

**First/Second Semester B.E. Degree Examination, December 2011**  
**Computer Concepts and C Programming**

Time: 3 hrs.

Max. Marks:100

- Note: 1. Answer FIVE full questions choosing at least two from each part.**  
**2. Answer all objective type questions only in OMR sheet page 5 of the answer booklet.**  
**3. Answer to objective type questions on sheets other than OMR will not be valued.**

**PART - A**

1. a. Select the correct answer : (04 Marks)
- i) The general name given to the physical parts of a computer is \_\_\_\_  
 A) Software      B) Hardware      C) Firmware      D) Computer ware
  - ii) A byte contains \_\_\_\_ number of bits.  
 A) 12              B) 8                      C) 16              D) 32
  - iii) Which of these is not an example of software?  
 A) Utilities                                      B) Operating system  
 C) Floppy disk                                    D) Device drivers
  - iv) Which of these is not a part of information processing cycle?  
 A) Data sharing                                B) Data collection  
 C) Data storage                                 D) Data output
- b. Mention the various steps associated with the information processing cycle and explain them. (08 Marks)
- c. What is a data scanning device? Mention any four such devices. (04 Marks)
- d. i) Convert the binary number 1 1 1 0 0 1 1 1 to decimal number.  
 ii) Convert the decimal number 55 to binary number. (04 Marks)
2. a. Select the correct answer : (04 Marks)
- i) A translator which reads a high level program line by line and converts its into machine language code is \_\_\_\_  
 A) Translator      B) Interpreter      C) Compiler      D) Assembler
  - ii) The size of most commonly used floppy these days is  
 A) 8 inch            B) 3.5 inch            C) 5.25 inch      D) 2.5 inch
  - iii) Which of these is not a network topology?  
 A) Bus                B) Ring                C) Star                D) Square
  - iv) Which of these is not a type of translator  
 A) Assembler      B) Interpreter      C) Compiler      D) Integrator
- b. Mention the various functions of an operating system. Explain any two of them. (08 Marks)
- c. List and explain the basic components of a computer network. (04 Marks)
- d. Mention the different storage devices and explain one of them. (04 Marks)
3. a. Select the correct answer : (04 Marks)
- i) Which of the following is associated with software changes / modification / evolution of software?  
 A) Design            B) Coding              C) Testing              D) Maintenance

- ii) The type of programming that is done using C is  
 A) High level B) Low level  
 C) Both A & B D) None of these
- iii) The function which takes a single character input from the keyboard is \_\_\_\_\_  
 A) get chr B) get char C) give char D) char get
- iv) Which of these is not a key word to C language?  
 A) float B) static C) delete D) insert
- b. What are C tokens? Mention them. Explain any two of them. (08 Marks)
- c. What is a datatype? Mention the basic data types available in C. (04 Marks)
- d. What are variables? How are they declared? (04 Marks)
4. a. Select the correct answer : (04 Marks)
- i) The order in which different operations in an expression are evaluated is decided by \_\_\_\_\_  
 A) Associativity B) Precedence C) Evaluation D) Format
- ii) The correct version of the clause to include I/O function library in C program is  
 A) # include < io.h > B) # include < Std io.h >  
 C) include # < io.h > D) include # < Std io.h >
- iii) The result of evaluating the expression  $7\% 5 + 10.0 * 10/3$  is  $\frac{2+100/3 = 33.2 = 33}{}$   
 A) 32.0 B) 32 C) 31.0 D) 31
- iv) Let  $K = 12, i = 3, J = 5$ . Consider the statement  $K += i + J ++$ ; After execution the values of k, i, J respectively are  
 $K += 3 + 6 = 12 + 9 = 21$   
 $i = 3 + 1 = 4$   
 $J = 5 + 1 = 6$   
 A) 21, 3, 6 B) 20, 3, 6 C) 21, 3, 6 D) 20, 4, 6
- b. Explain the structure of 'C' program. (06 Marks)
- c. Write a program to find the area of a triangle given the three sides. (06 Marks)
- d. With examples, illustrate any four common programming errors. (04 Marks)

### PART - B

5. a. Select the correct answer : (04 Marks)
- i) Which of the following will not be terminated by a semicolon sign?  
 A) Function prototype B) Function calling statement  
 C) Function definition D) None of these
- ii) A function that calls itself is \_\_\_\_\_  
 A) Nested function B) Overloaded function  
 C) Recursive function D) Inline function
- iii) The scope of the variables defined in a function is \_\_\_\_\_  
 A) Local B) Modular C) Global D) Universal
- iv) The parameters used in a function call are called \_\_\_\_\_ parametes.  
 A) Formal B) Dummy C) Actual D) None of these
- b. Mention the different ways of passing parameters to the function. Explain one of them. (08 Marks)
- c. Write a program to accept two integers and swap their values using a function to swap. (08 Marks)
6. a. Select the correct answer : (04 Marks)
- i) The correct statement for checking a condition in if statement is  
 A) if (a = b) B) if (a == b) C) if (a, b) D) if (a b)
- ii) The loop in which the number of iterations remain known prior to the execution of the loop is \_\_\_\_\_  
 A) for B) while C) do while D) None of these

- iii) The value of switch expression must be of type \_\_\_\_\_  
 A) Real                      B) int                      C) double                      D) All of these
- iv) The least number of times the do – while loop will be executed is \_\_\_\_\_  
 A) 0                      B) 1                      C) 2                      D) Both A and B
- b. Distinguish between while and do-while statement. (08 Marks)
- c. Write a C program to read a positive number and reverse the given number. (08 Marks)
7. a. Select the correct answer : (04 Marks)
- i) Number of elements in an array defined by a [3] [4] is  
 A) 8                      B) 12                      C) 16                      D) None of these
- ii) If  $\chi[4]$  is a declaration, then the first and last array index will be  
 A) 1, 4                      B) 0, 3                      C) 3, 0                      D) None of these
- iii) Given int a [3] [ 2] = {1, 2, 3, 4, 5, 6} ; the element in the 3<sup>rd</sup> row and 2<sup>nd</sup> column is \_\_\_\_\_  
 A) 3                      B) 6                      C) 52                      D) 4
- iv) A function that is used to join two strings is \_\_\_\_\_  
 A) Strep                      B) Strlen                      C) Streat                      D) Strem
- b. Explain the declaration and initialization of one dimensional array with examples. (06 Marks)
- c. Write a C program to input N integers into a single dimensional array and sort them in descending order using bubble sort method. Print both given array and sorted array with suitable headings. (10 Marks)
8. a. Select the correct answer : (04 Marks)
- i) \_\_\_\_\_ execution of instructions in a computer system is referred to as parallel computing.  
 A) Serial                      B) Sequential                      C) Accurate                      D) Simultaneous
- ii) Which of the following can be used as a resource in parallel computing?  
 A) A single computer with multiple processors.  
 B) An arbitrary number of computers connected by a network.  
 C) A combination of the above.  
 D) All of these.
- iii) Open Mp stands for \_\_\_\_\_  
 A) Open multi – parallelism                      B) Organised multi – programming  
 C) Open multi – processing                      D) Organised multi – parallelism.
- iv) An example of environment variable in OPEN MP is  
 A) Omp – thread – limit                      B) Omp – init – lock  
 C) Omp – test – lock                      D) Omp – get – dynamic.
- b. Define concurrent processing. What is the motivation for concurrent processing? (10 Marks)
- c. What are threads? Give the advantages and disadvantages of multiple threads. (06 Marks)

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