

B.TECH. (AEROSPACE ENGINEERING) (BTAE)

Term-End Examination

December, 2013

BAS-006 : COMPUTER FUNDAMENTALS

Time : 3 hours

Maximum Marks : 70

Note : Question No.1 is compulsory. Attempt any six questions from qno.2 to qno.10

1. Answer the following : 10x1=10
- (a) Which file starts MS Word ?
 - (b) In a 8086/88 Microprocessor, the unit responsible for getting the instructions from memory and loading in the Queue is _____ .
 - (c) UNIX is a single user multitasking operating system. (True/False).
 - (d) What is an "attribute" in DBMS ?
 - (e) 2's complement of $(11001)_2$ is _____ .
 - (f) A computer's memory is composed of 4K words of 32 bit each. How many total bits are there in memory ?
 - (g) Short cut key to 'delete' and 'cut'.
 - (h) What is the maximum number of lines you can set for lines to drop box ?
 - (i) Size and the Range of float numbers _____ .
 - (j) EXPAND the terms SMPS, RAM, ROM, BIOS.
2. (a) Describe the three level of Data abstraction. 5
- (b) What is the difference between Database and DBMS ? 5

3. (a) What are the five basic operations performed by any computer ? 5
 (b) List out the various computer generation along with their basic characteristics. 5
- OR**
- Describe the following with examples. 10
- (a) Virtual memory
 (b) Microprocessor and microcontroller
 (c) Cache memory
 (d) Mini computer and Micro computer
 (e) Pointers
4. (a) What are the Navigation and Directory Control Command in LINUX ? 5
 (b) Explain any two commands in UNIX. 5
- OR**
- What are the throughput, turn around time, waiting time and Response time ? 10
5. (a) Convert the following numbers from the given base to bases indicated 7
 (i) $(225.225)_{10}$ to binary, octal, Hexadecimal.
 (ii) $(623.77)_8$ to decimal, binary, Hexadecimal
 (iii) $(2AC5.D)_{16}$ to decimal, octal, binary
 (b) Find the 10's complement of $(935)_{11}$ 3
6. (a) Write a program to find the length of a given string. 5
 (b) Write a program to evaluate the function $y = k^N$. 5
7. (a) What is utility software ? Discuss various types of system software. 5
 (b) Describe briefly the use of graphics in word processor software. 5

8. (a) What are the trigraph characters ? How are they useful ? 5
- (b) Write the syntaxes of logical function and explain giving example in Ms-Excel. 5
9. (a) Explain the various relationship among entity. 5
- (b) Explain the differences between external, internal and conceptual schema and subschema. 5
10. How much tape is needed, if the tape characteristics are as follows : 10
- Tape density = 6250 bpi (bit per inch per trace).
- Tape speed = 200 inches per second.
- Size of interblock gap = 0.3 inch.
- File characteristics :
- Number of records = 1000000
- Size of records = 100 bytes.
- Blocking factor = 1

OR

- (a) How many 128×8 RAM chips are needed to provide a memory capacity of 2048 bytes ? 10
- (b) How many lines of the address bus must be used to access 2048 bytes of memory ? How many these lines will be common to all chips ?
- (c) How many lines must be decoded for chip select ?
