Code: 394/E/R/BL

FACULTY OF SCIENCE

B.Sc., V-Semester (Regular-Backlog) Examinations, January -2023

COMPUTER SCIENCE

Paper-Generic Elective

(2019 & 2020 Batches)

Information Technologies

Time: 3 Hours **Max. Marks: 80**

Section - A (Short Answer Questions) 8 x 4=32M

Note: Answer any **Eight** of the following questions not exceeding 20 lines each.

1. What is the role of Information Technology in Business?
2. Discuss the various components of Information technology.
3. Explain the infrastructure needed for the application of Information Technology.
4. Classify computer Software's with examples.
5. Define a process. Explain the life cycle of a process with the help of neat diagram.
6. Discuss the various services provided by an operating system.
7. What is an algorithm? List the characteristics of a good algorithm.
8. What is a database view?
9. Write a short note on SQL queries.
10. What do you mean by computer network?
11. What is Internet security?
12. Briefly explain data multiplexing.

Section - B (Essay Answer Questions) 4 x 12=48M

Note: Answer the following questions in not exceeding 4 pages each.

13. a) Write about the advantages and limitation of E-Commerce.

(OR)

b) Explain the applications of EDI.

14. a) What is an operating system? Explain various types of operating system.

(OR)

b) Explain how device management and security management is done by operating system.

15. a) Describe the classification of programming languages.

(OR)

b) Explain various Data Models.

16. a) Explain the OSI model.

(OR)

b) Explain the various types of computer networks.

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Code: 394/E/R/BL

FACULTY OF SCIENCE

B.Sc., V-Semester (Regular-Backlog) Examinations, January -2023

COMPUTER SCIENCE

Paper-Generic Elective

(2019 & 2020 Batches)

Information Technologies

Time: 3 Hours **Max. Marks: 80**

Section - A (Short Answer Questions) 8 x 4=32M

Note: Answer any **Eight** of the following questions not exceeding 20 lines each.

1. What is the role of Information Technology in Business?
2. Discuss the various components of Information technology.
3. Explain the infrastructure needed for the application of Information Technology.
4. Classify computer Software's with examples.
5. Define a process. Explain the life cycle of a process with the help of neat diagram.
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7. What is an algorithm? List the characteristics of a good algorithm.
8. What is a database view?
9. Write a short note on SQL queries.
10. What do you mean by computer network?
11. What is Internet security?
12. Briefly explain data multiplexing.

Section - B (Essay Answer Questions) 4 x 12=48M

Note: Answer the following questions in not exceeding 4 pages each.

13. a) Write about the advantages and limitation of E-Commerce.

(OR)

b) Explain the applications of EDI.

14. a) What is an operating system? Explain various types of operating system.

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b) Explain how device management and security management is done by operating system.

15. a) Describe the classification of programming languages.

(OR)

b) Explain various Data Models.

16. a) Explain the OSI model.

(OR)

b) Explain the various types of computer networks.

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Code: 183/E/R/BL

FACULTY OF SCIENCE

B.Sc., III-Semester (Regular-Backlog) Examinations, January-2023

COMPUTER SCIENCE

(2019, 2020 & 2021 Batches)

Paper-III

Data Structures

Time: 3 Hours **Max. Marks: 80**

Section - A (Short Answer Questions)

Note: Answer any **Eight** of the following questions not exceeding 20 lines each. **8 x 4=32M**

1. Pros and cons of Arrays
2. Write a program to reverse a string.
3. Write the process of converting infix expression to postfix expression.
4. Compare Iteraction and Recursion
5. Applications of Linked List
6. Applications of Queue
7. Pre Order and Post Order
8. Depth First Search Algorithm
9. Collision Resolution Strategy
10. Bubble Sort
11. Differentiate Searching and Sorting
12. Concept of Heap Search.

8x4m

Section - B (Essay Answer Questions)

Note: Answer the following questions in not exceeding 4 pages each. **4 x 12=48M**

13. a) Define string array. Explain the operations on string array with the example program.

(OR)

b) Define stack. Explain PUSH and POP operators with an example program.

14. a) What is double ended queue? Write a program of double ended queue for insertion and deletion.

(OR)

b) Write a program of single linked list to insert, delete and display elements from lists.

15. a) Illustrate spanning tree- Kruskal's algorithm, with an example.

(OR)

b) Explain briefly about implementation of binary trees.

4 x 12m

16. a) Define searching and write a program using linear search.

(OR)

b) Write a insertion sort program and explain.

ooOoo

Code: 588/R/BL

B.Sc., III-Semester (Regular/Backlog) Examinations, December-2023

FACULTY OF SCIENCE

(2019, 2020, 2021 & 2022 Batches)

COMPUTER SCIENCE

Paper-III

Data Structures

Time: 3 Hours **Max. Marks: 80**

Note: Answer any **Eight** of the following questions not exceeding 20 lines each. **8 x 4=32M**

Section - A (Short Answer Questions)

1. Illustrate an example for flowchart. 4M
2. List out pros and cons of arrays. 4M
3. Explain about stack conversions. 4M
4. Explain double-ended queue with an example. 4M
5. Write about the queue operations. 4M
6. Write a program to create linked list using stack. 4M
7. Demonstrate the representation of a general trees. 4M
8. Define binary trees. Explain the applications of binary trees. 4M
9. What is a graph? Illustrate with an example. 4M
10. Define binary search. Illustrate binary search with an example. 4M
11. Illustrate bubble sort with an example. 4M
12. What is an abstract data type? Explain. 4M

Section - B (Essay Answer Questions) **4 x 12=48M**

Note: Answer the following questions in not exceeding 4 pages each.

13. a) Define an Array. Write a programme to implement queue using array. 12M

(OR)

b) Enumerate on stack and its operations with suitable examples. 12M

14. a) Write about Recursion. Write a program to find with n^{th} term of Fibonacci sequence and GCD of two positive integers using recursion. 12M

(OR)

b) Define Queue. Write the algorithm for queue operations with examples. 12M

15. a) Explain in detail about binary tree traversal techniques. 12M

(OR)

b) Differentiate between BFS and DFS. Explain with an example for each. 12M

16. a) Demonstrate insertion sort and selection sort by taking an array of elements $15, 34, 28, 11, 36, 21, 42$. 12M

(OR)

b) What is Heap Sort? Explain the heap sort algorithm by considering the array of elements $\{4, 10, 3, 5, 1\}$. 12M

Code: 588/R/BL

FACULTY OF SCIENCE

B.Sc., III-Semester (Regular/Backlog) Examinations, December-2023

(2019, 2020, 2021 & 2022 Batches)

COMPUTER SCIENCE

Paper-III

Data Structures

Time: 3 Hours **Max. Marks: 80**

Section - A (Short Answer Questions)

Note: Answer any **Eight** of the following questions not exceeding 20 lines each. **8 x 4=32M**

1. Illustrate an example for flowchart. 4M
2. List out pros and cons of arrays. 4M
3. Explain about stack conversions. 4M
4. Explain double-ended queue with an example. 4M
5. Write about the queue operations. 4M
6. Write a program to create linked list using stack. 4M
7. Demonstrate the representation of a general trees. 4M
8. Define binary trees. Explain the applications of binary trees. 4M
9. What is a graph? Illustrate with an example. 4M
10. Define binary search. Illustrate binary search with an example. 4M
11. Illustrate bubble sort with an example. 4M
12. What is an abstract data type? Explain. 4M

Section - B (Essay Answer Questions)

4 x 12=48M

Note: Answer the following questions in not exceeding 4 pages each.

13. a) Define an Array. Write a programme to implement queue using array. 12M

(OR)

b) Enumerate on stack and its operations with suitable examples. 12M

14. a) Write about Recursion. Write a program to find with n^{th} term of Fibonacci sequence and GCD of two positive integers using recursion. 12M

(OR)

b) Define Queue. Write the algorithm for queue operations with examples. 12M

15. a) Explain in detail about binary tree traversal techniques. 12M

(OR)

b) Differentiate between BFS and DFS. Explain with an example for each. 12M

16. a) Demonstrate insertion sort and selection sort by taking an array of elements 15, 34, 28, 11, 36, 21, 42. 12M

(OR)

b) What is Heap Sort? Explain the heap sort algorithm by considering the array of elements $\{4, 10, 3, 5, 1\}$. 12M

Code: 899/YWS-SN/E/BL

FACULTY OF SCIENCE

B.Sc., III-Year (YW-Backlog) Examinations, September/October-2021

COMPUTER SCIENCE

Paper-IV

Web Technologies

Time: 3 Hours **Max. Marks: 100**

Section - A (Short Answer Type)

10 x 2=20M

Note: Answer the following questions not exceeding 20 lines each.

1. a) Write the differences between HTML and XML.
   b) Write a short note on World Wide Web.
   c) What are the uses of embedded style sheets?
   d) Describe the features of Dynamic HTML.
   e) What is regular expression in Java Script? Give an example.
   f) Write about the technologies used in DHTML.
   g) What is ASP?
   h) Write about XML DOM.
   i) Write the functions of Web Server.
   j) What is Perl? Write its advantages.

Section - B (Essay Answer Type)

5 x 16=80M

Note: Answer the following questions not exceeding 4 pages each.

2. a) What are attributes in HTML? Explain with examples.
   b) Explain the procedure to apply color to HTML elements using CSS.

   (OR)

   c) What is a use of frame tag? Write a program to demonstrate frames.

3. a) What are the applications of CSS? Explain CSS border and background properties.

   (OR)

   b) Write HTML program to create student admission form.

4. a) Explain Array, Array properties and Array methods with examples.

   (OR)

   b) Describe the steps for rollover with a Mouse Event and also write a Java Script for rollover with mouse event.

5. a) Explain ASP architecture with its components.

   (OR)

   b) What is XML document? Describe in detail with an example.
   c) Explain XML declaration with syntax and rules.

6. a) Describe PERL loops and operators with examples.

   (OR)

   b) What is mod_perl? Explain the installation procedure of mod_perl in detail.

Code: 098/E/R

FACULTY OF SCIENCE

B.A./B.Sc., VI-Semester (Regular) Examinations, June-2022

Computer Science

(2019 Batch)

Paper-VI

Web Technologies

Time: 3 hours **Max Marks: 80**

Section-A (Short Answer Questions) 8x4=32M

Note: Answer any **Eight** of the following questions in not exceeding 20 lines each.

1. Illustrate the skeleton of the HTML program.
2. Differentiate between line break and pre-formatted text tags with suitable examples.
3. Describe the <frame> tag with syntax and example.
4. Explain the CSS rules.
5. Explain the <style> element with an example.
6. Discuss about the text properties in designing a webpage using CSS.
7. Describe document object model (DOM).
8. Write about Java script libraries.
9. What are Conditional Statements?
10. Give an example for radio button and check boxes in form validation.
11. Explain the basic structure of XML program.
12. Write about Ajax applications.

Section-B (Essay Answer Questions) 4x12=48M

Note: Answer the following questions in not exceeding 4 pages each.

13. a) i) Design a sample Form with Form controls.
    ii) Discuss the process of sending form data to the server.

    (OR)

    b) Describe the following in detail (i) <img> tag (ii) <a> tag (iii) <Table> tag.

14. a) What are the properties used for controlling the text? Explain with examples?

    (OR)

    b) Explain box model and multi-column layout with examples.

15. a) Classify the different types of operators used in Java Script. Explain in brief.

    (OR)

    b) Write a note on the following with examples:
    (i) Reusable functions (ii) Case conversion (iii) Auto-tabbing between fields.

16. a) Write a program to represent student data using DTD.

    (OR)

    b) Write a note on (i) Extensible style sheet language (ii) XSL transformation.

Code: 042/R/BL

FACULTY OF SCIENCE & SOCIAL SCIENCES

B.A./B.Sc., I-Semester (Regular-Backlog) Examinations, February/March-2023

COMPUTER SCIENCE / COMPUTE APPLICATIONS

(2019, 2020, 2021 & 2022 Batches)

Paper-I

Programming in C

Time: 3 hours **Max Marks: 80**

Section-A (Short Answer Questions) 8x4=32M

Note: Answer any **Eight** of the following questions in not exceeding 20 lines each.

1. Draw and explain the components of CPU.
2. Define the following: (i) Compiler (ii) Interpreter.
3. Write a simple C program to add two numbers.
4. Explain about escape sequences.
5. What is the use of break statement? Write a program to demonstrate it.
6. Define an array with syntax and example.
7. Define a function. Writ about inline function.
8. What is a pointer? Write the uses of a pointer.
9. What is recursion? Explain with an example.
10. Differentiate structure and union with examples.
11. Write about different C files.
12. Write a C program to create a file.

Section-B (Essay Answer Questions) 4x12=48M

Note: Answer the following questions in not exceeding 4 pages each.

13. a) Define operating system. Explain various services of operating systems.

(OR)

b) Explain all C operators with expressions in detail.

14. a) Describe various iterative statements with program for each.

(OR)

b) What is multi-dimensional array? Write a C program to add two matrices.

15. a) Differentiate Call-By-Value and Call-by-Reference with program for each.

(OR)

b) What is dynamic memory allocation? Write a program to demonstrate Malloc and Calloc functions.

16. a) Define structure? Write a program to initialize and access elements of structure.

(OR)

b) Write a program to create five employee records and calculate salary.

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Code: 418/R/BL

FACULTY OF SCIENCE & SOCIAL SCIENCES

B.A./B.Sc., I-Semester (Regular/Backlog) Examinations, December-2023

(2019, 2020, 2021, 2022 & 2023 Batches)

COMPUTER SCIENCE / COMPUTE APPLICATIONS

Paper-I

Programming in C

Time: 3 hours **Max Marks: 80**

Section-A (Short Answer Questions) 8x4=32M

Note: Answer any **Eight** of the following questions in not exceeding 20 lines each.

1. Define Operating System and write the functions. 4M
2. Briefly explain the classification of programming languages. 4M
3. Write about primary data types in C language. 4M
4. Describe the characteristics and purpose of escape sequence characters. 4M
5. Explain the switch statement with syntax and example 4M
6. What is Array? Explain with syntax and example. 4M
7. Differentiate call-by-value Vs. call-by-reference. 4M
8. What are the storage classes in C language? Explain. 4M
9. What is Pointer? How pointers are declared and initialized explain briefly. 4M
10. What is structure? Write the syntax for defining a structure. 4M
11. Write about fopen(), getc(), fseek(), getw() functions. 4M
12. What are the common uses of rewind() and ftell() functions. 4M

Section-B (Essay Answer Questions) 4x12=48M

Note: Answer the following questions in not exceeding 4 pages each.

13. a) Explain the different ways of stating alogorithms and the strategy for designing algorithms. 12M

(OR)

b) Explain the various operators in C language and write a program to demonstrate the use of operators. 12M

14. a) Explain the various decision making statements in C language with syntax and example. 12M

(OR)

b) Briefly explain string handling functions in C language with syntax and example. 12M

15. a) Explain the concept of functions in C language and write a program using function that generate and print n-fibonacci numbers. 12M

(OR)

b) Write a program using pointers to read in an array of integers and print its elements in reverse order. 12M

16. a) Write a program to copy the contents of one file into another file. 12M

(OR)

b) What is meant by the following terms (i) Nested structure (ii) Array of structure. 12M

(OR)

... objects in MS Excel.

FACULTY OF SCIENCE

Code: 838/R

B.Sc., IV-Semester (Regular) Examinations, July/August-2022

DATA SCIENCE

Paper-IV

Machine Learning

Time: 3 hours **Max Marks: 80**

Note: Answer any **Eight** of the following questions in not exceeding 20 lines each. **8x4=32M**

Section-A (Short Answer Questions)

1. What is machine learning? Explain about learning.
2. What are underfitting and overfitting problems?
3. Discuss how k-means clustering technique works.
4. Explain about perception Algorithm.
5. Explain in brief about feature pruning and normalization.
6. Explain about convergence problem.
7. What are Neural Networks? Discuss bout some functions used in Neural Networks.
8. Explain about Naive Bayes Model.
9. What Multi Layer Networks and how do they work?
10. What are the similarity and distance measures used in clustering?
11. Explain in short about Divisive Clustering.
12. What are the Association rules? How do they help in Clustering?

Section-B (Essay Answer Questions)

Note: Answer the following questions in not exceeding 4 pages each. **4x12=48M**

13. a) Explain about Decision Tree and ID3 Algorithms.

(OR)

b) Describe "Not everything is learnable" in the perception of machine learning.

14. a) Explain about Support Vector Machines.

(OR)

b) Discuss about how debugging of Learning algorithms is done.

15. a) Discuss about Back-Propagation Algorithm.

(OR)

b) Explain about how initialization and convergence of neural networks is been done.

16. a) Discuss about Agglomerative Algorithms.

(OR)

b) Explain Apriori Algorithm with an example.

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Code: 838/R

FACULTY OF SCIENCE

B.Sc., IV-Semester (Regular) Examinations, July/August-2022

DATA SCIENCE

Paper-IV

Machine Learning

Time: 3 hours | Max Marks: 80

Section-A (Short Answer Questions) 8x4=32M

Note: Answer any **Eight** of the following questions in not exceeding 20 lines each.

1. What is machine learning? Explain about learning.
2. What are underfitting and overfitting problems?
3. Discuss how k-means clustering technique works.
4. Explain about perception Algorithm.
5. Explain in brief about feature pruning and normalization.
6. Explain about convergence problem.
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9. What Multi Layer Networks and how do they work?
10. What are the similarity and distance measures used in clustering?
11. Explain in short about Divisive Clustering.
12. What are the Association rules? How do they help in Clustering?

Section-B (Essay Answer Questions) 4x12=48M

Note: Answer the following questions in not exceeding 4 pages each.

13. a) Explain about Decision Tree and ID3 Algorithms.

(OR)

b) Describe "Not everything is learnable" in the perception of machine learning.

14. a) Explain about Support Vector Machines.

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b) Discuss about how debugging of Learning algorithms is done.

15. a) Discuss about Back-Propagation Algorithm.

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b) Explain about how initialization and convergence of neural networks is been done.

16. a) Discuss about Agglomerative Algorithms.

(OR)

b) Explain Apriori Algorithm with an example.

FACULTY OF SCIENCE

B.Sc., I - Year (YW-Backlog) Examinations, April-2019

Computer Science

Paper – I

(PC Software & C Programming)

Max. Marks: 100

Time: 3 Hours

Note: Answer All questions. 10x2=20 M

Section – A

1. a) Define operating system.
   b) Explain batch Processing.
   c) Write any four menu bar options in MS-Word.
   d) Write short note on Power point Presentation.
   e) Write about forms in MS-Access.
   f) Define about work sheet.
   g) Define data types in 'C'
   h) Explain Recursive functions in 'C'
   i) Write about of 'go to' statement.
   j) Define Union.

5x16=80 M

Section – B

2. a) Explain about functions of operating system in detail.
   b) Explain different types of DOS Commands with example.

   OR

   c) Explain the types of programming Languages.
   d) Explain the type of Memories.

3. a) What is macro? What are the steps are involved to create a Macro in MS-Word.
   b) What are the features of Power point? Write the procedure for insert and delete of image into a slide.

   OR

   c) What is Mail Merge? Write the process of Mail Merge in MS-Word.
   d) Write about the process of merging slides in power point.

4. a) Explain the concept of creation of Forms and Reports in MS-Access with example.

   OR

   b) Write the process of creating & inserting data in MS-Access by taking a college database as example.

5. a) Explain control statements in 'C' with example.
   b) Define function? Explain call by value and call-by reference with suitable program.

   OR

   c) Explain one-dimensional & two-dimensional array with example.
   d) Write a program to add two matrices.

6. a) Define structure and union with syntax and write how to initialize structure with example. Write difference between structure and union.
   b) Define pointer. Explain how to pass pointer to structure and pointer to array with example.

   OR

   c) Explain the File input and output operations with an example program.
   d) Write about Enumerated data types.

Code: 886/YWS-SN/E/BL

FACULTY OF SCIENCE

B.Sc., I-Year (YW-Backlog) Examinations, September/October-2021

COMPUTER SCIENCE

Paper-I

PC Software and C Programming

Time: 3 Hours **Max. Marks: 100**

Section - A (Short Answer Type) 10 x 2=20M

Note: Answer the following questions not exceeding 20 lines each.

1. a) Write about Secondary Memories.
   b) Define My Computer.
   c) Write the steps for page setup in MS Word.
   d) What are the types of transitions in MS PowerPoint?
   e) Write the steps to create a form in MS Access.
   f) Write the characteristics of C-language.
   g) Define string with example.
   h) What is conditional operator in C-language.
   i) Explain Malloc ().
   j) Define Unary operators in C-language.

Section - B (Essay Answer Type) 5 x 16=80M

Note: Answer the following questions not exceeding 4 pages each.

2. a) Explain the architecture of a digital computer with neat diagram.

(OR)

   b) Explain programming language and types of programming language.

3. a) Describe the syntax, use and purpose of built-in functions in MS Excel with example.

(OR)

   b) Write the step-by-step process of mail merge in MS Word.

4. a) Explain the process of creating queries and displaying data with example in MS Access.

(OR)

   b) Explain the process of creating, placing, resizing graphic objects in MS Excel.

5. a) Write a program to find GCD and LCM of two numbers in C-language.

(OR)

   b) Explain looping statements in C-language with programs.

6. a) Write the input output operations with files in C-language.

(OR)

   b) Write a short note on the following i) Pointers and Structures ii) Type Qualifiers and iii) Memory access operations.

Code: 879/YWS/E/BL

FACULTY OF SCIENCE

B.Sc., II-Year (YW-Backlog) Examinations, September/October-2021

COMPUTER SCIENCE

Paper-II

Object Oriented Programming with Java and Data Structure

Time: 3 Hours **Max. Marks: 100**

Section - A (Short Answer Type) 10 x 2=20M

Note: Answer the following questions not exceeding 20 lines each.

1. a) Define Polymorphism.
   b) What do you mean by type casting?
   c) Difference between Operator Precedence and Operator Associativity.
   d) Define Object.
   e) Define Interface.
   f) List out the different levels of access protections in Java.
   g) Draw the life cycle of a Thread.
   h) How to run an Applet?
   i) Define Linked List.
   j) Define Tree.

Section - B (Essay Answer Type) 5 x 16=80M

Note: Answer the following questions not exceeding 4 pages each.

2. a) How does Java differ from C and C++?
   b) What is Web browser? Write about the various web browsers.

   (OR)

   c) Write the structure of Java program and explain the steps for saving and executing the program.
   d) Write a Java Program to check a given number is palindrome or not?

3. a) Explain syntax for if-else and write a program to demonstrate.

   (OR)

   b) Define abstract class. Write a program to demonstrate final variables and methods in Java.

4. a) Define Array. Write a program to demonstrate single dimensional array.

   (OR)

   b) How to create a package?
   c) How to add a class to a package? Give an example?

5. a) How is exception handling done in Java? Give an example.

   (OR)

   b) Write a program for passing parameters to Applet.

6. a) Write a program for stack in Java.

   (OR)

   b) Write a program for quick sort in Java.

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Code: 099/E/R

FACULTY OF SCIENCE

B.A./B.Sc., VI-Semester (Regular) Examinations, June-2022

Computer Science

(2019 Batch)

Paper-(Optional)

PHP with MySQL

Time: 3 hours **Max Marks: 60**

Section-A (Short Answer Questions) 6x4=24M

Note: Answer any **Six** of the following questions in not exceeding 20 lines each.

1. PHP language basics
2. Decisions and loops
3. Creating and accessing strings
4. Recursive functions
5. Storing as strings
6. Storing PHP variables in forms
7. Copying and renaming a file
8. Select command
9. PHP script to create, write data and display a file

Section-B (Essay Answer Questions) 3x12=36M

Note: Answer the following questions in not exceeding 4 pages each.

10. a) Explain multidimensional array with an example.

(OR)

b) How to mix decisions and looping with HTML?

11. a) Explain about capturing form data with PHP.

(OR)

b) How is a web form generated in PHP?

12. a) Explain as how to setup MySQL and to connect MySQL from PHP.

(OR)

b) Analyze and write as how to setup a book club database.

Code: 763/E/BL

FACULTY OF SCIENCE

B.A./B.Sc., IV-Semester (Backlog) Examinations, June-2022

Computer Applications/ Computer Science

(2019 Batch)

SEC-III

Python-II

Time: 1½ Hours **Max Marks: 40**

Section-A (Short Answer Questions) 2 x 5=10M

Note: Answer any two questions in not exceeding 20 lines each.

1. Dictionaries
2. Entry Widget

Section-B (Essay Answer Questions) 2 x 15=30M

Note: Answer the following questions in not exceeding 4 pages each.

3. a) Explain lists and tuples in python with an example program for creating and searching items in list and tuples.

(OR)

b) What is Recursion in Python? Explain problem solving with recursion.

4. a) Define Objective Oriented Programming. Explain the techniques for designing classes.

(OR)

b) Briefly explain the following:

i) tkinter module

ii) Button widgets

iii) Info dialog boxes

Code: 398/E/R

FACULTY OF SCIENCE

B.Sc., V-Semester (Regular) Examinations, January-2023

DATA SCIENCE

Paper-V(B)

NoSQL Databases

Time: 3 Hours **Max. Marks: 80**

Section - A (Short Answer Questions) 8 x 4=32M

Note: Answer any **Eight** of the following questions not exceeding 20 lines each.

1. What is NoSQL? Explain about relationships.
2. Explain in brief about aggregation.
3. Explain about materialized view.
4. What is consistency? Explain about relaxing durability.
5. Discuss about partitioning and combining.
6. Discuss about map reduce.
7. Write the applications of document data model.
8. Explain about event logging.
9. Discuss about key value store.
10. What are transactions and availability in terms of columns family stores?
11. Explain the types of graph databases.
12. Discuss about the use cause routing dispatch and location based services.

Section - B (Essay Answer Questions) 4 x 12=48M

Note: Answer the following questions in not exceeding 4 pages each.

13. a) Explain about modelling for data access.

(OR)

b) Explain graph databases and schemaless databases.

14. a) What is relaxing consistency and explain about CAP theorem.

(OR)

b) How to compose map reduce calculations.

15. a) What is document database? Explain its features with one suitable use case.

(OR)

b) What is a key value store? Explain its use cases.

16. a) Discuss in short about column family stores use cases.

(OR)

b) Explain the features of graph database. Explain its features.

❧❖☙

12M

Code: 193143

Faculty of Sciences

B.Sc, II Year, III Semester Examination February/March-2022

Data Science – Paper-III

(Data Engineering with Phython)

Time: 3 hrs **Max. Marks: 75**

Section-A

I. Answer any five questions to the following. 5x3=15 Marks

1. What is Pickle Module?
2. Define Data acquisition Pipeline?
3. What is Regular Expression?
4. Define Hyper text?
5. What are mathematics function in Numpy array?
6. How to Split an array?
7. Define plotting with Pandas?
8. What are File I/O functions?.

Section – B

II. Answer any FOUR questions from the following. 4 X 15 = 60 Marks

9. How to Read and Write text Files?
10. Write short notes about JSON in Phython?
11. Explain Regular Expression with Glob Module.
12. How to Process HTML files in Phython?
13. What is Array? How to create NUMPY array?
14. Define Database and Setting of My SQL Database?
15. Wrtie in detail about Pandas Data Structure?
16. Explain about Reshaping Data.

string object. 12M

12M

Code: 836/E/BL

FACULTY OF SCIENCE

B.A./B.Sc., IV-Semester (Backlog) Examinations, June-2022

COMPUTER SCIENCE

(2019 Batch)

SEC-IV

Operating Systems-II

Time: 1½ Hours **Max. Marks: 40**

Section-A (Short Answer Questions) 2x5=10M

Note: Answer the following questions in note exceeding 20 lines each.

1. RAID structure
2. Cryptography

Section-B (Essay Answer Questions) 2x15=30M

Note: Answer the following questions in not exceeding 4 pages each.

3. a) Define memory. Explain Contiguous Memory Allocations.

(OR)

b) What is file? Explain File System Mounting Protection.

4. a) Write about Directory Implementation.

(OR)

b) What is Firewall? Explain how Firewall protect systems and networks.

Code: 655/R

FACULTY OF SCIENCE

B.Sc., II-Semester (Regular) Examinations, July/August-2022

DATA SCIENCE

Paper-II

Problem Solving and Python Programming

Time: 3 hours **Max Marks: 80**

Section-A (Short Answer Questions)

8x4=32M

Note: Answer any **Eight** of the following questions in not exceeding 20 lines each.

1. What are Computing Devices?
2. Define a variable and show the use of variables in python.
3. Write the syntax and code snippet for nested.if statement.
4. Illustrate the concept of default parameters with an example.
5. Define lifetime of a variable with an example program.
6. Give the syntax and example of abs() and len() built-in functions.
7. Differentiate between tuple and list.
8. Describe the dict() function.
9. Enumerate file access modes along with the description for each.
10. Discuss creating classes in python.
11. Write the program to demonstrate the difference between abstraction and encapsulation.
12. Illustrate the use of lambda function.

4x12=48M

Section-B (Essay Answer Questions)

Note: Answer the following questions in not exceeding 4 pages each.

13. a) Explain the steps to install and use jupyter notebook

(OR)

b) Write a program to demonstrate break statement and another to implement continue.

14. a) Explain in detail about importing, defining and installing commonly used modules.

(OR)

b) Write a program to count the total numbers of vowels, consonants and blanks in a string.

15. a) Explain the indexing and slicing operations in lists with suitable examples.

(OR)

b) Write a program to implement mergesort.

16. a) Explain the concept of Method Resolution Order (MRO) in python.

(OR)

b) Write a program to calculate area and perimeter of different shapes using polymorphism.

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FACULTY OF SCIENCE

B.Sc., V-Semester (Regular/Backlog) Examinations, December-2023 **Code: 816/R/BL**

DATA SCIENCE

Paper-V(A)

Natural Language Processing

Time: 3 Hours **Max. Marks: 80**

Section - A (Short Answer Questions) **8 x 4=32M**

Note: Answer any **Eight** of the following questions not exceeding 20 lines each.

1. What is NLP? Write advantages of NLP. 4M
2. Write the functions defined for NLTK's frequency distribution. 4M
3. Explain about text representation in NLP. 4M
4. Explain about segmentation. 4M
5. Explain about few python libraries. 4M
6. Describe Unicode, decoding and encoding. 4M
7. Explain about N tagging. 4M
8. Briefly explain maximum entropy model. 4M
9. Explain about relational extraction. 4M
10. Explain in brief about grammatic dilemmas. 4M
11. Draw and explain information extraction architecture. 4M
12. Describe well-formed substring table. 4M

Section - B (Essay Answer Questions) **4 x 12=48M**

Note: Answer the following questions in not exceeding 4 pages each.

13. a) Explain about how to reuse the code by using python. 12M

(OR)

b) Explain about making decisions and taking control. 12M

14. a) Explain about regular expressions using tokenizing text. 12M

(OR)

b) Explain how to generate random text with bigrams. 12M

15. a) What is Sequence Classification? Write a program in python for part-of-speech tagging with a consecutive classifier. 12M

(OR)

b) Explain about few functions used in structured programs. 12M

16. a) What is Chunking? Explain noun phrase chunking and chunking with regular expressions. 12M

(OR)

b) Explain Recursive Descent Parsing, Shift Reduce Parsing. 12M

Code: 864/BL

FACULTY OF SCIENCE

B.Sc., V-Semester (Backlog) Examinations, July/August-2022

Computer Applications

Paper-V

Programming in Java

Time: 3 hours **Max Marks: 80**

Section-A (Short Answer Questions) 8x4=32M

Note: Answer any **Eight** of the following questions in not exceeding 20 lines each.

1. Explain the security model of Java.
2. What is implicit and explicit type casting?
3. Explain the difference between instance variable and class variable.
4. Write short notes on Constructors.
5. Identify the applications where two-dimensional arrays are used.
6. Briefly explain command-line arguments.
7. Write a short note on thread synchronization.
8. Differentiate between file input stream and buffered input stream.
9. Describe Jav.io package.
10. What do you mean by event delegation model in Java?
11. Briefly explain how AWT components are added to container.
12. Briefly explain about JFrame.

Section-B (Essay Answer Questions) 4x12=48M

Note: Answer the following questions in not exceeding 4 pages each.

13. a) Discuss the tools available in JDK. How do they help in application development?

(OR)

b) Explain the various Data Types available in Java with an example program.

14. a) Write a program to explain method overriding in Java.

(OR)

b) Explain how the multiple inheritance is achieved using interface in Java with the help of a program.

15. a) Explain the difference between checked and unchecked Exceptions.

(OR)

b) What is Thread? Explain Thread Life Cycle with Diagram.

16. a) Compare the different layout managers in brief.

(OR)

b) Write a program using AWT to create a simple calculator.

❧❖☙

Code: 950/BL

FACULTY OF SCIENCE

B.Sc., V-Semester (Backlog) Examinations, July/August-2022

COMPUTER SCIENCE

Paper-V

Programming in Java

Time: 3 hours | Max Marks: 80

Section-A (Short Answer Questions) 8x4=32M

Note: Answer any **Eight** of the following questions in not exceeding 20 lines each.

1. Type conversion and casting
2. Compiler
3. Creating object
4. Super keyword
5. String class
6. Abstract class
7. Exception
8. One-dimensional array
9. Interface
10. Check box
11. Types of events
12. Components

Section-B (Essay Answer Questions) 4x12=48M

Note: Answer the following questions in not exceeding 4 pages each.

13. a) Explain the creation and execution of a program in Java.

(OR)

b) What are looping statements? Explain with its syntax and example.

14. a) What is inheritance? Explain the types of inheritance with an example.

(OR)

b) Define a package. Explain the creation and usage of a package.

15. a) Write a program for creating a package and using a package.

(OR)

b) What is thread priority and synchronization?

16. a) Explain DB connection procedure with a suitable example.

(OR)

b) Differentiate between a swing and AWT.

Code: 395/R/BL

FACULTY OF SCIENCE

B.Sc., V-Semester (Regular-Backlog) Examinations, January-2023

COMPUTER SCIENCE

Paper-V

Programming in Java

Time: 3 Hours **Max. Marks: 80**

8 x 4=32M

Section - A (Short Answer Questions)

Note: Answer any **Eight** of the following questions not exceeding 20 lines each.

1. Data types in Java
2. Interpreter
3. Variable and Keywords
4. For-loop Statement
5. Final Keyword
6. String buffered Class
7. Thread Priority
8. Container Class
9. Layouts
10. Radio Buttons
11. Results Set Class
12. Applet Viewer

Section - B (Essay Answer Questions)

4 x 12=48M

Note: Answer the following questions in not exceeding 4 pages each.

13. a) Write a program for Parameterized Constructor.

(OR)

b) Differentiate between a compiler and an interpreter.

14. a) What is packages in Java? Write a program for creating and using a package.

(OR)

b) What is wrapper class? Write a Java program to demonstrate the use of wrapper classes.

15. a) Explain the concept of multithreading. Write a program for creating new thread by extending thread class.

(OR)

b) Explain about random access file class.

16. a) How to develop JDBC application?

(OR)

b) What is Swing? Write a java program to create a swing application using swing components an layouts.

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01 + 9 + 20 + 8 = 38
00 + 6 + 16 + 8 = 30

Code: 207/BL

FACULTY OF SCIENCE

B.Sc., V-Semester (Backlog) Examinations, December-2023

(2016, 2017 & 2018 Batches)

COMPUTER SCIENCE

Paper-V

Programming in Java

Time: 3 hours **Max Marks: 60**

Section-A (Short Answer Questions) 4x6=24M

Note: Answer any **Four** of the following questions in not exceeding 20 lines each.

1. Demonstrate the taxonomy of data types used in Java programming. 6M
2. Distinguish between method overloading and method overriding. 6M
3. Differentiate between error and exception. 6M
4. Draw and explain thread life cycle. 6M
5. Compare and contrast the (i) JPanel, (ii) JFrame (iii) JComponent. 6M
6. Describe the features of AWT. 6M

Section-B (Essay Answer Questions) 3x12=36M

Note: Answer the following questions in not exceeding 4 pages each.

7. a) List and explain the features of java. Describe the process of creation and execution of a java program. 12M

(OR)

b) What are the rules for defining a constructor? Explain default constructor, parametrized constructor and constructor overloading with suitable examples. 12M

8. a) Explain in detail Wrapper Class, String Class and String Buffer Class with example for each. 12M

(OR)

b) Define package. Explain the various classes available in java.io package. 12M

9. a) Explain the hierarchy of AWT components with examples. 12M

(OR)

b) Explain the types of JDBC drivers and write the procedure to create a JDBC application. 12M

Dec 2023

Code: 814/R/BL

FACULTY OF SCIENCE

B.Sc., V-Semester (Regular/Backlog) Examinations, December-2023

(2019, 2020 & 2021 Batches)

COMPUTER SCIENCE

Paper-V

Programming in Java

Time: 3 Hours **Max. Marks: 80**

Section - A (Short Answer Questions) 8 x 4=32M

Note: Answer any **Eight** of the following questions not exceeding 20 lines each.

1. Write about JVM. 4M
2. What is platform independence and cross platform computing? 4M
3. What is role of inheritance in Java? 4M
4. Mention any four thread methods. 4M
5. Define a package. Mention its uses. 4M
6. Write about command-line arguments. 4M
7. What is runnable interface? 4M
8. Write about file input stream class. 4M
9. What are the important statements in applets? 4M
10. What is panel container in AWT? 4M
11. Write the steps to perform event handling. 4M
12. What are cookies? Describe the role of cookies in session tracking. 4M

Section - B (Essay Answer Questions) 4 x 12=48M

Note: Answer the following questions in not exceeding 4 pages each.

13. a) What do you mean by Class? Explain wrapper class and string class with suitable examples. 12M

(OR)

b) Define Constructors. Explain different types of constructors with examples. 12M

14. a) Define Exception. Explain exception handling mechanisms. 12M

(OR)

b) What is String Buffer? How does it differ from String? Give three ways to create a string object. 12M

15. a) What is Thread Synchronization? Write a program for implementing thread synchronization. 12M

(OR)

b) Differentiate between abstract class and an interface. 12M

16. a) What is AWT in Java? Explain the AWT controls with examples. 12M

(OR)

b) Write about JDBC drivers. 6M

c) Write a program to store and retrieve data from database using JDBC. 6M

Code: 657/R/BL

FACULTY OF SCIENCE

B.Sc., Semester II (Regular/Backlog) Examination, May - 2019

Computer Science-2

Programming in C ++

Time: 3 Hours **Max. Marks: 80**

Note: Answer any **FIVE** question in Section-A and **All** questions in Section-B.

Section-A (Short Type Answers) 5x4=20 M

1. Differentiate procedural and object oriented programming.
2. Write a syntax of Function with Template.
3. Explain about the Friend classes.
4. Explain about the Destructors.
5. Write a syntax of Constructor in base and derived class with respect to Inheritance.
6. Define polymorphism. Write different types of polymorphism.
7. Write short notes on Try, catch, Throw.
8. Define & Explain Virtual member Function with example.

Section-B (Essay Type Answers) 4x15=60 M

9.a) Write a program to implement a default Argument using class and object.

OR

b) Write all the List of object-oriented programming concepts with examples in detail.

10.a) Write a program to implement constructors declared in base class and destructors declared in derived class using Inheritance concept.

OR

b) Write a program to implement a copy constructors and destructors within a single class using class and object.

11.a) Define virtual function. What are the features of virtual functions explain with suitable program.

OR

b) Define Multiple Inheritance and write a program to implement a Multiple Inheritance.

12.a) Write a program to demonstrate static polymorphism using method overloading.

OR

b) Write a program to implement template concepts with template class and object.

12M

Code: 305/E/BL

FACULTY OF SCIENCE

B.Sc., II-Semester (Backlog) Examinations, June-2022

Computer Science

(2016, 2017 & 2018 Batches)

Programming in C++

Time: 3 hours **Max Marks: 80**

Section-A (Short Answer Questions) 5x4=20M

Note: Answer any **Five** of the following questions in not exceeding 20 lines each.

1. Write short notes on (i) Abstraction (ii) Encapsulation.
2. Write about different types of constructors.
3. Explain briefly about virtual functions.
4. Write short notes on multiple exceptions.
5. Write short notes on copy constructors.
6. Explain briefly arrays of objects.
7. Write about object oriented programming languages.
8. Describe how to handle bad_alloc exception.

Section-B (Essay Answer Questions) 4x15=60M

Note: Answer the following questions in not exceeding 4 pages each.

9. a) Explain the various control structures in C++ with example programs.

(OR)

b) Define an array. Explain searching and sorting arrays with example programs.

10. a) Explain operator overloading with suitable examples.

(OR)

b) Define constructor. Explain constructor overloading with an example program.

11. a) Explain the different access specifiers with its importance and example programs.

(OR)

b) Define derived class. Explain the use of constructors and destructors in base and derived classes.

12. a) Write in detail about extracting data from the exception class with an example program.

(OR)

b) Explain in detail about class templates with syntax and an example program.

Code: 654/R

FACULTY OF SCIENCE

B.A./B.Sc., II-Semester (Regular) Examination, July/August-2022

Computer Science

Paper-II

Programming in C++

Time: 3 hours **Max Marks: 80**

Section-A (Short Answer Questions) 8x4=32M

Note: Answer any **Eight** of the following questions in not exceeding 20 lines each.

1. Explain the syntactical structure of C++ Program with an example.
2. Differentiate between Character Literals and String Literals with suitable examples.
3. Discuss about Arithmetic operators with an example program.
4. Illustrate the concept of operator overloading with an example.
5. Write a short note on inline member functions.
6. Discuss about the passing of arguments to constructors with example.
7. Write a short note on various Access Modifiers for creating members in the class.
8. Draw and explain the concept of Multiple Inheritance.
9. Explain Pure Virtual Functions.
10. Define Exception? Explain the use of Exceptions in C++ Programming.
11. Explain the procedure to define the objects of Class Templates in Inheritance.
12. Illustrate try-catch block with example.

Section-B (Essay Answer Questions) 4x12=48M

Note: Answer the following questions in not exceeding 4 pages each.

13. a) Differentiate between call-by-value and call-by-reference. Write a program to implement call-by-value and call-by-reference using Functions.

(OR)

b) Demonstrate one-dimensional and two-dimensional array with suitable examples? Write a program to demonstrate passing of one-dimensional array to Functions.

14. a) What is Operator Overloading? Write a program to demonstrate the use of operator overloading.

(OR)

b) Discuss about Constructors and Destructors? Write a program to illustrate the use of Constructors and Destructors.

15. a) Explain in detail about Polymorphism with examples and a program.

(OR)

b) Describe unformatted I/O and formatted I/O operations with an example each.

16. a) Explain Exception Handling. Write a program to implement Exception Handling Mechanism.

(OR)

b) Explain function templates with multiple types. Write a program to implement overloading with function template.

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-idering the information of 12M

Code: 655/E/R

FACULTY OF SCIENCE

B.A./B.Sc., II- Semester (Regular) Examination, September/October-2021

COMPUTER APPLICATIONS

Paper-II

Programming in C++

Time: 2 Hours **Max. Marks: 80**

Note: Answer any **Four** of the following questions. 4x20=80M

1. Explain the loop control structures in C++ with syntax and example each.
2. Write a program to add and subtract two complex numbers using friend function.
3. Explain the concept of overloading constructors with example.
4. Write a note on, (i) Copy Constructor, (ii) Parameterized Constructor
5. What is Polymorphism? Explain different types of polymorphism with example program.
6. Explain the hierarchies of classes by using single and multiple inheritances.
7. Explain object oriented exception handling with an example program.
8. Write a note on the following:
   i) Overloading with function template.
   ii) Class templates and inheritance.

Code: 121/E/R/BL

FACULTY OF SCIENCE & SOCIAL SCIENCES

B.A./B.Sc., III-Semester (Regular-Backlog) Examinations, January-2023

COMPUTER APPLICATONS

(2019, 2020 & 2021 Batches)

Paper-III

Relational Database Management System

Time: 3 Hours **Max. Marks: 80**

Section - A (Short Answer Questions)

Note: Answer any **Eight** of the following questions not exceeding 20 lines each. **8 x 4=32M**

1. Data Dictionary
2. Domain Constraint
3. Types of attributes in ER-diagram
4. Heap Files
5. Database Integrity
6. Dependency Preservation
7. Subquery and Correlated Subquery
8. Joins in SQL
9. Table Handling
10. Database Errors
11. Deadlock Prevention Techniques
12. Crash Recovery

Section - B (Essay Answer Questions)

Note: Answer the following questions in not exceeding 4 pages each. **4 x 12=48**

13. a) Define FPS and advantages of database approach over FPS (File Processing System).

(OR)

b) Explain E-R diagram and steps for conversion of E-R diagram to relational database, with an exam

14. a) Discuss about redundancy and associated problems.

(OR)

b) Explain briefly about file organizations and its types.

15. a) Importance of SQL and types of SQL commands.

(OR)

b) Write a PL/SQL program using triggers.

16. a) Explain briefly about locking mechanisms.

(OR)

b) Discuss about failure controlling methods.

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Code: 528/R/BL

FACULTY OF SCIENCE & SOCIAL SCIENCES

B.A./B.Sc., III-Semester (Regular/Backlog) Examinations, December-2023

(2019, 2020, 2021 & 2022 Batches)

COMPUTER APPLICATONS

Paper-III

Relational Database Management Systems

Time: 3 Hours | Max. Marks: 80

Section - A (Short Answer Questions) 8 x 4=32M

Note: Answer any **Eight** of the following questions not exceeding 20 lines each.

1. Write about the problems caused in database due to Data Redundancy. 4M
2. Briefly explain Database Approach. 4M
3. List out disadvantages of DBMS. 4M
4. Define Dependency Preservations. 4M
5. What is Super Key? Give an example. 4M
6. List out types of Indexes. 4M
7. Explain Aggregate functions in SQL with examples. 4M
8. Define Table Handling. 4M
9. Define Nested Query in SQL with example. 4M
10. List out Failure Controlling Methods. 4M
11. Define Locking Protocol. 4M
12. Define Database Recovery. 4M

Section - B (Essay Answer Questions) 4 x 12=48M

Note: Answer the following questions in not exceeding 4 pages each.

13. a) Explain Three Level Architecture of DBMS with a diagram. 12M

(OR)

b) Explain the process of converting ER-diagram to relational database by considering the information of a bank. 12M

14. a) Define Normalization. Explain rules of Data Normalization. 12M

(OR)

b) Discuss about RAID level in detail. 12M

15. a) Define Triggers in SQL. Write a PL/SQL program to create a Row Level Trigger. 12M

(OR)

b) Discuss about (i) Correlated Sub Query (ii) Column Aliasing (iii) Sequences. 12M

16. a) Define Concurrent Transactions. Explain ACID properties. 12M

(OR)

b) What is Concurrency Control? Explain the various concurrency control techniques in DBMS. 12M

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Code: 372/E/BL

FACULTY OF SCIENCE

B.Sc., IV-Semester (Backlog) Examinations, June-2022

COMPUTER SCIENCE

(2016, 2017 & 2018 Batches)

Paper-IV

Database Management Systems

Time: 3 hours **Max Marks: 80**

Section-A (Short Answer Questions) 5x4=20M

Note: Answer any **Five** of the following questions in not exceeding 20 lines each.

1. What are the advantages of DBMS?
2. Define View and write its syntax.
3. Write short notes on Granting Privileges to other users.
4. What are different SQL Data Types?
5. List different types of Attributes in ER Diagram.
6. Write a short note on Aggregation.
7. Explain the properties of Transactions.
8. What are different types of Failure?

Section-B (Essay Answer Questions) 4x15=60M

Note: Answer the following questions in not exceeding 4 pages each.

9. a) Explain the Three Level ANSI-SPARC Architecture in detail with a neat diagram.

(OR)

b) Describe the Relational Query Languages and explain the relational algebra operations with suitable examples.

10. a) i) Write short notes on stored procedures and function in PL/SQL.
ii) Write a program using functions in PL/SQL.

(OR)

b) Describe the following DDL commands with syntax and suitable examples.
i) Alter ii) Drop iii) Create iv) Truncate v) Rename

11. a) i) Describe specialization and generalization with suitable example.
ii) What is functional dependency? Explain various functional dependencies.

(OR)

b) What is Normalization? Explain 1 NF, 2 NF and 3NF with suitable examples.

12. a) i) Write short notes on Concurrency Control.
ii) Explain strict two-phase locking (strict 2-PL) protocol for concurrency control.

(OR)

b) i) What is Recovery? Explain any two recovery mechanisms.
ii) Write short notes on encryption, integrity and raid.

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Code: 837/E/BL

FACULTY OF SCIENCE

B.Sc., IV-Semester (Backlog) Examinations, June-2022

COMPUTER SCIENCE

(2019 Batch)

Paper-IV

Database Management Systems

Time: 3 hours **Max Marks: 80**

Section-A (Short Answer Questions) 8x4=32M

Note: Answer any **Eight** of the following questions in not exceeding 20 lines each.

1. Three level ANSI-SPARC Architecture
2. Set operation in Relational Algebra
3. Aggregation in Relational Algebra
4. Joins in SQL
5. Check constraints in SQL
6. Triggers
7. Types of Attributes
8. Data Redundancy and update Anomalies
9. Transitive Functional Dependency
10. Serializability
11. Backup and Recovery
12. Deadlock Optimistic Technique

Section-B (Essay Answer Questions) 4x12=48M

Note: Answer the following questions in not exceeding 4 pages each.

13. a) Explain briefly about File Based System and its disadvantages.

(OR)

b) Explain about different Data Models.

14. a) Explain the DDL commands with syntax and examples.

(OR)

b) Explain PL/SQL control statements with an example program.

15. a) Explain specialization and generalization with example.

(OR)

b) Define Normalization. Write about 1NF, 2NF, 3NF and BCNF with examples.

16. a) Explain locking methods in database.

(OR)

b) Explain about encryption techniques.

Code : 500/YW/BL

FACULTY OF SCIENCE

B.Sc., III – Year, (YW-Backlog) Examinations, April - 2019

Computer Science

Paper – III

(Database Management System)

Time : 3 Hours **Max. Marks: 100**

I. Answer All Questions.

Section – A **10x2=20 M**

a) What is a DBMS?
b) What are the problems with file system data management?
c) What are the symbols in ER Model?
d) What is functional dependency?
e) List out DDL commands.
f) Write aggregate functions in SQL.
g) What are the properties of transaction?
h) Define DDBMS.
i) Write about OLAP.
j) Define data warehouse.

Section – B **5x16=80 M**

II. Answer all questions. All questions Carry equal marks.

2.a) Explain the database systems and the advantages of DBMS.
b) Write in detail about integrity rules.

OR

c) What are relational set operators? Explain with examples.
d) Write about Relational Data Model and Codd's Rules.

3.a) Explain Developing ER diagrams.
b) Define normalization and explain the steps to convert a relation to 1NF, 2NF & 3NF.

OR

c) What is super type / subtype Relationship explain with example.
d) Explain the need of De-Normalization with example.

4.a) Write the syntax and example of DML commands.
b) Explain SQL JOIN operators with syntax and example.

OR

c) Explain the Data base Life cycle.
d) Explain the need of PL/SQL in database.

5.a) Explain the concurrency control with locking methods.
b) Write is detail about DDBMS components.

OR

c) What is Transaction? Write the ACID properties.
d) What are the Data base Recovery Management techniques? Explain briefly.

6.a) Write about data mining process.
b) Explain different database administration tools.

OR

c) Discuss how data as a Corporate Asset.
d) Write the process of using DBA functions in Oracle.

Code: 898/YWS-SN/E/BL

FACULTY OF SCIENCE

B.Sc., III-Year (YW-Backlog) Examinations, September/October-2021

COMPUTER SCIENCE

Paper-III

Database Management System

Time: 3 Hours | Max. Marks: 100

Section - A (Short Answer Type) 10 x 2=20M

Note: Answer the following questions not exceeding 20 lines each.

1. a) What is Degree of Data Abstraction?
   b) What are the drawbacks of file system?
   c) What are different types of Attributes?
   d) What is DeNormalization?
   e) List out DML commands.
   f) Write aggregate functions in SQL.
   g) Explain Transaction with an example.
   h) Define Decision Support System (DSS).
   i) Write any two functions of DBA
   j) Define data warehouse.

Section - B (Essay Answer Type) 5 x 16=80M

Note: Answer the following questions not exceeding 4 pages each.

2. a) Define DBMS. What are the advantages and disadvantages of DBMS?

(OR)

   b) Explain different relational set operators with suitable examples.
   c) Discuss about Data Dictionary and System Catalog.

3. a) Describe the process of Developing ER diagrams with examples.
   b) Discuss the database design challenges.

(OR)

   c) Define normalization and explain the steps to convert a relation to 1NF, 2NF and 3NF.

4. a) Write the syntax and example of advanced DDL commands.
   b) Explain the concept of joining tables with suitable examples and SQL statement.

(OR)

   c) Explain the data base life cycle.
   d) Explain the PL/SQL procedure with syntax and examples.

5. a) Explain the concurrency control with locking methods.

(OR)

   b) What are the advantages and disadvantages of Distributed Data Base Management System?

6. a) Explain about online analytical processing and the tools used.

(OR)

   b) Discuss how data as a corporate asset.
   c) Explain different database administration tools.