Sl.No.1387 **Course Code:71717103**

VINAYAKA MISSIONS RESEARCH FOUNDATION, SALEM

(Deemed to be University)

BCA DEGREE EXAMINATION – November 2018

Third Semester

DSC – I FUNDAMENTALS OF COMPUTER APPLICATIONS

Time: Three hours Maximum: 70 marks

PART – A (10 x 2 = 20)

(Answer ALL Questions)

1. Define Boolean algebra.
2. How the exclusive-OR gate is constructed?
3. What is an input unit?
4. Expand RAM and ROM
5. List any four input devices.
6. Mention the types of scanner.
7. Mention the symbols used in flow chart
8. Mention some of the functions of operating systems.
9. Give a definition for topology
10. Define WWW.

PART – B (4 x 5 = 20)

(Answer ALL Questions)

11. a) Explain 1's Complement and 2's Complement method.

(OR)

b) Explain the functions of a computer

12. a) Write a brief note on secondary memory

(OR)

b) Write the features of magnetic disk.

13. a) Explain Scanner and the aspects in which it differs.

(OR)

b) Write short notes on CRT

14. a) Write short note on OS functions.

(OR)

b) Elaborate search engines with examples

PART – C (3 x 10 = 30)

(Answer any THREE Questions)

15. Explain 9's Complement and 10's Complement method.
16. Explain in detail about RAM.
17. Describe the various types of printers
18. Elucidate-Evolution of programming languages
19. Explain how SMTP can be used for sending emails?

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Sl.No.1936 **Course Code: 71717204 / 71617205**

VINAYAKA MISSIONS RESEARCH FOUNDATION, SALEM

(Deemed to be University)

B.SC(COMPUTER SCIENCE) / BCA DEGREE EXAMINATION – November 2018

Second Semester

DSC III – OBJECT ORIENTED PROGRAMMING USING C++

Time: Three hours Maximum: 70 marks

PART – A (10 x 2 = 20)

(Answer ALL Questions)

1. List the characteristics of procedure oriented programming
2. Give the structure of C++ program
3. List out user defined data types in C++.
4. What is the use of malloc function?
5. Define function overloading.
6. Find the two ways where objects are used as function arguments.
7. Give an example for hierarchical inheritance
8. Give an example for operator overloading
9. Name the two types of bugs
10. Draw a diagram for throwing an exception

PART – B (4 x 5 = 20)

(Answer ALL Questions)

11. a) Discuss about any five header files in C++.

(OR)

b) Write a note on input and output operator

12. a) How will you initialize a variable dynamically? Explain with an example?

(OR)

b) Discuss the importance of while and do while statements

13. a) Discuss the special characteristics of a friend function

(OR)

b) Write a C++ program to illustrate the use of array of objects

14. a) With syntax discuss the process of defining derived classes

(OR)

b) Explain with neat diagram the mechanism of exception handling

PART – C (3 x 10 = 30)

(Answer any THREE Questions)

15. Discuss the concept of objects and classes with suitable example
16. Discuss in detail about memory management operators in C++
17. Describe how objects act as function arguments
18. Discuss about i) virtual functions ii)virtual base class iii) pure virtual functions
19. Write short notes on a.setfill() b.precision() c.setw() d.set ios flag e. unsetf()

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Sl.No.1337 **Course Code: 7171205**

VINAYAKA MISSIONS RESEARCH FOUNDATION, SALEM

(Deemed to be University)

BCA DEGREE EXAMINATION – November 2018

Second Semester

DATA STRUCTURE AND ITS APPLICATIONS

Time: Three hours Maximum: 70 marks

PART – A (10 x 2 = 20)

(Answer ALL Questions)

1. How is the memory represented in the linked list?
2. Give two examples of ordered list?
3. Define pop
4. Mention any two applications of queue
5. How will you identify the end of a linked list?
6. List the applications of Linked list
7. What is degree of tree?
8. What is hashing table?
9. What is best case?
10. What is the average case efficiency of merge sort?

PART – B (4 x 5 = 20)

(Answer ALL Questions)

11. a) Describe the different types of non-linear data structure.

(OR)

b) Discuss in detail about array with a suitable example

12. a) Distinguish between stack and queue

(OR)

b) Write a short note on circular queue with example

13. a) Discuss about garbage collection

(OR)

b) Explain in detail about the representation of polynomial using linked list

14. a) How the binary tree is represented in the memory sequentially using array? Explain with neat diagram.

(OR)

b) Write simple algorithm for merge sort.

PART – C (3 x 10 = 30)

(Answer any THREE Questions)

15. Describe the different types of data structures with example.
16. Explain in detail about the operations of circular queue
17. Discuss about the applications of singly linked list and doubly linked list.
18. Explain in detail about Dijkstra's algorithm with an example
19. Explain with an example about merge sort using divide and conquer method

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S.No.1228 Sub.Code:71717302

VINAYAKA MISSION'S RESEARCH FOUNDATION, SALEM
(Deemed to be University)

BCA DEGREE EXAMINATION – November 2018

Third Semester

DSC VI - DATABASE MANAGEMENT SYSTEM AND ITS APPLICATIONS

Time : Three Hours Maximum: 70 marks

SECTION - A

Answer All questions (10 x 2 = 20)

1 Write any 3 Application of DBMS.
2 Write the role of Query Evaluation Engine.
3 How will you define transitive dependency?
4 How will you represent multi valued and derived attributes in ER diagram?
5 Write a built in function to compute a square root of a given number.
6 What is meant by embedded SQL?
7 How will you define primary index?
8 Define closed hashing.
9 How will you define roll back operation?
10 Draw the lock compatibility matrix.

SECTION - B

Answer the following (4 X 5 = 20)

11.a Explain any 5 merits of Database system over file processing system.

OR

.b Describe the functions of query processor of Database system

12.a Explain the concept of decomposition and its types.

OR

.b Explain the different types of keys with examples.

13.a Explain the different types of SQL Operators.

OR

.b Explain the various join operations with examples.

14.a Differentiate sparse and dense index.

OR

.b Discuss two phase locking protocol.

SECTION -C

III. Answer ANY **THREE** of the following questions: (3 x 10 = 30)

15 Define Data Model and discuss the various types of Data Models.
16 Discuss ER-Model.
17 Describe the different types of Integrity Constraints with examples.
18 Explain the concept of hashing process with examples.
19 Explain the SQL commands for transaction

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