

B.TECH. (AEROSPACE ENGINEERING) (BTAE)

Term-End Examination

June, 2013

BAS-006 : COMPUTER FUNDAMENTALS

Time : 3 hours

Maximum Marks : 70

Note : *Answer any seven questions. All questions carry equal marks. Use of calculator is permitted.*

1. (a) Distinguish between Input units and Output units of a computer. Give suitable examples in support of your answer. 5+5
(b) What is the meaning of the term "Volatile memory" ? Distinguish between internal and external memory.

2. (a) How are the computers of four different generations superior as compared to their previous models ? 5+5
(b) List at least three advantages of computer based data processing over manual methods.

3. (a) What is the difference between a keyword and an identifier ? 5+5
(b) Write two major differences between Object Oriented Programming and Procedural Programming.

4. (a) Evaluate the following C++ expressions 5+5
 where a, b, c are integers and d, f are floating point numbers. The values are a=5, b=3, and d=15.
- (i) $f = a + \frac{b}{a}$
- (ii) $c = d * a + b$
- (iii) $f = (a++) * d + a$
- (iv) $f = (++b) * b - a$
- (v) $c = a - (b++) * (--d)$
- (b) What are LAN and WAN ?
5. (a) What is World Wide Web and what are its advantages ? 5+5
- (b) What are protocols ? Give some examples of different types of protocols.
6. (a) Differentiate between a Logical Error and a Syntax Error. Also, give suitable examples of each in C++ . 5+5
- (b) What is the significance of Cyber Law ?
7. (a) List any five names of Programming Languages and their features. 5+5
- (b) Write a C++ program to calculate and point the roots of a quadratic equation i.e $ax^2 + bx + c = 0$.

8. (a) Write a C++ program to calculate the area of a circle or a rectangle or a triangle depending upon user's choice. 5+5
- (b) Determine the decimal equivalent of $(11010)_2$.
9. (a) Determine the binary equivalent of $(231)_8$. 5+5
- (b) Determine the decimal equivalent of $(11101.10111)_2$.
10. (a) Write a C++ program to generate fibonacci series. 5+5
- (b) Explain, in brief, the use of Relational Database Management System in relation to Aerospace Engineering.
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