

Reg. No. :

Sub. Code : JMCA 21

Second Semester

OBJECT ORIENTED PROGRAMMING C++

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

- How many characters are specified in the ASCII scheme?
(a) 64 (b) 128
(c) 256 (d) 231
- Which of the following belongs to the set of character types?
(a) char (b) wchar_t
(c) only (a) (d) both (a) and (b)

3. Which of the following correctly declares an array?
(a) `int array[10];` (b) `int array;`
(c) `array{10};` (d) `array array[10];`
4. What is the index number of the last element of an array with 9 elements?
(a) 9
(b) 8
(c) 0
(d) Programmer-defined
5. What is this operator called? _____
(a) conditional (b) relational
(c) casting operator (d) non relational
6. The `if..else` statement can be replaced by which operator?
(a) Bitwise operator
(b) Conditional operator
(c) Multiplicative operator
(d) None of the mentioned

Page 2

Code No. : 21150



7. How many minimum number of functions are need to be presented in C++?
 (a) 0 (b) 1
 (c) 2 (d) 3
8. How many ways of passing a parameter are there in C++?
 (a) 1 (b) 2
 (c) 3 (d) 4
9. Which of the following can derived class inherit?
 (a) members (b) functions
 (c) both (a) and (b) (d) parameters
10. Which keyword is used to declare the friend function?
 (a) firend (b) friend
 (c) classfriend (d) myfriend

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Explain the role of manipulators in C++ and the functions of type cast operators.
 Or
 (b) Explain inheritance and Polymorphism with examples.

Page 3 Code No. : 21150

12. (a) Write a C++ program to explain nesting of member functions.
 Or
 (b) Write a program to define Arrays of objects.
13. (a) Describe the method to manipulate strings using operators.
 Or
 (b) What are constructors and what are its characteristics?
14. (a) Discuss in detail how pointers to objects are used to implement dynamic binding.
 Or
 (b) Describe the role of 'this' pointers.
15. (a) Explain the mechanism of file pointer and their manipulations in files.
 Or
 (b) How to update a file in Random Access Conditions?

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Explain the basic concepts of object-oriented programming in detail.
 Or
 (b) Discuss the new kind of variable introduced in C++ with suitable illustration.

Page 4 Code No. : 21150

[P.T.O.]



17. (a) Explain friendly function in detail with respect to its applications in two class programs swapping private data of multiple classes.

Or

- (b) (i) What is the objective of the inline functions?
(ii) List some of the commonly used math library functions with their purposes.
18. (a) Elaborate the three types of conversion activities carried out in C++ with basic $\rightarrow$ class, class $\rightarrow$ basic, and class $\rightarrow$ class.

Or

- (b) (i) What are default constructors?
(ii) Explain the use of constructors in dynamic memory allocation through a program.
19. (a) (i) Explain the usage of pointers to derived classes.
(ii) Discuss the "nesting" feature in member classes.

Or

- (b) Explain the role of inheritance and its usage in private derivations.

20. (a) (i) Analyze the error handling options associated with file operations.
(ii) Define the various classes for file stream operations.

Or

- (b) (i) Explain the operators of C++ stream classes with respect to I/O system diagrams.
(ii) File open and close operation and its modes.

