

FACULTY OF ENGINEERING & INFORMATICS

B.E. I Year (New) (Common to all Branches) (Main) Examination, June 2011
Programming in C & C++

Time : 3 Hours]

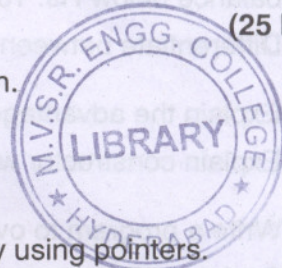
[Max. Marks : 75

Note : Answer **all** questions from Part A, answer any **five** questions from Part B.

PART – A

(25 Marks)

1. Define function. Explain characteristics of function. 3
2. Differentiate between local & global variable. 2
3. Define Array. 2
4. Write a program to calculate cube of a number by using pointers. 3
5. What are the various pre-processor commands ? 2
6. What is copy constructor ? 2
7. Explain the meaning of base class and derived class. 3
8. What is the output of the following ? 3



```
#include <stdio.h>
main ()
{
  unsigned int x,y ;
  x = 128, y = 32 ;
  x = x>>1 ;
  printf ("After right shifting by 1x=%d", x); y = y<<2 ;
}
printf ("After left shifting by 2y=%d", y);
```

9. Explain string handling Library functions. 3
10. Define friend function. 2

PART – B

(50 Marks)

11. (a) Explain the various loops with simple program. 5
- (b) Write a program to find the sum of the following : 5

$$\cos x = 1 - \frac{x^2}{2!} + \frac{x^4}{4!} - \frac{x^6}{6!} + \dots$$
12. (a) Explain with a program the different parameter passing techniques. 5
- (b) Write a program for binary search using function. 5

13. (a) List the operations performed on pointer variables. 5
(b) Write a program to find the matrix multiplication using pointers. 5
14. (a) Create a structure to specify data of customers in a bank. The data to be stored is : Account number, Name, Balance in account. Assume maximum of 50 customers in the bank. (a) Write a function to print account number and name of each customer with balance below Rs. 1000. 6
(b) Differentiate between structure and union. 4
15. (a) Explain the advantages of object oriented programming. 4
(b) Explain constructor with a program. 6
16. (a) Write a program to overload 'T' operator. 7
(b) Explain various types of inheritances. 3
17. Write short notes on the following : 3 + 4 + 3
(a) Function templates (b) Virtual function (c) Stream.