Total No. of Questions—**8**] [Total No. of Printed Pages—**2**

Seat No.	

[5459]-205

S.E. (Information Technology) (I Sem.) EXAMINATION, 2018

PROBLEM SOLVING AND OBJECT ORIENTED PROGRAMMING

(2015 PATTERN)

Time : Two Hours **Maximum Marks : 50**

N.B. **:—** (*i*) Solve Q. **1** *or* Q. **2**, Q. **3** *or* Q. **4**, Q. **5** *or* Q. **6**, Q. **7** *or* Q. **8**.

(*ii*) Neat diagrams must be drawn wherever necessary.

(*iii*) Figures to the right indicate full marks.

(*iv*) Assume suitable data, if necessary.

1. (*a*) What is cohesion and coupling ? Why are cohesion and coupling important to programmers ? [6]

(*b*) What are operators ? Explain different types of operators. Write precedence of it. [6]

Or

2. (*a*) What are the *three* types of decision logic structure ? Explain with flowchart. [6]

(*b*) Create the algorithm and the flowchart to find the average age of all the students in a class using While/While End. Write pseudo code for same. [6]

P.T.O.

3. (*a*) Explain features of object oriented programming in detail. [6]

(*b*) What is friend function ? Give syntax for same. What are properties of friend function ? [6]

Or

4. (*a*) Explain need of operator overloading. Write C++ program to demonstrate any unary operator overloading. [6]

(*b*) How memory management is carried out in C++ ? Write syntax for the same. [6]

5. (*a*) Explain need of function overloading. Write C++ program to demonstrate function overloading. [6]

(*b*) What is inheritance ? What are different types of inheritance ? [7]

Or

6. (*a*) Explain virtual function and pure virtual function. [6]

(*b*) Explain template in C++. Write a generic function to sort the integer and float array using function template. [7]

7. (*a*) Write a note on Standard Template Library. [6]

(*b*) Which Classes are used in file stream operations ? Explain in detail. [7]

Or

8. (*a*) Explain Namespaces. What are rules for namespaces ? [6]

(*b*) How to manage console I/O operations ? Explain with example. [7]