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06CCP13/23

First / Second Semester B.E. Degree Examination, June-July 2009

Computer Concepts and 'C' Programming

Time: 3 hrs.

Max. Marks:100

- Note : 1. Answer any Five full question, choosing at least two from each part.
2. Answer all objectives type questions only in OMR sheet page 5 of the Answer Booklet.
3. Answer to the objective type questions on sheets other than OMR will not be valued

PART - A

- 1 a. i) Which of the following units represent the largest amount of data?
A) Kilo byte B) Tera byte C) Giga byte D) Mega byte
- ii) Which type of s/w is used for creating slide show?
A) Web design s/w B) Presentation s/w
C) Word processing s/w D) Spread sheet s/w.
- iii) In most programs you can press this key to get help:
A) ESC B) F10 C) Alt D) F1
- iv) Resolution is determined for
A) Monitor B) Video controller C) CPU D) System unit. (04 Marks)
- b. What are the four phases of information processing cycle? Explain briefly. (08 Marks)
- c. Define the following terms, give an example for each
i) System software ii) Application s/w. (03 Marks)
- d. Explain how CRT displays image or text on the screen. (05 Marks)
- 2 a. i) The standard that promises to provide enough characters to cover all the world's languages
A) ASCII B) Unicode C) Extended ASCII D) EBCDIC
- ii) Memory that loses data when power is turned off is considered as
A) Volatile memory B) Static memory
C) Dynamic memory D) Refreshed memory.
- iii) What does the term SCSI stands for?
A) Small computer software interface B) Small computer storage interface
C) Small computer system interface D) Small computer standard interface
- iv) Floppy disks and magnetic Disks are examples of
A) Optical storage B) Solid state storage
C) Magnetic storage D) Electrical storage (04 Marks)
- b. What is the difference between volatile and non-volatile memory? (03 Marks)
- c. What are the factors that affect the processing speed? Explain any two. (06 Marks)
- d. With neat sketch, explain working of magnetic disk unit. (07 Marks)
- 3 a. i) Acronym DOS stands for
A) Distributed operating system B) Driver operating system
C) Disk operating system D) Diskless operating system.
- ii) Windows 95 was the first version of windows support which standard for connecting new hardware?
A) GUI B) Plug and play C) Enterprise directory D) Operating system
- iii) Collection of related web pages is called
A) Web book B) Website C) Web dictionary D) Search Engine
- iv) E-mail is a system for exchanging messages through a
A) Client B) Program C) Network D) Backbone (04 Marks)
- b. What are the primary functions of operating system? (02 Marks)

- c. What are the various hardwares used in computer Network? Also give their functions. (10 Marks)
- d. Differentiate between LAN and WAN. (04 Marks)
- 4 a. i) What does the oval sign represent in a flow chart?
A) Start / End B) Decision C) Process D) None of the above
- ii) Which character marks the end of each statement in C?
A) ; B) : C) } D) {
- iii) To find out the remainder after dividing the number by other number, the operator is
A) / B) ^ C) % D) ÷
- iv)

```
int main ()
{
  int I=5;
  print f ( " %d %d %d", i ++, i, ++i);
  return 0;
}
```

 The output is
A) 567 B) 556 C) 667 D) 666 (04 Marks)
- b. Draw a neat flow chart to exchange two numbers without using a temporary variable. (05 Marks)
- c. What do you mean by mixed mode operation? Explain with an example. (06 Marks)
- d. Evaluate the following expressions independent to each other, the declaration and initialization is as follows: `int i = 3, j = 4, k = 2;`
i) `i++ - j--` ii) `++k % --j` iii) `j + 1 / i - 1` iv) `j++ / i--` v) `++i / ++j + 1`. (05 Marks)

PART - B

- 5 a. i) In which of the following header the function `getchar ()` exist?
A) `iostream . h` B) `stdio . h` C) `Function . h` D) `getchar . h`
- ii) Which of the following command will place the program control out of the loop when it gets executed
A) `goto` B) `break` C) `Continue` D) `end`
- iii) In the following program segment S2 will be executed :

```
if ( a > b)
  if ( b > c)
    S1;
else
  S2;
```

 if
A) `b > c` B) `a <= b` C) `a < b` D) `a > b and b ≤ c`
- iv) Which command is used to skip the rest of the loop and carry on from top of the loop again
A) `Exit` B) `Continue` C) `Switch` D) `break` (04 Marks)
- Write a C program to find the roots of a Quadratic equation using if statement. Print the output neatly. (10 Marks)
- With a flow chart, explain the selection process of switch statement. (06 Marks)

- 6 a. i) While (`++ K ≤ n`) what is the value of K when loop completes, if initial value of K is 1
A) `n + 1` B) `n - 1` C) `n + 2` D) `n`
- ii) The following for loop prints for (`i = 1, j = 3; i < 3; i ++, j --`);
`print f (" %d %d", i, j);`
A) 1 3 2 2 B) 1 3 2 2 3 1 C) 31 D) None of these



iii) Which of the following statements can't be used to transfer control unconditionally to a different statement in 'C' program?

- A) goto B) continue C) For D) break

iv) The following do-loop prints, for an initial value of $c = 2$

```
do
{ print f (" %d", c);
  print f (" %d", c - -);
} while (c);
```

- A) 2 1 B) 2 1 0 C) 2 2 1 0 D) 2 2 1 1.

(04 Marks)

b. Differentiate between do and while do statement.

(05 Marks)

c. Write a program to compute the value of Euler's number e , that is used as the base of natural logarithm. Use the following formula. Use while statement.

$$e = 1 + \frac{1}{1!} + \frac{1}{2!} + \dots \text{ upto } \text{acc} = 0.0001.$$

(08 Marks)

d. With syntax, explain for loop.

(03 Marks)

7 a. i) The amount of storage requires for holding elements of the array depends on

- A) Size B) Data type
C) Data type and size D) Run - time requirement

ii) Array elements are stored in

- A) Scattered memory location B) Direct memory location
C) Random memory location D) Sequential memory location

iii) Consider the following array definition. The address of an element 6 in the array is
 $\text{int } a [] [4] = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12\}$

- A) $a [3] [3]$ B) $a [1] [1]$ C) $a [3] [1]$ D) None of these

iv) What will happen if we initialize too few elements of an array?

- A) Only those elements will have initialized values B) Compilation error
C) Unused element will be set to zero D) None of the above (04 Marks)

b. What does the name of the array signify? What are the different stages in which arrays can be initialized? Give an example for each.

(06 Marks)

c. Write a 'C' program to find the product of two matrices by checking the compatibility of two matrices. The program must read the sizes of each matrix and their elements after checking the compatibility.

(10 Marks)

8 a. i) Using keyword void before function name means

- A) Returns nothing B) Has no argument C) both A and B D) None of these

ii) The main () is a

- A) Library function B) user defined function C) Keyword D) None of these

iii) A static variable

- A) Cannot be initialized B) is initialized once at the commencement of execution and cannot be changed at run time
C) Retains its value throughout the execution of the program D) Same as the automatic variable. But it is placed at the head of the program.

iv) A variable declared in a function is called

- A) Actual variable B) Formal variable C) Local variable D) Global variable

(04 Marks)

b. What is the need for user-defined functions? Also explain in brief different elements of a user-defined function.

(06 Marks)

c. Write a function that will generate and print the first n Fibonacci numbers.

(04 Marks)

d. Discuss the different methods of passing parameters to the function with an example for each.

(06 Marks)