## TERM END EXAMINATIONS (TEX)

| Programme      |  | EE) - August 2024                  |
|----------------|--|------------------------------------|
| Course Name    | : Object Oriented Programming With C++ : 23 Aug 2024 / Session - I | Semester : Fall Semester 2024-2025 |
| Date / Session | : 23 Aug 2024 / Session - I  | Slot                               |
| Time           | . 2 Ups  | Max. Marks : 160                   |

## Answer ALL the Questions

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|------|-------|--|--------|
| Q. N | 0.    | Question Description   | Maries |
| 1    | (-)   | PART A – (60 Marks)  |        |
|      | (a)   | Define Object-oriented programming and Explain the features of Object-oriented programming. How it is different than procedure oriented programming.             | 12     |
|      |       |  | 2.5    |
|      | (b)   | Describe the inline function in Control OR   |        |
|      |       | Describe the inline function in C++ with a program. Write a program on scope resolution operator.  | 12     |
| 2    | (a)   | constructor, and destructor consisting of five students' data of   | 12     |
|      |       | registration number, and department with the stream, and marks for any three subjects.   | 1 .    |
|      |       | OR   | mila   |
|      | (b)   | Write a C++ program for constructors and destructors. Explain its importance.  | 12     |
| 3    | (a)   | Explain about Runtime polymorphism. Write a C++ program illustrating Runtime polymorphism.   | 12     |
|      |       | OR   |        |
|      | (b)   | Mention multi-level inheritance with a sketch. Explain with a suitable program. Write a program for function overloading.  | 13     |
| 4    | (a)   | Differentiate between class templates and function templates. Write programs for each template.  | 1      |
|      |       | OR   |        |
|      |       | Illustrate the list container with the program by considering the following functions push_back, push_front, pop_back, pop_front, merge, reverse, sort and size. | , 1    |
| 5    | (a)   | Describe the C++ stream class with a neat sketch. Write a program having as I/O function of get() and put().   | n 1    |
|      |       | OR   |        |
|      | (b) ' | Write a program working with multiple files.   |        |
|      |       |  |        |

## PART B-(40 Marks)

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|--------|--|---|
| 6<br>7 | Explain Object-oriented programming features by considering any real-world   | 8 |
| ,      | What is a friend function? Discuss its pros and cons with respect to normal member functions.                                    | 8 |
| 8      | Differentiate various types of constructors with programs for the banking sector.  | 8 |
| 9      | How to handle exceptions that arise in constructors? Explain with a C++ Program.   | 1 |
| 10     | Explain the following I/O Stream functions with suitable examples. i) width() ii) precision() iii) setf() iv) unsetf() v) fill() |   |
|        | $\Leftrightarrow \Leftrightarrow \Leftrightarrow$  |   |
|        |  |   |