

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

Term-End Examination

December, 2015

BAS-006 : COMPUTER FUNDAMENTALS

Time : 3 hours

Maximum Marks : 70

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

1. (a) Draw the block diagram of a computer and explain in brief, its various components. 7
- (b) A disk pack consists of 8 disk plates, each plate has 500 tracks and there are 100 sectors per track. If 512 bytes can be stored per sector, calculate the total number of bytes, which can be stored. 3
2. (a) Write at least five distinct features of Linux and Windows operating systems. 5
- (b) Differentiate between 'RAM' and 'ROM'. Write different types of ROM. 5

3. Write and explain any five mathematical functions of MS-Excel, with one example each. 10
4. (a) Write a program in 'C', which reads a list of numbers and arrange the list in ascending order. 7
- (b) Differentiate between while() and do...while() statements in 'C'. 3
5. (a) What is the importance of a primary key in a table? Explain with a suitable example. 5
- (b) Explain in brief the various data types used in a standard database. 5
6. Answer the following in brief: 5×2=10
- (a) Explain any two commands of Linux.
- (b) Explain single-dimensional array.
- (c) Differentiate between GUI and CUI.
- (d) What is a cache memory?
- (e) Name various 'Format Options' in MS-Word.
7. (a) Write the importance of 'Header' and 'Footer' features of MS-Word. 4
- (b) A computer's memory is composed of 8 K words of 32 bits each and a byte is 8 bits. How many bytes does this memory contain? 3
- (c) Differentiate between a 'File' and a 'Database'. 3

8. (a) Write a 'C' program that gives the user the option of converting Fahrenheit to Celsius or Celsius to Fahrenheit temperature. Depending upon the user's choice, the program carries out the conversion. 5
- (b) Write a 'C' program to compute the sum upto n^{th} term of exponential series. 5
9. (a) Write the importance of role of 'Pointers' in 'C' using a sample program. 5
- (b) Write short notes on the following : $2 \times 2 \frac{1}{2} = 5$
- (i) Functions in 'C'
- (ii) Formula Bar in MS-Excel
10. Compute the following : $5 \times 2 = 10$
- (a) Add the octal numbers 26 and 17.
- (b) Subtract $(677)_8$ from $(770)_8$.
- (c) Subtract $(75)_{16}$ from $(527)_{16}$.
- (d) The octal equivalent of $(2B6)_{10}$.
- (e) Add the hexadecimal numbers $(76)_{16}$ and $(45)_{16}$.
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