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**Question Paper Code : 40027**

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

Second Semester

Computer Science and Engineering

CS 8251 – PROGRAMMING IN C

(Common to : Computer and Communication Engineering/  
B.Tech. Information Technology)

(Regulations 2017)

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions

PART – A

(10×2=20 Marks)

1. What is external storage class ?
2. How does a preprocessor work ?
3. What is an array ? Write the syntax for multi-dimensional array.
4. Design a C program for compare any two string.
5. List the advantages of recursion.
6. When null pointer is used ?
7. State the meaning of the root word struct.
8. Specify the use of typedef.
9. How can you restore a redirected standard stream ?
10. What does argv and argc indicate in command-line arguments ?

PART – B

(5×13=65 Marks)

11. a) i) Explain the different types of operators used in C with necessary program. (8)
- ii) Write a C program to check the integer is Palindrome or not. (5)
- (OR)
- b) Describe the decision making statements and looping statements in C with an example. (13)



12. a) Write the C program to multiply two matrices (two-dimensional array) which will be entered by a user. The user will enter the order of a matrix and then its elements and similarly input the second matrix. If the entered orders of two matrices are such that they can't be multiplied by each other, then an error message is displayed on the screen. (13)
- (OR)
- b) i) What are the different types of string function ? Describe with their purpose. (5)
- ii) Write the C program to find the number of Vowels, Consonants, Digits and white space in a string. (8)
13. a) i) Explain the purpose of a function prototype. And specify the difference between user defined function and built-in functions. (8)
- ii) Write the C program to find the value of  $\sin(x)$  using the series up to the given accuracy (without using user defined function) also print  $\sin(x)$  using library function. (5)
- (OR)
- b) What is difference between pass by value and pass by reference ? Write the C coding for swapping two numbers using pass by reference. (13)
14. a) Define structure in C. Also specify the pointer and structure with example. (13)
- (OR)
- b) i) Write a C program for accessing structure member through pointer using dynamic memory allocation. (6)
- ii) Write a short note on singly linked list and specify how the node are created in singly linked list. (7)
15. a) Explain the types of file processing with necessary examples. (13)
- (OR)
- b) Write the C coding for finding the average of number stored in sequential access file. (13)

**PART – C****(1×15=15 Marks)**

16. i) Write the case study of "How sequential Access file is differ from Random Access file". (10)
- ii) Write a C program to write all the members of an array of structures to a file using `fwrite ()`. Read the array from the file and display on the screen. (5)