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**BJ—06—2016**

**FACULTY OF COMPUTER STUDIES**

**B.Sc. (CS) (Second Year) (Third Semester) EXAMINATION**

**OCTOBER/NOVEMBER, 2016**

**(Revised Course)**

**COMPUTER SCIENCE**

**Paper (CS) S3.4**

**(Object Oriented Concept and Programming in C++)**

**(Friday, 18-11-2016)**

**Time : 2.00 p.m. to 5.00 p.m.**

*Time—3 Hours*

*Maximum Marks—80*

*N.B. :— (i) All questions are compulsory.*

*(ii) Figures to the right indicate full marks.*

1. Attempt the following : 20
  - (i) Define object oriented methodology
  - (ii) Data types in C++
  - (iii) Describe inline function
  - (iv) Define pointer.
2. (a) What is inheritance ? Explain single inheritance with example. 8  
(b) Write a program to demonstrate concept of virtual base class. 7

*Or*

  - (c) What is friend function ? Define with example. 8
  - (d) Write a program to find factorial value of a given number. 7
3. (a) Explain virtual base class and abstract base classes. 8  
(b) Using function overloading mechanism write a function to calculate area of triangle, circle and square. 7

*Or*

  - (c) Explain file operations with example. 8
  - (d) Write a program to access a month number [1 to 12] and print number of days in that month. 7

P.T.O.

4. (a) Define constructor with example. 8
- (b) Define exception handling. 7
- Or*
- (c) Define usage of destructor. 8
- (d) Explain array of objects. 7
5. Write short notes on (any *three*) : 15
  - (i) Define Data member and member function
  - (ii) Structure of C++ program
  - (iii) Memory allocation
  - (iv) Class template
  - (v) Virtual function.