

USN

--	--	--	--	--	--	--	--	--	--

10CCP13/23

First/Second Semester B.E. Degree Examination, June/July 2017
Computer Concepts and C Programming

Time: 3 hrs.

Max. Marks: 100

**Note: Answer any FIVE full questions,
choosing at least TWO from each part.**

PART – A

- 1 a.** Choose the correct answers for the following : **(04 Marks)**
- i) Which of the following device stored instructions that help computer to start up?
A) Joy stick B) RAM C) ROM D) Monitor
 - ii) Who is called the father of computer?
A) Balise Pascal B) Charles Babbage
C) Joseph Jacquard D) Dr. Hewrman Hollerith
 - iii) A collection of 8-bits is called
A) Byte B) Word C) Record D) File
 - iv) A computer resolution is determined by _____
A) Monitor B) Video C) CPU D) System unit.
- b.** With a neat diagram, explain the basic structure of a computer. **(08 Marks)**
- c.**
- i) Convert the decimal number 512_{10} to binary form
 - ii) Convert the binary number 100011 to decimal form. **(04 Marks)**
- d.** Explain two type of monitors based on the technique used to display image and text. **(04 Marks)**
- 2 a.** Choose the correct answers for the following :- **(04 Marks)**
- i) The CPU uses a _____ to store and retrieve each piece of data in the memory
A) Control unit B) Cache C) Post D) Memory location
 - ii) A magnetic Disk's tracks are divided into smaller parts called
A) Clusters B) Sectors C) Bytes D) Slices
 - iii) A distributed network configuration in which all data information passes through center computer is
A) BUS Network B) Star Network
C) Ring Network D) Point-to-Network
 - iv) If you want to execute more than one program at a time, the system software you must be capable of
A) Word processing B) Virtual Memory
C) Compiling D) Multi tasking.
- b.** What is an operating system? List and explain different types of operating system based on usage and requirement. **(08 Marks)**
- c.** What is OSI model? Explain principle used to develop seven layers of OSI model. **(04 Marks)**
- d.** Briefly explain the following processors : **(04 Marks)**
- i) AMD ii) IBM.

- 3 a. Choose the correct answers for the following : (04 Marks)
- The flowcharting symbol diamond shaped box indicates
A) Start B) Process Step C) Decision D) End
 - Which of the following are not valid identifiers
A) Student-Name B) Total C) Znames D) int
 - DOS stands for
A) Distributed operating systems B) Disk operating systems
C) Driver operating systems D) Diskless operating systems
 - Which of the following is an I/P function?
A) Scanf B) printf C) puts() D) putchar().
- b. Briefly explain the different functions performed by the operating systems. (04 Marks)
- c. What is the need of network topology? Explain the following different networking topologies : (08 Marks)
- Bus Topology
 - Star Topology
 - Ring Topology
 - Mesh Topology.
- d. What is variable? Explain variable initialization. (04 Marks)
- 4 a. Choose the correct answers for the following : (04 Marks)
- The step by step procedure to solve a particular problem is called
A) Flowchart B) Program C) Instruction D) Algorithms
 - Which of the following is not a valid assignment expression?
A) X = 23 B) 4X = 8 = 3 C) Y% = 5 D) x = r = 5
 - An infinite loop in a program sequences, causes no output but creates error, what type error is it?
A) Syntax Error B) Logical Error C) Run-Time Error D) None of these
 - Which of the following has highest precedence?
A) Pre fix increment B) Multiply C) Modulus D) Assignment.
- b. Explain the following operators, with example : (08 Marks)
- Relational operator
 - Increment operator
 - Conditional operator
 - Special operators
- c. Write a flowchart to generate prime numbers between the limit N_1 and N_2 . (06 Marks)
- d. What is the value of x? If a = 100, b = 150 and $x = (a > b) ? a : b$; (02 Marks)

PART – B

- 5 a. Choose the correct answers for the following : (04 Marks)
- To read a single character, which of the following equation is used
A) putchar() B) getchar() C) getch() D) putch()
 - A function that calls itself for its processing is known as
A) Inline Function B) Nested Function
C) Over loaded Function D) Recursive Function
 - Arguments of a function are separated with
A) comma (,) B) semicolon(;) C) colon(:) D) None of these
 - Which operator has the highest procedures
A) + B) * C) ++ D) >>
- b. What is difference between IF-ELSE and Switch statement? (04 Mark)
- c. Explain with an example the different ways of passing parameter to function. (08 Mark)
- d. Write a C program to find the largest of their integers with appropriate message. (04 Mark)

- 6 a. Choose the correct answers for the following : (04 Marks)
- i) Determine how many times the body of the loop is executed in the given program segment
- ```
int x = 5, y = 50 ;
while (x <= y)
{
 X = y|x ;
}
```
- A) 0                      B) 1                      C) Infinite                      D) Error
- ii) Which of the following is not a relational operator?  
A) <                      B) <=                      C) =                      D) >=
- iii) Given a for loop as :  
for (i = 1; j <= 32; y)  
printf ("%d", i)  
if this for loop must produce an o/p of 1, 2, 4, 8, 16, 32, which of the following must replace y?  
A) i = i + 2                      B) i = i × 2                      C) i = i/2                      D) None of these
- iv) Which statement is called as an bypasses?  
A) goto                      B) continue                      C) break                      D) switch.
- b. Explain the logical operators used in C. (06 Marks)
- c. Write a recursive function to find the factorial of a number. (04 Marks)
- d. Using flowchart and syntax, explain pretest and posttest loops. (06 Marks)
- 7 a. Choose the correct answers for the following : (04 Marks)
- i) Array is which data type?  
A) built-in                      B) user defined                      C) primary data type                      D) derived datatype
- ii) \_\_\_\_\_ is an integral value used to access element of an array  
A) constant                      B) element                      C) variable                      D) index
- iii) The statement `int m[3][5] = {{0}, {0}, {0}}`; is used and the value of statement `m[2][2]` will be  
A) 1                      B) 3                      C) 2                      D) 0
- iv) The process through which data are arranged according to their values is known as  
A) Arranging                      B) Searching                      C) Listing                      D) Sorting
- b. Write a C program to sort the elements of an array using bubble sort. (08 Marks)
- What is an array? How do you declare and initialize ONE and TWO dimension array? (08 Marks)
- c. Explain with example.
- 8 a. Choose the correct answers for the following : (04 Marks)
- i) Parallel computing is \_\_\_\_\_ execution of instructions in a computer system  
A) Simultaneous                      B) Serial                      C) Accurate                      D) Complete
- ii) The process of splitting a lengthy and complete program into a number of smaller programs is called  
A) Unit program                      B) Modular program                      C) Build-In program                      D) Logical program
- iii) Identify mathematical function in the following :  
A) clrscr()                      B) printf()                      C) fabs()                      D) main()
- iv) A variable declared inside a function is called \_\_\_\_\_ variable  
A) personal                      B) public                      C) global                      D) Local.
- b. What are threads? Highlight the need of threads. (08 Marks)
- c. What are open mp directives which help in synchronization of task? Explain in detail. (08 Marks)

\* \* \* \* \*