Sub. Code 7BCEA4

## U.G. DEGREE EXAMINATION, NOVEMBER 2021

## **Computer Science**

Allied: PROGRAMMING IN C++

(CBCS - 2017 onwards)

Time: 3 Hours Maximum: 60 Marks

**Part A**  $(10 \times 1.5 = 15)$ 

Answer all questions.

- 1. What are identifiers?
- 2. Define symbolic constants and Give two examples for symbolic constants.
- 3. What are static data members?
- 4. State the role of destructors in C++ programs.
- 5. Define operator overloading and List two operators that cannot be overloaded.
- 6. What is virtual base class?
- 7. State the significance of 'this' pointer.
- 8. What are stream classes?
- 9. What are file pointers? How do you declare a file pointer in C++?
- 10. Why are class templates created?

**Part B**  $(5 \times 3 = 15)$ 

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

11. (a) Distinguish between basic and user defined data types.

Or

- (b) Explain implicit conversion in C++ with an example.
- 12. (a) Describe an array of objects with an example.

Or

- (b) Explain copy constructor with an example.
- 13. (a) List the rules for operator overloading.

Or

- (b) Describe the role of constructors in derived class.
- 14. (a) Explain any two unformatted I/O operations.

Or

- (b) Explain any three output manipulators.
- 15. (a) Explain command line arguments with an example.

Or

(b) How is end of file detected in C++?

**Part C**  $(3 \times 10 = 30)$ 

Answer any **three** questions.

16. Explain function overloading with an example C++ program.

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- 17. Describe the mechanism for passing objects as function arguments with a C++ program
- 18. Explain the types of inheritance in C++.
- 19. Explain virtual functions and pure virtual functions with examples.
- 20. Describe function templates with an example.