

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Fourth Semester B.Sc Degree Examination, March /April 2019

A13 – Objected Oriented Programming Using C++

(2017 Admission onwards)

Time: 3 hours

Max. Marks: 80

**PART – A****Answer all questions.****Each question carries One mark.**

A blueprint for creating an object in C++ is called .....

A variable which stores the address of another variable is called .....

Give an example for both unary operator and binary operator.

When a compiler cannot differentiate two overloaded constructors, they are called .....

If you design a class that needs special initialization tasks, then you need to design .....

Overloaded functions are required to have the same .....

A function that is called automatically each time an object is destroyed is a .....

What is the access scope of a private member function?

Using the wardrobe structure within the ShopList structure is an example of a good programming principle, known as .....

The compiler converts your C++ instructions into .....

**(10 x 1 = 10 Marks)****PART – B****Answer all questions.****Each question carries Two marks.**

What do you mean by member access modifiers?

What is the use of scope resolution operator (::) in C++?

How do we invoke constructor function?

How to detect end of a file?

What is I/O stream?

**(5 x 2 = 10 Marks)**

### PART - C

Answer any *five* questions.

Each question carries Four marks.

16. Explain the advantages of object oriented programming approach over functional/procedural programming.
17. Explain different data types of C++.
18. Write a program to find the factorial of a number by using class object and function.
19. What is inheritance? Explain the different types of inheritance.
20. How multidimensional arrays are implemented in C++? Give an example.
21. Give a short note on stream class hierarchy.
22. What is friend function? Explain the need for using friend function.
23. Briefly describe different file management functions.

(5 x 4 = 20 Marks)

### PART - D

Answer any *five* questions.

Each question carries Eight marks.

24. Define constructor. Explain various types of constructors with examples.
25. Explain dynamic memory management. Write a C++ program to demonstrate the usage of *new* and *delete* operators.
26. Write a program in C++ to demonstrate the usage of multiple inheritance.
27. Write a C++ program to read employee details such as empid, name, dept, salary, joining date for 10 employees. Make use of array of object.
28. Explain the concept of operator over loading with suitable example.
29. Explain various looping constructs in C++.
30. Give a detail account of type conversion in C++.
31. What is mean by function overloading? Explain with suitable examples.

(5 x 8 = 40 Marks)

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE  
Fourth Semester B.Sc Degree Examination, March /April 2019

A14 – Principles of Software Engineering  
(2017 Admission onwards)

Time: 3 hours

Max. Marks: 80

**PART – A****Answer all questions.****Each question carries One mark.**

Software is a superset of .....

SRS stands for .....

The measure for degree of interdependence between modules is called .....

The person responsible for requirement analysis is called .....

The development is supposed to proceed linearly through the phases in ..... model

The Level 0 DFD is similar to .....

Which process model is best suitable if requirements are changing frequently?

The process of generating analysis and design documents is called .....

A ..... diagram shows both structural and behavioral aspects explicitly.

The process of transforming a model into source code is called .....

**(10 x 1 = 10 Marks)****PART – B****Answer all questions.****Each question carries Two marks.**

What is the difference between a program and a software?

What do you mean by Software Development Life Cycle?

What are the characteristics of a good SRS?

Define DFD and data dictionary.

What is risk analysis?

**(5 x 2 = 10 Marks)**

**PART - C**

Answer any *five* questions.  
Each question carries Four marks.

6. Explain iterative enhancement model.
7. What are the limitations of Waterfall model?
8. What is SRS? Explain the need of SRS.
9. Write a short note of coding standards.
10. Differentiate between structured analysis and structured design.
11. What is functional modeling in OOD?
12. Explain error, fault and failure.
13. What is test plan? What are its components?

(5 x 4 = 20 Marks)

**PART - D**

Answer any *five* questions.  
Each question carries Eight marks.

14. Explain the various phases in the software development process.
15. Explain the structured design methodology for developing system designs.
16. Explain in detail about the function oriented design principles.
17. Write notes on the following
  - (a) Equivalence class partitioning
  - (b) Boundary value analysis
18. What is structural testing? Explain various approaches in it?
19. What are use cases? Explain how it is useful in functional specification.
20. Explain importance of software engineering in software development .
21. Write a short note on
  - a)Consistency checks
  - b)UML
  - c)Validation
  - d)Program verification methods

(5 x 8 = 40 Marks)

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE  
Fourth Semester B.Sc Degree Examination, March /April 2019  
BCS4B06 – Fundamentals of Database Management Systems & RDBMS  
(2017 Admission onwards)

Time: 3 hours

Max. Marks: 80

**Part A****Answer all questions.****Each question carries One mark**

1. ANSI/SPARC stands for \_\_\_\_\_.
2. \_\_\_\_\_ constraint enforces relationship integrity between tables.
3. \_\_\_\_\_ statement in SQL removes an object from a RDBMS.
4. Views are created by \_\_\_\_\_ command.
5. Functional dependencies are said to be \_\_\_\_\_ if they are satisfied by all relations.
6. Which NF states that the domain of an attribute must include only atomic values?
7. \_\_\_\_\_ is a collection of operations that performs a single logical function in a database application.
8. \_\_\_\_\_ is responsible for assigning and policing the locks used by the transactions.
9. When an exception is raised, normal execution of PL/SQL block or subprogram stops and control transfers to its \_\_\_\_\_ block.
10. By default, PL/SQL variables are initialized to \_\_\_\_\_

**(10x1=10 Marks)****Part B****Answer all questions.****Each question carries Two marks**

11. What is a constraint?
12. Differentiate between left, right and full outer joins.
13. Define decomposition.
14. List the properties of a transaction.
15. What are the components of a PL/SQL block structure?

**(5x2=10 Marks)**

**Part C**

**Answer any *Five* questions.  
Each question carries *Four* marks**

16. What is a database instance? How does it differ from a database schema?
17. Define attribute. Discuss the different types of attributes.
18. What you mean by E-R diagram? List the E-R diagram notations.
19. Explain the different Anomalies in DBMS with suitable example.
20. Discuss the basic operations of relational algebra.
21. What is deadlock? Discuss the strategies for dealing with deadlocks.
22. Explain how procedures are defined and called in PL/SQL. Illustrate with suitable examples.
23. What do you mean by Integrity Constraints? Differentiate between Referential Integrity and Domain Integrity.

**(5x4=20 Marks)**

**Part D**

**Answer any *Five* questions.  
Each question carries *Eight* marks**

24. Explain the differences between a file-oriented and a database oriented system.
25. What you mean by a view in SQL? Explain how to create, rename and destroy a view with suitable examples.
26. Explain order by, group by and having clauses with suitable examples.
27. What is concurrency control? Explain the three main problems associated with it.
28. Explain the transaction state with the help of a suitable diagram.
29. What you mean by a lock? Discuss the different types of locks.
30. Define triggers. What are the different types of triggers supported in PL/SQL?
31. Explain 1NF, 2NF, 3NF and BCNF with suitable examples.

**(5x8=40 Marks)**