

**B.Tech. AEROSPACE ENGINEERING
(BTAE)**

00375 **Term-End Examination**
December, 2014

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. Define and distinguish between data and information. 7
2. What are the functions performed by the ALU ? Is it an independent unit ? If not, which unit does ALU work in coordination with ? 7
3. What are the functions of output unit in a computer system ? Give examples of some output devices. 7
4. What is an object ? What is a class ? How is an object different from a class ? 7
5. Write a C++ program to tabulate the function

$$f(x) = \frac{x^2 + 1.5x + 5}{x - 3}$$

for $x = -10$ to 10 .

x should take values

- 10, - 8, - 6, ..., 6, 8, 10. 7

6. Write a C++ program to calculate the area of a circle, the surface area of a sphere, or the volume of a sphere depending upon user's choice. 7
 7. Write a C++ temperature-conversion program that gives the user the option of converting Fahrenheit to Celsius or Celsius to Fahrenheit and depending upon user's choice carries out the conversion. 7
 8. Determine the octal equivalent of the decimal number of $(359)_{10}$. 7
 9. Determine the hexadecimal equivalent of the decimal number of $(5112)_{10}$. 7
 10. What do you understand by the term "Super Computer"? Give the name of a super computer installed in India. 7
 11. What is the importance of a Primary Key in a table? Explain with a suitable example. 7
 12. Explain Data Base Management System (DBMS) with the help of a suitable example. 7
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