Students Details using Class. The students' attributes are RollNo, Name, Date_of_Birth, Mobile_Number, E_MailID and Address. Also, define functions in class to count number of students and to display all students' details. | L4 | CO4 | 3M |
| | | b) Explain regular expressions in Python. Elaborate any 4 Modifiers mostly used in Regular Expressions with examples. | L3 | CO4 | 3M |
| 8 | From Unit-V | a) Develop python program to count number of alphabets, digits and special symbols from input file data. <i>Count = len(line)</i> | L4 | CO5 | 3M |
| | | b) Discuss any 5 directory methods present in the os module. <i>os.getcwd(), os.chdir(), os.rmdir()</i> | L2 | CO5 | 3M |
| 9 | From Unit-VI | a) List out any 5 functions of Numpy in Python with examples. | L1 | CO6 | 3M |
| | | b) Elaborate importance of PlotPy with the development of any application using PlotPy in Python. | L3 | CO6 | 3M |

| | | | | | |
|-------|--------------|---|----|-----|----|
| 10 a) | From Unit-IV | a) Explain about the types of attributes with an example. | L2 | CO4 | 2M |
| b) | From Unit-V | b) Do you think it is mandatory to call close () method after using the file? Justify. | L5 | CO5 | 2M |
| c) | From Unit-VI | c) Write a Python GUI program to add a button in your application using Tkinter module. | L3 | CO6 | 2M |

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SREENIDHI INSTITUTE OF SCIENCE AND TECHNOLOGY
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SECOND MID EXAMINATION, July 2024

Course: B.Tech II Year II SEM

Branch: CSE, IT&EEE

Subject: Probability and Statistics (9HC15)

Time : 2 Hours

Date : 22.07.2024 (AN)

Max Marks: 30

Part – A
(Compulsory Short answers)

6X 2 = 12 Marks

| S.No | Coverage | | BCLL | CO(s) | Marks |
|------|--------------|--|------|-------|-------|
| 1 | From Unit-IV | For an F-distribution, find (i) $F_{0.99}(28,12)$ (ii) $F_{0.05}(7,15)$ | L3 | CO-3 | 2 |
| 2 | From Unit-IV | For t-distribution, find (i) $t_{0.025}$ (ii) $t_{0.995}$ if the degrees of freedom are 14 and 7 respectively. $2.145 \quad 7.415$ | L3 | CO-3 | 2 |
| 3 | From Unit-V | Define simple correlation and write about types of correlation. | L1 | CO-4 | 2 |
| 4 | From Unit-V | Given $n=10, \sigma_x = 5.4, \sigma_y = 6.2$ and sum of the product of deviation from the mean of X and Y is 66. Find the correlation coefficient. | L2 | CO-4 | 2 |
| 5 | From Unit-VI | Find mean of x and mean of y, if the regression lines y on x and x on y are $x + 6y = 6; 3x + 4y = 10$. | L3 | CO-5 | 2 |
| 6 | From Unit-VI | To fit a regression plane $y = a + bx_1 + cx_2$, write its normal equations. | L1 | CO-5 | 2 |

Part – B
Answer any THREE out of the FOUR questions **3X 6 = 18 Marks**

| S.No | Coverage | | BCLL | CO(s) | Marks | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|--------------|--|-------|-------|--------------------|---|--------------------|---|-------|-------|-------|----|----|-------|--------------|----|----|----|-------|----|----|---|----|-------|--|--|--|
| 7 | From Unit-IV | From the following data, Use Chi squared test and state whether the two attributes i.e., condition of house and condition of child are independent. $0.5 = 5.991$ $0.025 = 7.378$ | L4 | CO-3 | 6 | | | | | | | | | | | | | | | | | | | | | | |
| | | <table border="1"> <thead> <tr> <th colspan="2"></th> <th colspan="2">Condition of House</th> </tr> <tr> <th colspan="2">Condition of child</th> <th>Clean</th> <th>Dirty</th> </tr> </thead> <tbody> <tr> <td>Clean</td> <td>69</td> <td>51</td> <td></td> </tr> <tr> <td>Fairly clean</td> <td>81</td> <td>20</td> <td></td> </tr> <tr> <td>Dirty</td> <td>35</td> <td>44</td> <td></td> </tr> </tbody> </table> | | | Condition of House | | Condition of child | | Clean | Dirty | Clean | 69 | 51 | | Fairly clean | 81 | 20 | | Dirty | 35 | 44 | | DF | 3.785 | | | |
| | | Condition of House | | | | | | | | | | | | | | | | | | | | | | | | | |
| Condition of child | | Clean | Dirty | | | | | | | | | | | | | | | | | | | | | | | | |
| Clean | 69 | 51 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fairly clean | 81 | 20 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dirty | 35 | 44 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | From Unit-V | Determine the rank correlation for the following data which shows the marks obtained in two mid examinations in mathematics 83.9845 | L3 | CO-4 | 6 | | | | | | | | | | | | | | | | | | | | | | |
| | | <table border="1"> <tbody> <tr> <td>Mid-1</td> <td>6</td> <td>5</td> <td>8</td> <td>8</td> <td>7</td> <td>6</td> <td>10</td> <td>4</td> <td>9</td> <td>7</td> </tr> <tr> <td>Mid-2</td> <td>8</td> <td>7</td> <td>7</td> <td>10</td> <td>5</td> <td>8</td> <td>10</td> <td>6</td> <td>8</td> <td>6</td> </tr> </tbody> </table> | Mid-1 | 6 | 5 | 8 | 8 | 7 | 6 | 10 | 4 | 9 | 7 | Mid-2 | 8 | 7 | 7 | 10 | 5 | 8 | 10 | 6 | 8 | 6 | | | |
| Mid-1 | 6 | 5 | 8 | 8 | 7 | 6 | 10 | 4 | 9 | 7 | | | | | | | | | | | | | | | | | |
| Mid-2 | 8 | 7 | 7 | 10 | 5 | 8 | 10 | 6 | 8 | 6 | | | | | | | | | | | | | | | | | |
| 9 | From Unit-VI | Estimate the chlorine residual parts per million in a swimming pool after 5 hours(x) it has been treated with chemicals by an exponential curve of the form $y=ab^x$ to the following data. $a = 2.01$ $b = 0.937$ | L4 | CO-5 | 6 | | | | | | | | | | | | | | | | | | | | | | |
| 10 a) | From Unit-IV | Write the test statistic (t_{cal}) formula for a small-sample test concerning to difference between two means. | L1 | CO-3 | 2 | | | | | | | | | | | | | | | | | | | | | | |
| b) | From Unit-V | Evaluate the correlation coefficient to the following data points (2,18), (4,12), (5,10), (6,8), (8,7) and (11,5) | L5 | CO-4 | 2 | | | | | | | | | | | | | | | | | | | | | | |
| c) | From Unit-VI | Find a least square straight line for the following data $-7 \times 35.85 \times 10^3$ | L3 | CO-5 | 2 | | | | | | | | | | | | | | | | | | | | | | |



SREENIDHI INSTITUTE OF SCIENCE AND TECHNOLOGY
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SECOND MID EXAMINATION, JULY 2024

Course: B.Tech II Year II SEM

Branch: CSE, IT, ECM, AI&ML, DS, CS & IOT.

Subject: DATABASE MANAGEMENT SYSTEMS

Time : 2 Hours

Date : 31.07.2024 (FN)

Max Marks: 30

Part – A

(Compulsory Short answers)

6X 2 = 12 Marks

| S.No | Coverage | | BCLL | CO(s) | Marks |
|-------------|-----------------|--|-------------|--------------|--------------|
| 1 | From Unit-IV | Write about lossless join decomposition? | L3 | CO4 | 2M |
| 2 | From Unit-IV | Explain Multi Valued Dependency? | L2 | CO4 | 2M |
| 3 | From Unit-V | List out the properties of Transaction. Explain? | L2 | CO5 | 2M |
| 4 | From Unit-V | Draw and explain the state diagram of a Transaction. | L2 | CO5 | 2M |
| 5 | From Unit-VI | Why do we need Indexing. Explain Primary Indexing with the suitable diagram. | L3 | CO6 | 2M |
| 6 | From Unit-VI | Differentiate between dense Index and Sparse Index? | L2 | CO6 | 2M |

Part – B

Answer any THREE out of the FOUR questions

3X 6 = 18 Marks

| S.No | Coverage | | BCLL | CO(s) | Marks |
|-------------|-----------------|---|-------------|--------------|--------------|
| 7 | From Unit-IV | What is Normalization. Explain Second Normal Form (2NF) Third Normal Form (3NF) with an example? | L2 | CO4 | 6M |
| 8 | From Unit-V | Illustrate the concept of Validation Based Protocol? | L4 | CO5 | 6M |
| 9 | From Unit-VI | Build the B^+ tree index structure of order four with the following search key values: 2, 4, 7, 10, 17, 21, 28, 30, 34, 35. | L6 | CO6 | 6M |
| 10-a) | From Unit-IV | Discuss the Functional Dependency with an example? | L2 | CO4 | 2M |
| b) | From Unit-V | Differentiate between Serial and Concurrent Schedules in the Transaction. | L4 | CO5 | 2M |
| c) | From Unit-VI | Give an over view of Secondary Indexing? | L3 | CO6 | 2M |

REG: A22



SREENIDHI INSTITUTE OF SCIENCE AND TECHNOLOGY

Autonomous Institution

Yamnampet, Ghatkesar, Hyderabad – 501 301.

SECOND MID EXAMINATION, JULY 2024

Course: B.Tech II Year II SE Branch: CSE/IT/ECM/CS/AIML/DS/IOT

Subject: BEFA

Time : 2 Hours

Date : 24.07.2024 (FN)

Max Marks: 30

Part - A

(Compulsory Short answers)

6X 2 = 12 Marks

| S.No | Coverage | | BCLL | CO(s) | Marks |
|------|--------------|---|------|-------|-------|
| 1 | From Unit-IV | Bring out the difference between capital and revenue expenditure. | L1 | CO4 | 2 |
| 2 | From Unit-IV | Write a note on business entity concept. | L1 | CO4 | 2 |
| 3 | From Unit-V | Bring out the difference between Trading account and Profit & Loss account. | L2 | CO5 | 2 |
| 4 | From Unit-V | What are the two effects of outstanding salaries given in adjustment? | L2 | CO5 | 2 |
| 5 | From Unit-VI | What are the types of ratios? What do they measure? | L1 | CO6 | 2 |
| 6 | From Unit-VI | Write the formulas any two ratios. | L2 | CO6 | 2 |

Part - B

Answer any THREE out of the FOUR questions

3X 6 = 18 Marks

| S.No | Coverage | | BCLL | CO(s) | Marks | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------|--------------|--|--|-------|--------|---------|--------|--|------------|-------|--|-------|--------|--|---------------|-------|--|-----------|-------|--|------------------|-------|--|-------------------|-------|--|-----------|--------|--|-----------|--------|--|------------------|-------|--|-----------|--------|--|------------------|-------|--|----------------|-------|--|----------|-------|--|------------|-----|---|
| 7 | From Unit-IV | Journalize the following transactions: Jan1 Purchased goods for cash 20,00Rs Jan2 Paid Salaries 3,00,000 Jan 10 Interest Paid 1,000 Jan12 Sold goods to Ram & Co 75,000 | Rev. A/c Paid Sales A/c Inter. dt Cos. deb | L2 | CO4 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | From Unit-IV | From the following Trial Balance prepare final accounts: <table> <thead> <tr> <th>Particulars</th> <th>Debit</th> <th>Credit</th> </tr> </thead> <tbody> <tr> <td>Capital</td> <td>25,000</td> <td></td> </tr> <tr> <td>Bank Loans</td> <td>5,000</td> <td></td> </tr> <tr> <td>Sales</td> <td>35,000</td> <td></td> </tr> <tr> <td>Bills Payable</td> <td>4,000</td> <td></td> </tr> <tr> <td>Creditors</td> <td>5,000</td> <td></td> </tr> <tr> <td>Purchase Returns</td> <td>2,000</td> <td></td> </tr> <tr> <td>Dividend received</td> <td>3,000</td> <td></td> </tr> <tr> <td>Machinery</td> <td>13,000</td> <td></td> </tr> <tr> <td>Buildings</td> <td>17,000</td> <td></td> </tr> <tr> <td>Bills Receivable</td> <td>9,650</td> <td></td> </tr> <tr> <td>Purchases</td> <td>18,000</td> <td></td> </tr> <tr> <td>Discount Allowed</td> <td>1,200</td> <td></td> </tr> <tr> <td>Wages(factory)</td> <td>7,000</td> <td></td> </tr> <tr> <td>Salaries</td> <td>3,000</td> <td></td> </tr> </tbody> </table> | Particulars | Debit | Credit | Capital | 25,000 | | Bank Loans | 5,000 | | Sales | 35,000 | | Bills Payable | 4,000 | | Creditors | 5,000 | | Purchase Returns | 2,000 | | Dividend received | 3,000 | | Machinery | 13,000 | | Buildings | 17,000 | | Bills Receivable | 9,650 | | Purchases | 18,000 | | Discount Allowed | 1,200 | | Wages(factory) | 7,000 | | Salaries | 3,000 | | 4300 L3 | CO5 | 6 |
| Particulars | Debit | Credit | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capital | 25,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bank Loans | 5,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sales | 35,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bills Payable | 4,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Creditors | 5,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Purchase Returns | 2,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dividend received | 3,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Machinery | 13,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Buildings | 17,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bills Receivable | 9,650 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Purchases | 18,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Discount Allowed | 1,200 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Wages(factory) | 7,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Salaries | 3,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

2300 13700 6200
 12700 6400

| | | <p>Travelling Expenses 750</p> <p>Freight(factory expense) 200</p> <p>Insurance 300</p> <p>Commission Paid 100</p> <p>Bank 1,700</p> <p>Repairs 500</p> <p>Interest on Loans 600</p> <p>Opening Stock 6,000</p> <p>79,000 79,000</p> <p>Adjustments:</p> <p>Closing Stock Rs 8,000</p> <p>Depreciation on Buildings 10%</p> <p>Prepaid Insurance Rs 50</p> <p>Outstanding Rent Rs 100 Wages (factory)</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|-----------------|---|-----------------|--------|--------|--------|---------------|----------|----------|--------|--|--|-----------|----------|-----------------|--------|-----------|----------|--------|--------|-----------|--------|---------------|----------|-------|--------|-----------|--------|---------|--------|---------------|--------|--------------|-------|--|-----------------|--|-----------------|----|-----|---|
| 9 | From Unit-V | <p>Following is the Balance Sheet of ABC Co as on 31/03/2015</p> <table border="1"> <thead> <tr> <th>Liabilities</th><th>Amount</th><th>Assets</th><th>Amount</th></tr> </thead> <tbody> <tr> <td>Share Capital</td><td>4,00,000</td><td>Goodwill</td><td>20,000</td></tr> <tr> <td></td><td></td><td>Buildings</td><td>2,50,000</td></tr> <tr> <td>General Reserve</td><td>20,000</td><td>Machinery</td><td>1,75,000</td></tr> <tr> <td>Profit</td><td>15,000</td><td>Furniture</td><td>10,000</td></tr> <tr> <td>5% Debentures</td><td>1,00,000</td><td>Stock</td><td>90,000</td></tr> <tr> <td>Creditors</td><td>28,000</td><td>Debtors</td><td>21,000</td></tr> <tr> <td>Bills Payable</td><td>12,000</td><td>Cash at Bank</td><td>9,000</td></tr> <tr> <td></td><td>5,75,000</td><td></td><td>5,75,000</td></tr> </tbody> </table> <p>Calculate:</p> <p>(a) Fixed Assets to Proprietary Fund Ratio <i>FA : P.F.</i></p> <p>(b) Current Ratio <i>CR</i></p> <p>(c) Quick Ratio</p> | Liabilities | Amount | Assets | Amount | Share Capital | 4,00,000 | Goodwill | 20,000 | | | Buildings | 2,50,000 | General Reserve | 20,000 | Machinery | 1,75,000 | Profit | 15,000 | Furniture | 10,000 | 5% Debentures | 1,00,000 | Stock | 90,000 | Creditors | 28,000 | Debtors | 21,000 | Bills Payable | 12,000 | Cash at Bank | 9,000 | | 5,75,000 | | 5,75,000 | L3 | CO5 | 6 |
| Liabilities | Amount | Assets | Amount | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Share Capital | 4,00,000 | Goodwill | 20,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Buildings | 2,50,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| General Reserve | 20,000 | Machinery | 1,75,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Profit | 15,000 | Furniture | 10,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5% Debentures | 1,00,000 | Stock | 90,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Creditors | 28,000 | Debtors | 21,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bills Payable | 12,000 | Cash at Bank | 9,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 5,75,000 | | 5,75,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 a) | From Unit-V | Explain any two accounting concepts. | L2 | CO4 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| b) | From Unit-VI | What are the items shown in a Balance Sheet? | L2 | CO5 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| c) | From Unit-VI | Explain any two ratios. | L1 | CO6 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Final ms.



SECOND MID EXAMINATION, JULY 2024

Course: B.Tech II Year II SEM
 Subject: CO
 Date : 22.07.2024(FN)

Branch: CSE, IT, DS
 Time : 2 Hours
 Max Marks: 30

Part – A
 (Compulsory Short answers) **6X 2 = 12 Marks**

| S.No | Coverage | | BCLL | CO(s) | Marks |
|------|----------|---|------|-------|-------|
| 1 | Unit-1 | Discuss about functional units of a computer | L1 | CO-1 | 2 |
| 2 | Unit-1 | Draw the IEEE format for single precision floating point representation and mention the types of computers. | L4 | CO-1 | 2 |
| 3 | Unit-2 | Define micro operation, mention few micro operations. | L1 | CO-2 | 2 |
| 4 | Unit-2 | Mention the advantages of stack organized CPU | L1 | CO-2 | 2 |
| 5 | Unit-3 | Explain about mapping b/w computer instruction and microinstruction in control unit | L2 | CO-3 | 2 |
| 6 | Unit-3 | Draw the microinstruction format and computer instruction format | L3 | CO-3 | 2 |

Part – B

Answer any THREE out of the FOUR questions 3X 6 = 18 Marks

| S.No | Coverage | | BCLL | CO(s) | Marks |
|----------|----------|---|------|-------|-------|
| 7 | Unit-1 | a) Distinguish b/w Multiprocessors and Multicomputer. b) Perform arithmetic operations on (25 +15), (33-25) using 2's complement method. | L3 | CO-1 | 3 |
| 8 | Unit-2 | a) Explain about instruction cycle using neat diagram and flow chart b) List few types of computer instructions | L5 | CO-2 | 4 |
| 9 | Unit-3 | a) Explain about address sequencer with neat diagram. b) Draw and explain the flow chart for Booths multiplication | L2 | CO-3 | 3 |
| 10 a) | Unit-1 | Explain basic operational concept of computers | L3 | CO-1 | 2 |
| b) | Unit-2 | Draw the hardware implementation diagram for logical operations | L2 | CO-2 | 2 |
| c) | Unit-3 | Differences between Hardwired and Micro programmed control unit <i>charles wishart</i> | L3 | CO-3 | 2 |

**SREENIDHI INSTITUTE OF SCIENCE AND TECHNOLOGY**

Autonomous Institution

Yamnampet, Ghatkesar, Hyderabad - 501 301.

REG: A22

THIRD MID EXAMINATION, AUGUST 2024**Course:** B.Tech II Year II SEM**Branch:** CSE and IT**Subject:** Computer Organization**Time :** 2 Hours**Date :** 20.08.2024 (AN)**Max Marks:** 30**Part - A**

(Compulsory Short answers)

6X 2 = 12 Marks

| S.No | Coverage | | BCLL | CO(s) | Marks |
|------|---------------|--|------|-------|-------|
| 1 | From Unit-I | Represent -13 in IEEE single precision format. | L5 | CO1 | 2 |
| 2 | From Unit-II | Draw 4 bit binary adder. | L2 | CO2 | 2 |
| 3 | From Unit-III | Represent the microinstruction format of a control unit. | L1 | CO3 | 2 |
| 4 | From Unit-IV | List the different segment registers in 8086. | L1 | CO4 | 2 |
| 5 | From Unit-V | Differentiate Procedure and Macro. | L3 | CO5 | 2 |
| 6 | From Unit-VI | Brief interrupt vector table | L2 | CO6 | 2 |

Part - BAnswer any THREE out of the SIX questions**3X 6 = 18 Marks**

| S.No | Coverage | | BCLL | CO(s) | Marks |
|------|---------------|---|------|-------|-------|
| 7 | From Unit-I | a) What is the role of software in a basic computer? | L2 | CO1 | 3 |
| | | b) List the parameters which improve the performance of a computer. | L1 | CO1 | 3 |
| 8 | From Unit-II | With a neat flow chart discuss the steps involved in an instruction cycle. | L3 | CO2 | 6 |
| 9 | From Unit-III | a) Discuss in detail about microprogram sequencer. | L4 | CO3 | 3 |
| | | b) Illustrate Booth's multiplication algorithm using numerical example. | L5 | CO3 | 3 |
| 10 | From Unit-IV | Explain in detail the architecture of 8086. | L2 | CO4 | 6 |
| 11 | From Unit-V | a) Write an assembly language program to find the square of a given number. | L3 | CO5 | 3 |
| | | b) Write an assembly language program to reverse a string. | L3 | CO5 | 3 |
| 12 | From Unit-VI | Explain in detail the internal block diagram of 8255. | L2 | CO6 | 6 |

*Akash**WMS*

REG: A22

**SREENIDHI INSTITUTE OF SCIENCE AND TECHNOLOGY**

Autonomous Institution

Yamnampet, Ghatkesar, Hyderabad – 501 301.

SECOND MID EXAMINATION, JULY 2024**Course:** B.Tech II Year II SEM **Branch:** CE, EEE, ME, ECE, CSE, IT, CS, DS, AI&ML, IoT**Subject:** Environmental Science**Time :** 2 Hours**Date :** 26.07.2024(AN)**Max Marks:** 30**Part – A**

(Compulsory Short answers)

6X 2 = 12 Marks

| S.No | Coverage | | BCLL | CO(s) | Marks |
|------|--------------|---|------|-------|-------|
| 1 | From Unit-IV | What are Gases that cause Green House effect? | L1 | CO-4 | 2 |
| 2 | From Unit-IV | Mention about soil degradation. | L2 | CO-4 | 2 |
| 3 | From Unit-V | Define sustainable Development | L1 | CO-5 | 2 |
| 4 | From Unit-V | What is the effect of over-exploitation of resources? | L3 | CO-5 | 2 |
| 5 | From Unit-VI | What are Environmental Protection acts? | L1 | CO-6 | 2 |
| 6 | From Unit-VI | Classify EIA. | L2 | CO-6 | 2 |

Part – BAnswer any THREE out of the **FOUR** questions 3X 6 = 18 Marks

| S.No | Coverage | | BCLL | CO(s) | Marks |
|-------|--------------|--|------|-------|-------|
| 7 | From Unit-IV | Define Air pollution? List out the differences between primary and secondary pollutants. | L4 | CO-4 | 6 |
| 8 | From Unit-V | Discuss sustainable Development and green building concept | L2 | CO-5 | 6 |
| 9 | From Unit-VI | What do you understand by hazardous waste management and its handling rules. | L2 | CO-6 | 6 |
| 10 a) | From Unit-IV | Write any two impacts of global warming | L1 | CO-4 | 2 |
| b) | From Unit-V | Discuss Role of IT in Environment | L3 | CO-5 | 2 |
| c) | From Unit-VI | Explain Concept of EMP | L2 | CO-6 | 2 |

-xx-

Code No: 9FC02

Date: 08-August-2024 (FN)

B.Tech II-Year II- Semester External Examination, August-2024 (Regular)
PYTHON PROGRAMMING (CSE,IT,ECM,CS,IOT)

Max.Marks:60

Time: 3 Hours

Note: a) No additional answer sheets will be provided.
 b) All sub-parts of a question must be answered at one place only, otherwise it will not be valued.
 c) Missing data can be assumed suitably.

Bloom's Cognitive Levels of Learning (BCLL)

| | | | | | |
|------------|----|---------|----|----------|----|
| Remember | L1 | Apply | L3 | Evaluate | L5 |
| Understand | L2 | Analyze | L4 | Create | L6 |

Part - A

Max.Marks: 6x2=12

ANSWER ALL QUESTIONS, EACH QUESTION CARRIES 2 MARKS.

- 1 List the various Data types in python.
- 2 Define a function.
- 3 Define a module.
- 4 Define Inheritance and its types.
- 5 Mention the use of chdir() method.
- 6 Describe few important aspects of Tkinter module.

| BCLL | CO(s) | Marks |
|------|-------|-------|
| L1 | CO1 | [2M] |
| L1 | CO2 | [2M] |
| L1 | CO3 | [2M] |
| L1 | CO4 | [2M] |
| L1 | CO5 | [2M] |
| L2 | CO6 | [2M] |

Part – B **Max.Marks: 6x8=48**

ANSWER ALL QUESTIONS. EACH QUESTION CARRIES 8 MARKS.

- 7 Write a python code to find the roots of a quadratic equation.
 OR
- 8 Explain the various conditional statements and control statements in python using example code.
- 9 Explain the concept of strings and its method in detail.
 OR
- 10 Write a python code to count the number of occurrences of each number in a given list of numbers.
- 11 Explain the various keywords used for exception handling with example code.
 OR
- 12 Explain few methods in Math module with example code.
- 13 Explain match function and search function in regular expressions with suitable examples.
 OR
- 14 Write a Python code to illustrate concept of over loading and overriding with example.
- 15 List and Explain file functions in python.
 OR
- 16 Write a python code to copy contents of one file to another.
- 17 Explain in detail the applications of Scipy and plotpy.
 OR
- 18 Explain briefly Tkinter widgets with an example.

| BCLL | CO(s) | Marks |
|------|-------|-------|
| L1 | CO1 | [8M] |
| L2 | CO1 | [8M] |
| L2 | CO2 | [8M] |
| L3 | CO2 | [8M] |
| L2 | CO3 | [8M] |
| L2 | CO3 | [8M] |
| L2 | CO4 | [8M] |
| L1 | CO4 | [8M] |
| L1 | CO5 | [8M] |
| L3 | CO5 | [8M] |
| L2 | CO6 | [8M] |
| L2 | CO6 | [8M] |

-- 00 -- 00 --

Code No:9HC15

Date: 06-August-2024 (FN)

B.Tech II-Year II- Semester External Examination, August-2024 (Regular)
 PROBABILITY AND STATISTICS (EEE,CSE,IT)

Time: 3 Hours

Max.Marks:60

- Note: a) No additional answer sheets will be provided.
 b) All sub-parts of a question must be answered at one place only, otherwise it will not be valued.
 c) Missing data can be assumed suitably.

Bloom's Cognitive Levels of Learning (BCLL)

| | | | | | |
|------------|----|---------|----|----------|----|
| Remember | L1 | Apply | L3 | Evaluate | L5 |
| Understand | L2 | Analyze | L4 | Create | L6 |

Part - A

Max.Marks: 6x2=12

ANSWER ALL QUESTIONS, EACH QUESTION CARRIES 2 MARKS.

- 1 Define Discrete and Continuous random variables.
 2 Define interval estimation and point estimation.
 3 Define Type-I and Type-II error.
 4 Write the testing process for student's t-test.
 5 Define positive and negative correlation.
 6 Write the normal equations of the curve $y = a+bx$ by using method of least squares.

| BCLL | CO(s) | Marks |
|------|-------|-------|
| L1 | CO1 | [2M] |
| L2 | CO2 | [2M] |
| L1 | CO3 | [2M] |
| L1 | CO4 | [2M] |
| L2 | CO5 | [2M] |
| L2 | CO6 | [2M] |

Part – B

Max.Marks: 6x8=48

ANSWER ALL QUESTIONS. EACH QUESTION CARRIES 8 MARKS.

7. Out of 800 families with 5 children each, Test how many would you expect to have (a) 3 boys (b) 5 girls (c) either 2 or 3 boys (d) At least one boy , Assume equal Probability for boys and girls.

| BCLL | CO(s) | Marks |
|------|-------|-------|
| L2 | CO1 | [8M] |

- 8 In normal distribution, 31% of the items are under 45 and 8% are over 64. find the mean and variance of the distribution. $u = 45, \sigma = 10, 100$
 9. A population consists of 5 numbers 2, 3, 6, 8 and 11 consider all possible samples of size 2 which can be drawn (i) with replacement (ii) without replacement from this population, Evaluate to find
 (a) The Mean of the population
 (b) The Standard Deviation of the Population
 (c) Mean of the sampling distribution of Means
 (d) The Standard Deviation of the Sampling Distribution of Means

$$\begin{array}{l} u = 6 \\ \sigma^2 = 10.8 \\ \bar{\sigma} = 3.28 \end{array} \quad \left. \begin{array}{l} \text{with} \\ 6 \\ 0.657 \end{array} \right\} \text{without} \quad \left. \begin{array}{l} 6 \\ 1.039 \end{array} \right\}$$

OR

- 10 A random sample of size 81 was taken whose variance is 20.25 and mean is 32 construct a 98% confidence Interval. L3 CO2 [8M]

- 11 Random samples of 400 men and 600 women were asked whether they would like to have a Flyover near their residence. 200 men and 325 women were in favour of the proposal. Test the hypothesis that proportions of men and women in favour of the proposal are same,test at 5% Level (Difference of two proportions). L3 CO3 [8M]

T.T.T
 OR

$$\hat{P}_1 - \hat{P}_2$$

$$\sqrt{P_2(\frac{1}{n_1} + \frac{1}{n_2})}$$

$$t_{0.05} = 1.885$$

$$C.V = 39.5180$$

- 12 A sample of 400 items is taken from a population whose standard deviation is 10. The mean of the sample is 4. Test whether the sample has come from a population with mean 38. Also calculate 95% confidence interval for the population. $Z = 3.4$ $t = 1.96$ L3 CO3 [8M]

(38.98, 37.02)

- 13 Two independent Samples of sizes 8 and 7 items respectively. L3 CO4 [8M]

X

| | | | | | | | | |
|-----------|----|----|----|----|----|---|----|-----|
| Sample-I | 11 | 11 | 13 | 11 | 15 | 9 | 12 | 14 |
| Sample-II | 9 | 11 | 10 | 13 | 9 | 8 | 10 | --- |

$$CV = 2.1499 \\ t.v = 1.771 (O.T.T)$$

Is the difference between the means of the Samples Significant? Test at 5% L.O.S.

OR

- 14 A set of 5 similar coins is tossed 320 times and result is L4 CO4 [8M]

| No. of heads | 0 | 1 | 2 | 3 | 4 | 5 |
|--------------|---|----|----|-----|----|----|
| Frequency | 6 | 27 | 72 | 112 | 71 | 32 |

Test the hypothesis at 5% level of significance.

- 15 Calculate the coefficient of correlation between the two variables x and y. L3 CO5 [8M]

| | | | | | | | |
|---|----|----|----|----|----|----|----|
| x | 55 | 56 | 58 | 59 | 60 | 60 | 62 |
| y | 35 | 38 | 38 | 39 | 44 | 43 | 44 |

OR

- 16 Obtain the rank correlation coefficient for the following data L3 CO5 [8M]

| | | | | | | | | | |
|---|----|----|----|----|----|----|----|----|----|
| x | 68 | 64 | 75 | 50 | 64 | 80 | 75 | 40 | 55 |
| y | 62 | 58 | 68 | 45 | 81 | 60 | 68 | 48 | 50 |

X X X X X X X X

0.6

- 17 Heights of fathers and Sons(in inches) are given in the following table L3 CO6 [8M]

| | | | | | | | | |
|-------------------|----|----|----|----|----|----|----|----|
| Heights of father | 65 | 66 | 67 | 67 | 68 | 69 | 71 | 73 |
| Heights of Son | 67 | 68 | 64 | 68 | 72 | 70 | 69 | 70 |

Form the two lines of regression and calculate the expected average heights of the Son when the height of the father is 67.5.

OR

- 18 Fit a parabola $y = a + bx + cx^2$ to the following data. L3 CO6 [8M]

| | | | | | |
|---|---|-----|-----|-----|-----|
| x | 0 | 1 | 2 | 3 | 4 |
| y | 1 | 1.8 | 1.3 | 2.5 | 6.3 |

$$1.62 \approx a \\ -0.07 \approx b \\ 0.55 \approx c$$

-- 00 -- 00 --

$$\frac{N\sum xy - \sum x \sum y}{N(\sum x^2 - (\sum x)^2)}$$

$$S^2 = \frac{1}{n-1} \sum (y_i - \bar{y})^2$$

$$1 - \frac{6}{n(n^2-1)} \sum D_i + \frac{m_1}{12} (m_1^2 - 1) + \frac{m_2}{12}$$

-3u / 101.5r

Page 2 of 2
1.6us

Code No:9FC04

Date: 12-August-2024 (FN)

B.Tech II-Year II- Semester External Examination, August-2024 (Regular)
DATA BASE MANAGEMENT SYSTEMS (CSE,IT,ECM,CS,AIML,DS,IOT)

Max.Marks:60

Time: 3 Hours

- Note: a) No additional answer sheets will be provided.
b) All sub-parts of a question must be answered at one place only, otherwise it will not be valued.
c) Missing data can be assumed suitably.

Bloom's Cognitive Levels of Learning (BCLL)

| | | | | | |
|------------|----|---------|----|----------|----|
| Remember | L1 | Apply | L3 | Evaluate | L5 |
| Understand | L2 | Analyze | L4 | Create | L6 |

Part - A

Max.Marks: 6x2=12

ANSWER ALL QUESTIONS, EACH QUESTION CARRIES 2 MARKS.

- 1 What are the 3 levels of data abstraction in Database Systems? L1 CO1 [2M]
 2 Define selection and projection operations in relational algebra. L2 CO2 [2M]
 3 Write an SQL query to retrieve the first_name and last_name columns from a L5 CO3 [2M] table named Employee.
 4 What is a functional dependency (FD) in a database? L1 CO4 [2M]
 5 Define serializability in the context of transaction management. L3 CO5 [2M]
 6 Define file organization in databases and give an example. L1 CO6 [2M]

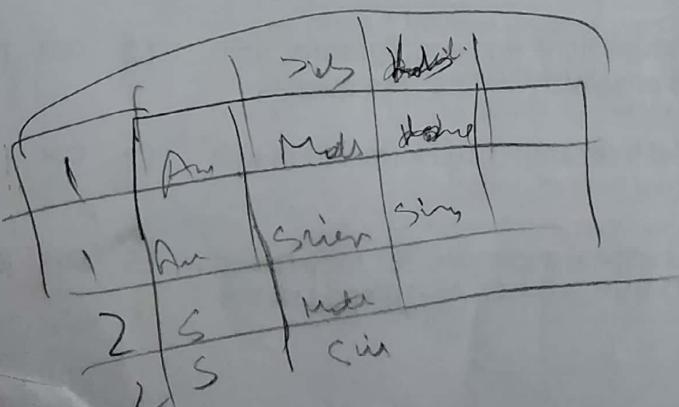
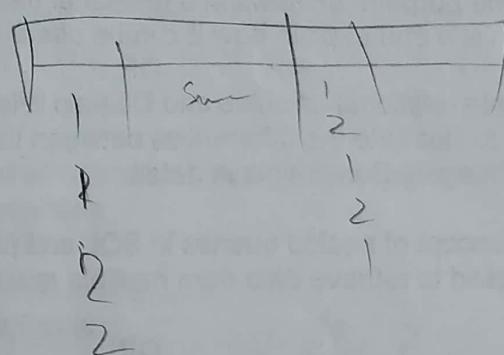
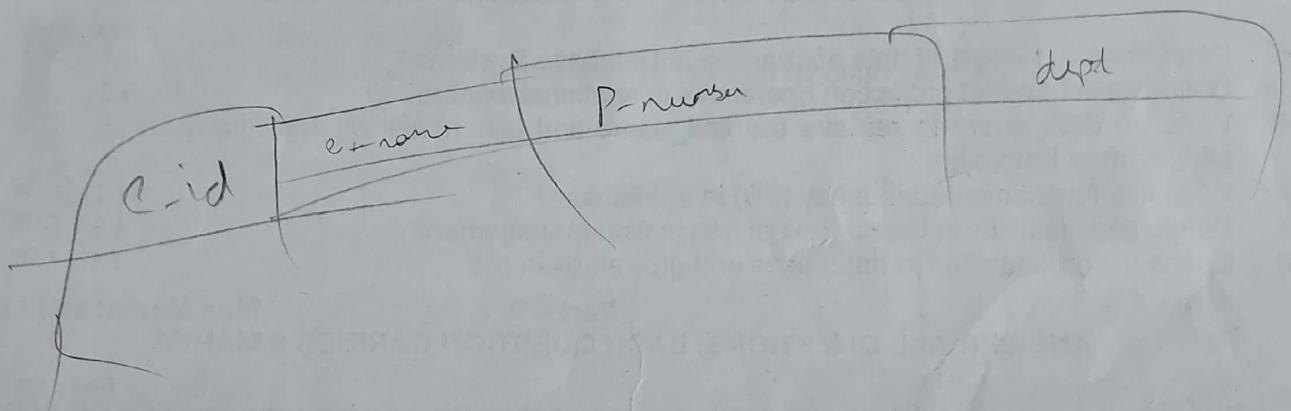
Part – B Max.Marks: 6x8=48

ANSWER ALL QUESTIONS. EACH QUESTION CARRIES 8 MARKS.

- | | BCLL | CO(s) | Marks |
|---|------|-------|-------|
| 7. Describe the overall structure of a database system. And Discuss the functions of storage manager and the query processor. | L4 | CO1 | [8M] |
| OR | | | |
| 8 Explain the roles of Data Definition Language (DDL) and Data Manipulation Language (DML) in database systems. Provide SQL examples for each. | L3 | CO1 | [8M] |
| 9. a) Explain the significance of set operations (union, intersection, set difference) in relational algebra, with examples. b) Describe the purpose of views in a relational database. Provide an example of creating a view and explain how it can be used in queries. | L2 | CO2 | [8M] |
| OR | | | |
| 10 a) Define Tuple relational calculus and Domain relational calculus. Provide examples to illustrate the differences between them. b) Describe Integrity Constraints in detail. | L1 | CO2 | [8M] |
| L3 | | | |
| 11 Explain the concept of nested queries in SQL and provide an example of how they can be used to retrieve data from multiple related tables effectively. | L3 | CO3 | [8M] |
| OR | | | |
| 12 Explain how SQL handles NULL values in comparisons and aggregations, and discuss strategies for managing NULL values effectively in database queries | L2 | CO3 | [8M] |
| 13 What is Normalization, Explain Second Normal form and Third Normal form with an example? | L2 | CO4 | [8M] |
| OR | | | |
| 14 Determine the closer of the following set of functional dependencies for a relation scheme. R(A,B,C,D,E,F,G,H), F={ AB→C, BD→EF, AD→G, A→H} and List the candidate keys of R. | L5 | CO4 | [8M] |

- 15 Define the ACID properties of database transactions. Discuss why these properties are essential for ensuring reliable transaction processing. L4 CO5 [8M]
- OR
- 16 What are concurrent executions of transactions? How does serializability ensure consistent database state in a production environment? L3 CO5 [8M]
- 17 Describe B+ tree architecture and its advantages in indexing large datasets, particularly for range queries. L4 CO6 [8M]
- OR
- 18 What is Indexing? Differentiate the types of Indexing techniques. L3 CO6 [8M]

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Code No: 9ZC01

Date: 14-August-2024 (FN)

B.Tech II-Year II- Semester External Examination, August-2024 (Regular)

BUSINESS ECONOMICS AND FINANCIAL ANALYSIS (CSE, IT, ECM, CS, AIML, DS, IOT)

Time: 3 Hours

Max.Marks: 60

- Note: a) No additional answer sheets will be provided.
 b) All sub-parts of a question must be answered at one place only, otherwise it will not be valued.
 c) Missing data can be assumed suitably.

Bloom's Cognitive Levels of Learning (BCLL)

| | | | | | |
|------------|----|---------|----|----------|----|
| Remember | L1 | Apply | L3 | Evaluate | L5 |
| Understand | L2 | Analyze | L4 | Create | L6 |

Part - A

Max.Marks: 6x2=12

ANSWER ALL QUESTIONS, EACH QUESTION CARRIES 2 MARKS.

- | | | | | | |
|---|--|-------------------------|------|-------|-------|
| 1 | Define Cross elasticity of demand. | Ques demand / rule form | BCLL | CO(s) | Marks |
| 2 | What are the two inputs you would consider for production function with two variable inputs? | Copier & reader | L2 | CO1 | [2M] |
| 3 | What is fixed cost? | | L2 | CO2 | [2M] |
| 4 | Distinguish between Journal and Ledger. | | L2 | CO3 | [2M] |
| 5 | What is Net Profit Ratio? | | L2 | CO4 | [2M] |
| 6 | Write formulae for Gross Profit Ratio. | | L2 | CO5 | [2M] |
| | | | L1 | CO6 | [2M] |

Part – B

Max.Marks: 6x8=48

ANSWER ALL QUESTIONS. EACH QUESTION CARRIES 8 MARKS.

- | | | | | | |
|----|---|-------------------------|------|-------|-------|
| 7. | Explain Law of Demand. Write its exceptions. | OR | BCLL | CO(s) | Marks |
| 8 | What is Elasticity of Demand? Explain the types of elasticity of demand. | | L2 | CO1 | [8M] |
| 9. | Describe the BEP with the help of diagram. | P.E. L | L3 | CO2 | [8M] |
| 10 | Explain internal and external economies of scale. | 100 100 P.I.E. Unit | L2 | CO2 | [8M] |
| 11 | Define Monopoly. Write features of monopoly. | R.E. E | L2 | CO3 | [8M] |
| 12 | Define cost and explain the different types of cost. | 200 200 P.I.E. + D.I.E. | L2 | CO3 | [8M] |
| 13 | a) What are the types of accounts and what are the rules governing them? b) Explain double entry system of accounting. | 300 300 300 | L2 | CO4 | [8M] |
| 14 | Journalize the following transactions | OR | L2 | CO4 | [8M] |

| Date | Particular | Rs |
|---------------|------------------------------|--------|
| 01st Jan 2019 | Mohan commenced business ✓ | 50,000 |
| 03rd Jan | Purchased goods cash ✓ | 2,000 |
| 05th Jan | Sold goods to Tarun cash ✓ | 20,000 |
| 08th Jan | Cash deposited into bank ✓ | 8,000 |
| 15th Jan | Paid rent to land lord ✓ | 5,000 |
| 17th Jan | Commission received cash ✓ | 450 |
| 25th Jan | Paid salaries ✓ | 5,000 |
| 28th Jan | cash withdrawn from the bank | 3,000 |

D - Rec
 C - Div
 D - what com I
 C - what go out
 Drs - exps - los
 Cr - gain profit

- 15 a) What is a balance sheet and why is it prepared?
b) Explain Revenue and Capital Expenditure.

L2 CO5 [8M]
L2

- 16 From the following Trial balance & additional information, you are required to prepare final accounts as on 31st December 2018.

L4 CO5 [8M]

| Particulars | Debit (Rs) | Credit (Rs) |
|------------------|------------|-------------|
| Capital | | 20,000 |
| Sundry Debtors | 5,400 | |
| Drawings | 1,800 | |
| Machinery | 7,000 | |
| Sundry Creditors | | 2,800 |
| Wages | 10,000 | |
| Purchases | 19,000 | |
| Opening stock | 4,000 | |
| Bank Balance | 3,000 | |
| Carriage inwards | 300 | |
| Salaries | 400 | |
| Rent & taxes | 900 | |
| Sales | | 29,000 |
| | 51,800 | 51,800 |

16300

Additional Information:

- (1) Closing stock Rs. 1200
- (2) Outstanding rent & taxes Rs. 100
- (3) Charge depreciation on Machinery @ 10% p.a.
- (4) Wages prepaid Rs. 400

2,48302 0.9586

- 17 From the following information calculate Current ratio, Quick ratio and write interpretation.

L4 CO6 [8M]

| Particulars | Rs. | Particulars | Rs. |
|------------------|----------|------------------|----------|
| Bills payable | 45,000 | Stock | 2,50,000 |
| Cash at bank | 39,000 | Sundry Debtors | 1,00,000 |
| Sundry creditors | 1,00,000 | Bills Receivable | 10,000 |
| Land | 1,25,000 | Buildings | 2,50,000 |

OR

- 18 Define Ratio. Explain different Types of Ratios.

L4 CO6 [8M]

32900
30700
- 00 - 00 -
16300

2700

16300

Page 2 of 2

Code No:9CC54

Date: 20-August-2024 (FN)

B.Tech II-Year II- Semester External Examination, August-2024 (Regular)
 COMPUTER ORGANIZATION (CSE and IT)

Time: 3 Hours

Max.Marks:60

- Note: a) No additional answer sheets will be provided.
 b) All sub-parts of a question must be answered at one place only, otherwise it will not be valued.
 c) Missing data can be assumed suitably.

Bloom's Cognitive Levels of Learning (BCLL)

| | | | | | |
|------------|----|---------|----|----------|----|
| Remember | L1 | Apply | L3 | Evaluate | L5 |
| Understand | L2 | Analyze | L4 | Create | L6 |

Part - A

Max.Marks: 6x2=12

ANSWER ALL QUESTIONS, EACH QUESTION CARRIES 2 MARKS.

- ✓ 1 Explain about the Bus structure.
- ✓ 2 Define register transfer language.
- 3 Discuss about control memory.
- ✓ 4 Define microprocessor.
- ✓ 5 Define Macro.
- 6 Define interrupt service routine.

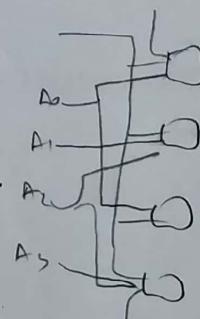
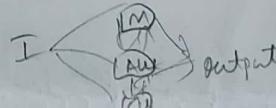
| BCLL | CO(s) | Marks |
|------|-------|-------|
| L6 | CO1 | [2M] |
| L1 | CO2 | [2M] |
| L2 | CO3 | [2M] |
| L1 | CO4 | [2M] |
| L1 | CO5 | [2M] |
| L1 | CO6 | [2M] |

Part – B

Max.Marks: 6x8=48

ANSWER ALL QUESTIONS. EACH QUESTION CARRIES 8 MARKS.

- ✓ 7 Discuss the functional units of a digital computer and show their interconnections.
 OR
- 8 State the floating point representation. Explain the IEEE standards for floating point representation with example.
- ✓ 9 Explain various shift micro operations.
 OR
- 10 Draw and explain the flow chart for memory reference instructions.
- 11 Explain how the address sequencing in micro programmed control unit.
 OR
- ✓ 12 Explain the flow chart for addition operation with sign-magnitude data.
- ✓ 13 Define Flag. Explain the different Flags present in 8086 processor along with Flag register.
 OR
- 14 Define addressing mode and explain the different addressing modes presented in 8086 Microprocessor with examples.
- ✓ 15 Discuss various Assembler directives available in 8086 programming.
 OR
- ✓ 16 Write an 8086 program to add two 16 bit numbers in CX and DX and store the result in location 0500H addressed by DL.
 DT 16
 SEN
 ALU
 WR
- ✓ 17 Draw and explain each signal function of 8086.
 OR
- 18 Explain the architecture of 8255 PPI.



A + B =
 -A + (-B)

Page 1 of 1

Code No:9HC05

Date: 22-August-2024 (FN)

B.Tech II-Year II- Semester External Examination, August-2024 (Regular)
ENVIRONMENTAL SCIENCE (CE,EEE,ME,ECE,CSE,IT,CS,AIML,DS,IOT)

Time: 3 Hours

Max.Marks:60

- Note:** a) No additional answer sheets will be provided.
 b) All sub-parts of a question must be answered at one place only, otherwise it will not be valued.
 c) Missing data can be assumed suitably.

Bloom's Cognitive Levels of Learning (BCLL)

| | | | | | |
|------------|----|---------|----|----------|----|
| Remember | L1 | Apply | L3 | Evaluate | L5 |
| Understand | L2 | Analyze | L4 | Create | L6 |

Part - A

Max.Marks: 6x2=12

ANSWER ALL QUESTIONS, EACH QUESTION CARRIES 2 MARKS.

- 1 What is meant by bioaccumulation?
- 2 Name some alternate energy sources
- 3 Define hotspots of biodiversity.
- 4 Differentiate primary and secondary pollutants.
- 5 Define sustainable development.
- 6 Elaborate EIA.

| BCLL | CO(s) | Marks |
|------|-------|-------|
| L1 | CO1 | [2M] |
| L2 | CO2 | [2M] |
| L1 | CO3 | [2M] |
| L1 | CO4 | [2M] |
| L1 | CO5 | [2M] |
| L4 | CO6 | [2M] |

Part – B

Max.Marks: 6x8=48

ANSWER ALL QUESTIONS. EACH QUESTION CARRIES 8 MARKS.

- 7 What is ecosystem? describe structure of ecosystem?
OR
- 8 Discuss nitrogen cycle with a neat Sketch.
- 9 Differentiate renewable, non renewable resources?
OR
- 10 Write benefits and problems of dams?
- 11 "India is a mega biodiversity nation? Discuss.
OR
- 12 Explain hotspots of biodiversity in India?
- 13 Examine the Global warming and its effects.
OR
- 14 Explain noise pollution?
- 15 Analyze threats to sustainable development.
OR
- 16 Interpret Clean development mechanisms.
- 17 Discuss Legal aspects of air Act 1981.
OR
- 18 Give a detailed account on concepts of Environmental Management Plan (EMP).

| BCLL | CO(s) | Marks |
|------|-------|-------|
| L2 | CO1 | [8M] |
| L3 | CO1 | [8M] |
| L2 | CO2 | [8M] |
| L2 | CO2 | [8M] |
| L1 | CO3 | [8M] |
| L2 | CO3 | [8M] |
| L3 | CO4 | [8M] |
| L2 | CO4 | [8M] |
| L4 | CO5 | [8M] |
| L3 | CO5 | [8M] |
| L3 | CO6 | [8M] |
| L2 | CO6 | [8M] |

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