

Total Pages : 2

**End Semester Examination of Semester-II, 2016**

**Subject : MATHEMATICS (PG)**

**Paper : MTMPG-206**

**Full Marks : 20**

**Time : 1 Hr**

*The figures in the margin indicate the marks corresponding to the question*

*Candidates are requested to give their answers in their own word as far as practicable.*

*Illustrate the answers wherever necessary*

**Group A**

Answer any one out of two questions : 10x1=10

1. What does inheritance mean in C++? Explain its different forms with appropriate examples. What is a virtual base class?
  
2. a) Write a program to create two vectors d and f. Each vectors have few elements in it. Use the swap function, the content of vectors are entirely swapped.  
b) Write a Simple program to prove the concept of how friend function is useful. 6+4

[P.T.O.]

( 2 )

**Group B**

Answer **any one** out of two questions : 6x1=6

3. What is constructor? What are the types of constructors supported in C++? 2+4
  
4. What is operator overloading? A friend function cannot be used to overload the assignment operator =. Explain why? We have two classes X and Y. If 'a' is an object of X and 'b' is an object of Y and we want to say a = b; what type of conversion routine should be used and where?

**Group C**

Answer **any two** out of four questions : 2x2=4

5. When will you make a function 'inline'? Why?
  6. How will you allocate and deallocate memory in C++?
  7. How is the operator :: used in C++?
  8. What does 'this' pointer point to?
-