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**Reg. No. :**

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**Question Paper Code: 51207**

**B.E./B.Tech. DEGREE EXAMINATION, MAY 2018**

**First Semester**

**Computer Science Engineering**

**15UCS107 - COMPUTER PROGRAMMING**

**(Regulation 2015)**

**Duration: Three hours**

**Maximum: 100 Marks**

**Answer All Questions**

**PART A - (10x 1 = 10 Marks)**

1. C language was developed by CO1- R  
(a) Dennis Richie (c) Bill Gates  
(b) Martin Richards (d) Ken Thompson
  
2. The basic architecture of computer was developed by CO1- R  
(a) John von neumann (c) Garden Moore  
(b) Charles Babbage (d) Pascal
  
3. Which of the following special symbol allowed in a variable name? CO2- R  
(a) \* (asterisk) (c) - (hyphen)  
(b) | (pipeline) (d) \_ (underscore)
  
4. The format identifier '%i' is also used for \_\_\_\_\_ data type? CO2- R  
(a) int (b) float (c) double (d) char

5. Which operator is used to continue the definition of macro in the next line? CO3- R  
(a) # (b) ## (c) \$ (d) /
6. The keyword 'break' cannot be simply used within: CO3- R  
(a) do-while (b) if-else (c) switch-case (d) for
7. How many values can a function return? CO4- R  
(a) 1 (b) 2 (c) 3 (d) 4
8. The recursive functions are executed in a \_\_\_\_\_ CO4- R  
(a) parallel (c) Last In First Out order  
(b) First In First Out order (d) Iterative order
9. If a1 = &x and a2 = &a1, what will be the output generated by the expression CO5- R  
\*\*a2?  
(a) Address of a2 (b) Address of a1  
(c) Value of x (d) Address of x
10. #include is called \_\_\_\_\_ CO5- R  
(a) Preprocessor directive (c) File inclusion directive  
(b) Inclusive directive (d) None of these

PART – B (5 x 2= 10Marks)

11. Outline the Structure of a 'C' Program CO1- U
12. What is a pseudocode? Write the rules for pseudocode. CO2- U
13. Write a C program to print the leap year from 2000 to 2015. CO3- U
14. What is meant by recursion? CO4- U
15. What is NULL pointer? CO5- U

PART – C (5 x 16= 80Marks)

16. (a) With a neat block diagram explain the basic organization of a computer and list out the functions performed by each unit. CO1-U (16)
- Or
- (b) (i) Mention the various guidelines to be followed while drawing a flowchart with a suitable example. CO1 -U (8)
- (ii) Draw the flowchart to find the greatest among three numbers. CO1 -App (8)
17. (a) (i) Describe in detail formatted and unformatted I/O with example 'C'. CO2 -U (10)
- (ii) Explain in detail the structure of a C program with an example. CO2 -App (6)
- Or
- (b) List and explain different types of data types in C? Also differentiate between signed and unsigned data types with reference to range of memory they occupy. CO2 -U (16)
18. (a) (i) Explain the various decision making mechanism in C. CO3- U (8)
- (ii) Write a program to print the integers between 1 and n which are divisible by 7. CO3- App (8)
- Or
- (b) (i) With an example explain the Branching and Looping mechanism in C. CO3- App (8)
- (ii) Write a menu driven program which has following options: CO3- App (8)
- (i) Factorial of a number (ii) Prime or not
- (iii) Odd or even (iv) Exit.
19. (a) (i) Explain about the different parameter passing method with examples. CO4-App (8)
- (ii) Differentiate between pass by value and pass by reference. CO4 -U (8)
- Or

- (b) (i) Write a C program to read n numbers in an array and split the array into two arrays even and odd such that the array even contains all the even numbers and other is odd. So the output will be as follows:  
 Original array is 7,9,4,6,5,3,2,10,18  
 Odd array is 7,9,5,3  
 Even array is 4,6,2,10,18  
 CO4 -App (8)
- (ii) Define functions. Write the advantages and disadvantages of function in C. CO4 -U (8)
20. (a) (i) State the advantages of using pointers. Represent the pointer declaration and initialization and how the value of variable is accessed using pointers. Give suitable example. CO5- U (8)
- (ii) What is the difference between a structure and a union? CO5- U (8)
- Or
- (b) (i) Define dynamic memory allocation? Exemplify the different dynamic memory allocation functions in C. CO5- U (8)
- (ii) Describe in detail about the Preprocessors in C CO5- U (8)