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[5559]-205

S.E. (Information Technology) (I Sem.) EXAMINATION, 2019
PROBLEM SOLVING AND OBJECT ORIENTED PROGRAMMING
(2015 PATTERN)

Time : Two Hours

Maximum Marks : 50

Instructions to the candidates:

- 1) Answer 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.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right indicate full marks.
- 4) Assume suitable data if necessary.

1.(a)	Design an algorithm to find out maximum number from an array using the following problem solving strategies : (i) Sequential logic structure (ii) Decision logic structure (iii) Loop logic structure	6
1.(b)	Define an Algorithm. What are the various types of algorithm? Explain them with suitable example	6
	OR	
2.(a)	What is difference in between Expression and Equation? Evaluate the following for the values A = 5, B = 3 and C = 2 (i) $F = (A * B + A * C) \setminus (B + C)$ (ii) $F = (C + (B * 2 * A) + 5 * A) / B$	6
2.(b)	What is cohesion and coupling? Why are cohesion and coupling important to programmers?	6
3.(a)	Enlist the properties of static data members and Static member function.	6
3.(b)	Explain need of function overloading. Write C++ program to demonstrate function overloading.	6
	OR	
4.(a)	Explain features of object oriented programming in details.	6
4.(b)	Write a C++ program to demonstrate concept of Multilevel and Hierarchical Inheritance	6
5.(a)	Explain Template and write a C++ program for Bubble sort using concept of function template	7
5.(b)	When do we make Virtual function "Pure"? Explain it with example.	6

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	OR	
6.(a)	What is STL? Explain components of STL.	5
6.(b)	List the rules of virtual function.	3
6.(c)	How would you compare Late binding and Early binding?	5
7.(a)	Which Classes are used in file stream operations explain it in details.	6
7.(b)	How exception handling mechanism works in C++? How to catch multiple exception?	7

	OR	
8. a	What are the rules for Namespaces?	6
8. b	What is the advantage of using exception handling mechanism in a program?	4
8.c	How to manage console Unformatted I/O operations	3