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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)\ (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