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**[5152]-175**

**S.E. (Information Technology) (First Semester)**

**EXAMINATION, 2017**

**PROBLEM SOLVING AND OBJECT ORIENTED**

**PROGRAMMING**

**(2012 PATTERN)**

**Time : Two Hours**

**Maximum Marks : 50**

**N.B. :—** (i) Solve Q. No. 1 or Q. No. 2, Q. No. 3 or Q. No. 4, Q. No. 5 or Q. No. 6, Q. No. 7 or Q. No. 8.

(ii) Neat diagram must be drawn wherever necessary.

(iii) Figures to the right indicate full marks.

(iv) Assume suitable data, if necessary.

**1.** (a) What are the *six* steps of problem solving ? [6]

(b) What are operators ? Explain different types of operators. Draw table for hierarchy of operator. [6]

*Or*

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

(b) Create the algorithm and the flowchart to find the average percentage (%) of all the students in a class using automatic counter loop. [6]

P.T.O.

3. (a) What are table lookup techniques ? Explain any *one* table lookup technique in detail. [6]

(b) Explain features of object oriented programming in detail. [6]

*Or*

4. (a) Write algorithm for keyword searching in text. [6]

(b) How is memory management 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) Explain multilevel inheritance with C++ program. [7]

*Or*

6. (a) What is pure virtual function ? [6]

(b) What is inheritance ? Explain types of inheritance. [7]

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

(b) What is use of Exception Handling in C++ ? [7]

*Or*

8. (a) Write a note on RTTI. [6]

(b) How to manage console I/O operations ? [7]