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First/Second Semester B.E. Degree Examination, June/July 2014

Computer Concepts and C Programming

Time: 3 hrs.

Max. Marks: 100

Note: 1. Answer any 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. Choose the correct answers for the following : (04 Marks)
- A computer converts data into this _____.
A) information B) charts C) software D) input or output
 - A device that holds a disk is called
A) drive B) RAM C) ROM D) memory
 - The terms dots per inch (dpi) refers to
A) printer resolution B) printer speed C) printer output D) printer size
 - The earliest computer were _____ systems.
A) digital B) paper C) analog D) slide rule
- b. Differentiate between system software and application software. (06 Marks)
- c. Explain with example, different type of printers. (10 Marks)
- 2 a. Choose the correct answers for the following : (04 Marks)
- A list of command choices in an OS is called
A) command line B) check box C) drop down list D) menu
 - _____ is one of the benefits using network.
A) File security B) Peripheral sharing
C) Protection from virus D) Folder creation
 - FTP sites are often called
A) channels B) archives C) groups D) domain
 - DOS and Linux are examples of _____ interface.
A) old fashion B) GUI C) command line D) parallel
- b. Explain in detail, various types of network topologies. (10 Marks)
- c. Define the following:
i) Thrashing ii) Buffering iii) Spooling (06 Marks)
- 3 a. Choose the correct answers for the following : (04 Marks)
- Which of the following is a character constant?
A) 'C' B) "c" C) 'b' D) "?"
 - Which field specification is used to refer short int?
A) %c B) %d C) %fd D) %hd
 - A nibble is _____.
A) 4 bits B) 8 bits C) 16 bits D) 32 bits
 - Identify formatted console input function.
A) getchar() B) gets() C) scanf() D) fgets()
- b. Explain the structure of a C program. (06 Marks)
- c. What are the different types of input and output functions? (10 Marks)

- 4 a. Choose the correct answers for the following : (04 Marks)
- A _____ is name given to the memory location where data can be stored, accessed or manipulated.
A) string B) keyword C) reserved word D) variable
 - The _____ data type does not occupy any space in the memory.
A) long int B) float C) void D) double
 - An operator which acts on 3 operands
A) Unary operator B) Key operator
C) Binary operator D) Ternary operator
 - What is the output of the following code?

```
main ( )
{printf ("%d", 'A');}
```

A) 65 B) A C) 65.0 D) Error
- b. Evaluate the expressions where a = 8, b = 15, c = 4.
- $2*((a\%5)*(4+(b-3)/(c+2)))$
 - $100/20 <= 10-5+100\%10-20 == 5 >= 11 = 20$ (06 Marks)
- c. Write a C program to find and output all the roots of a quadratic equation for non zero coefficients. (10 Marks)

PART - B

- 5 a. Choose the correct answers for the following : (04 Marks)
- The default return type of function is
A) int B) float C) char D) void
 - Which is the user defined function?
A) main() B) sqrt() C) clrscr() D) gets()
 - A function that calls itself is known as _____
A) recursive function B) iterative function
C) main function D) none of these
 - Parameters passed as arguments to the function call are called as
A) actual parameters B) formal parameters
C) no parameters D) none of these
- b. Design and develop a function rightrot (x, n) in C that returns the value of the integer x rotated to the right by n bit positions as an unsigned integer. Invoke the function from the main with different values for x and n and print the results with suitable headings. (08 Marks)
- c. How are functions categorized based on the value returned by the function and parameter accepted? (08 Marks)
- 6 a. Choose the correct answers for the following : (04 Marks)
- Each case statement in switch is separated by
A) break B) continue C) exit D) goto
 - Several statements grouped together in braces is called
A) compound B) equivalent C) complex D) simple
 - In C language, "x?y:z" is equivalent to
A) if (x == 0)y; else z; B) if (x == 1)z; else y;
C) if (x == 0)y: z; D) if (x == 1)y; else z;
 - How many times is the following loop executed

```
for (i = 0; i <= 5; i++)
{printf ("Hello");}
```

A) 1 B) 6 C) zero D) infinite
- b. Write a C program to find the sum of N natural numbers. (08 Marks)
- c. What is the purpose of a switch case statement? Explain with syntax. (08 Marks)

- 7 a. Choose the correct answers for the following : (04 Marks)
- The number of elements in array A[3][4] is
A) 8 B) 12 C) 16 D) none of these
 - If A[4] is declaration, then the first and last array index will be
A) 1, 4 B) 0, 3 C) 3, 0 D) none of these
 - A function that is used to string copy is
A) strcpy() B) strncpy() C) copystring() D) concat()
 - Given A[3][2] = {1, 2, 3, 4, 5, 6}; The element in 3rd row 2nd col is
A) 3 B) 4 C) 6 D) 2
- b. Explain initialization and declaration of 2D array. (08 Marks)
- c. Write a C program to input N integers in a single dimensional array and sort them in ascending order using Bubble sort. (08 Marks)
- 8 a. Choose the correct answers for the following : (04 Marks)
- _____ execution of an instruction in a computer system is referred as parallel computation.
A) Sequential B) Serial C) Accurate D) Simultaneous
 - Open MP stands for
A) open multi parallelism B) organized multi programming
C) open multi programming D) organized multi parallelism
 - An example of environment variable in open MP is
A) OMP_thread_limit B) OMP_init_lock
C) OMP_thread_ref D) OMP_get_byname
 - Which of the following can be used as resource in parallel computing?
A) Single computer with multi process B) Network of computers
C) Combination of above D) None of these
- b. What are threads? Give the advantages and disadvantages of multiple threads. (08 Marks)
- c. Design and develop a parallel program in C to determine and print prime numbers which are less than 100 making use of the algorithm of Sieve of Eratosthenes. (08 Marks)
