JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2026

B.Tech-III Semester (CSE/IT)

COURSE CODE (CREDITS): 18B11CI311 (3) MAX. MARKS: 15

COURSE NAME: OBJECT ORIENTED SYSTEMS AND PROGRAMMING

COURSE INSTRUCTOR: AAYUSH SHARMA MAX. TIME: 1 Hour

Note: *(a) All questions are compulsory.*

(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

(c) Use of calculator is allowed

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<table>
<tr><th>Q.No</th><th>Question</th><th>CO</th><th>Marks</th></tr>
<tr><td>Q1</td><td>Consider the following C++ program:
<pre>
#include <iostream>
using namespace std;

class Test {
public:
  Test() { cout << "Constructor called\n"; }
  ~Test() { cout << "Destructor called\n"; }
};

int main() {
  Test t1;
  {
    Test t2;
  }
  Test* t3 = new Test();
  return 0;
}
</pre>
Write the exact output of the program</td><td>[CO1]</td><td>[1 x 5]</td></tr>
<tr><td>Q2</td><td>Match each feature in Column A with its correct description in Column B. Write the answer as a list of pairs (e.g., 1–b, 2–c, ...).
<table>
<tr><th>Column A</th><th>Column B</th></tr>
<tr><td>1. <code>static</code> data member</td><td>a. Can access private members but is not a member of the class</td></tr>
<tr><td>2. <code>const</code> member function</td><td>b. Shared by all objects of the class</td></tr>
<tr><td>3. <code>friend</code> function</td><td>c. Cannot modify any data members of the class</td></tr>
<tr><td>4. <code>inline</code> function</td><td>d. Expanded at the point of call to reduce function call overhead</td></tr>
<tr><td>5. <code>static</code> member function</td><td>e. Can be called using the class name without an object</td></tr>
</table></td><td>[CO2]</td><td>[1 x 5]</td></tr>
<tr><td>Q3</td><td>Complete the following statements about constructors and destructors in C++.
1. A constructor has the same name as the _____ and no return type.
2. A destructor is automatically called when an object goes out of _____.
3. A constructor can be overloaded, but a destructor _____ be overloaded.</td><td>[CO1]</td><td>[1 x 5]</td></tr>
</table>

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	4. If a class does not define any constructor, the compiler provides a _____ constructor. 5. The destructor of a class is preceded by the _____ symbol.		

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