| BAS-006 |

B.Tech. AEROSPACE ENGINEERING (BTAE)

Term-End Examination   00308

June, 2015

BAS-006 : COMPUTER FUNDAMENTALS

Time : 3 hours   *Maximum Marks : 70*

*Note : Attempt any **ten** questions. All questions carry equal marks. Use of scientific calculator is permitted.*

1. Briefly explain the basic architecture of a computer.   7

2. Differentiate between the following :   7

    (a) Input unit and Output unit

    (b) CPU and ALU

3. Describe in brief the different generation of computers.   7

4. What is Object Oriented Programming paradigm ? Name the four basic concepts of OOP.   7

5. Write a C^{++} program to print the first n natural numbers and their sum. (Take n = 200)   7

6. Write a C^{++} program to calculate and print the roots of a quadratic equation

    $$ax^2 + bx + c = 0 \ (a \neq 0).$$ 7

7. What are the outputs of the following two codes fragments ? Justify your answer.　　　7

```
// Version 1                    // Version 2
int f = 1, i = 2 ;             int f = 1, i = 2 ;
while (++ i < 5)              do {
f* = 1 ;                         f* = 1 ;
cout << f ;                    } while (++ i < 5) ;
                               cout << f ;
```

8. Determine the octal equivalent of

$(1010111110110010)_2$.　　　7

9. Determine the decimal equivalent of $(B14)_{16}$.　　　7

10. What are the advantages and disadvantages of e-mail ?　　　7

11. Differentiate between 'RAM' and 'ROM'.　　　7

12. Describe the different types of printers.　　　7

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