Code No. 5014 / O

FACULTY OF ENGINEERING AND INFORMATICS

B.E. I - Year (Old) Examination, January 2016

Subject : Programming in C and C++

Time : 3 hours **Max. Marks : 75**

Note: Answer all questions from Part-A. Answer any FIVE questions from Part-B.

PART – A (25 Marks)

1		What are the data types available in C?	3
2		Write a C program to swap contents of integer variables a and b without using additional variable.	2
3		What is recursion?	2
4		List the operations performed on pointer variables.	3
5		Differentiate Structure and Union.	2
6		What does fopen() return for successful and unsuccessful opening of a file?	3
7		What is the need of default argument in C++?	3
8		What is constructor?	2
9		What is overriding? Give example.	2
10		What is virtual function?	3

PART – B (50 Marks)

11	a)	Draw and explain the block diagram of a computer.	6
	b)	What are the various C pre-processor directives or commands and explain them with simple programs.	4
12	a)	Write a program to find the matrix multiplication-using pointer to an array.	5
	b)	Write a program to display the prime numbers in a Fibonacci series using functions.	5
13	a)	Write a program to count the number of lines and words in a text file.	5
	b)	Write a program to read the 'n' student information and display the information about the students in the increasing order of marks. Student structure should have following fields roll-no, name, marks in 3 subjects.	5
14	a)	Define a class to represent a bank account. Include the following data members and member functions. Data member : Depositor name A/c No, Type of A/c, Balance amount. Member function : Initial balance, Deposit, Withdraw, Display name and balance	5
	b)	Write a program to overload << operator.	5
15	a)	Explain the mechanism of giving initial values to the objects of a derived class using multiple inheritance with a suitable example.	5
	b)	What are the different types of stream classes in C++? Discuss each of them in detail.	5
16	a)	What is an exception? Explain with example.	5
	b)	Write a template class to sort the array elements of integer or floats,	5
17		Write short notes on : a) Flow chart b) Friend class c) Storage class	3+3+4

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Code No. 5006 / N

FACULTY OF ENGINEERING & INFORMATICS

B.E. I-Year (New) (Supplementary) Examination, January 2016

Subject : Programming in C and C++

Time : 3 hours **Max. Marks : 75**

Note: Answer all questions from Part-A. Answer any FIVE questions from Part-B.

PART – A (25 Marks)

1 Convert the given binary number into its equivalent Octal and Hexadecimal number systems. 2
   i) 11101110 ii) 10.11011101
2 Draw a flowchart to find the sum of any 'n' numbers. 3
3 Write a code to find all even numbers in an array. 3
4 Write a code to print the command line arguments. 2
5 What is self-referential pointer? Give examples. 3
6 Explain the random accessing of the file. 2
7 What is the use of default argument? 3
8 Define destructor. 2
9 What is the usage of template functions? 2
10 How static member of a class can be initialized and accessed? Give example. 3

PART – B (50 Marks)

11 a) What are the components of the computer? Explain the functions of each component. 6
   b) Write a program to find the sum of all digits of a number. 4

12 a) Write a program to find the second maximum in an array using function. 5
   b) What are the various C pre-processor directives or commands and explain them with simple program? 5

13 a) Write a program to copy the content of one file into another. 5
   b) Explain the defining and initializing the structure variable and structure pointers. 5

14 a) Write a program to overload "<<" operator. 5
   b) Define a class called 'Figure', member function area() to find area and constructors 5
      i) with different number of arguments
      ii) with default argument
      iii) with object of figure as argument

15 a) What is exception? Explain exception handling with example. 5
   b) Explain the dynamic binding with example. 5

16 a) Explain type conversion with example. 5
   b) Write a C-program to multiply two matrices of size NxN. 5

17 Write short notes on : 4+3+3
   a) different access specifiers used in C++
   b) virtual functions
   c) new and delete operators

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