Bachelor of Science (B.Sc.-I) (CBCS Pattern) Second Semester CBCS

USCST04 - Computer Science Paper-II: Structured Programming With C

P. Pages : 2 **GUG/W/18/11577**

Time : Three Hours * 3 6 5 2 * Max. Marks : 50

Notes : 1. All the questions are compulsory and carry equal marks.
2. Draw neat and labelled diagram wherever necessary.
3. Avoid vague answers.

1. Either:

a) Write a program to reverse all array values. **5**

b) Explain the binary search method with suitable example. **5**

OR

c) Write a program to display transpose of a give matrix of size $m \times n$. **5**

d) What is an array? Explain the types of array in detail. **5**

2. Either:

a) Explain the difference between structure and union. **5**

b) Design structure to store date and initialize with todays date. **5**

OR

c) Define a structure. Explain the term structure type and structure variable. How do you access member of a structure, give suitable example. **5**

d) Write a C program to calculate income tax of employee. The employee structure contains empcode, name, salary. Calculate Income tax as follows if, **5**

Salary	tax rate
>=250000 and <500000	5%
>500000 and <1000000	20%
>1000000	30%

3. Either:

a) Discuss the function type No arguments and No return values with suitable example. **5**

b) Write a user defined function to calculate highest common factor of 2 integer numbers. **5**

OR

c) Discuss the structure of a user defined function in a 'C' program with suitable example. **5**

d) Write a program of passing an entire array to a function. **5**

4. Either:

a) Write a program to calculate the sum of 2 nos. using pointer. **5**

b) Explain the general format of fopen( ) function. **5**

OR

c) Write a program using command line arguments, that will receive a filename and a line of text. **5**

d) Define a pointer and give syntax of its variable declaration. What is the purpose of $\rightarrow$operator. **5**

5. Attempt all the questions.

a) Explain Strlen( ) String handling library function with example. **2½**

b) Explain declaration of enumeration variables with suitable example. **2½**

c) Distinguish between local and global variables. **2½**

d) Write a short note on closing of a file. **2½**

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