SEAT No. :

F.Y.B.Sc.(CS)

CS 121: ADVANCED 'C' PROGRAMMING
(CBCS 2019 Pattern) Semester-II

[Time: 2 Hours]   **[Max Marks: 35]**

Instructions to the candidates:
- *All questions are compulsory.*
- *Figures to the right indicate full marks.*
- *Assume suitable data if necessary.*

Q.1 Attempt any EIGHT of the following   **[8x1=8]**

a) Which function is used in C to compare two strings?

b) Difference between scanf() and gets() functions

c) Explain fopen() function with parameters?

d) What is union?

e) What is macro?

f) Write note on nested structures?

g) "For all members in structures common storage space is allocated" – Justify with True or False

h) What is purpose of #define directive?

i) Explain command line arguments

j) What is user defined type?

Q.2 Attempt any FOUR of the following   **[4x2=8]**

a) Explain declaration and initialization of character array with example.

b) What is Preprocessor? Give example

c) Define union with three members of types int, char and float.

d) State any four standard library functions for file handling in C

e) How to do dynamic memory allocation in C?

P.T.O.

Q.3 Attempt any TWO of the following   **[2x4=8]**

a) Write a 'C' program to define a structure time with hour, minute and second as members. Define variable of structure time, accept the input and display.

b) Write a 'C' program to check string is palindrome (Use pointers)

c) Write a 'C' program to accept the text, store in text file sample.txt. Read the same file and display its content.

Q.4 Attempt any TWO of the following   **[2x4=8]**

a) Write a user defined function to find a^b.

b) Explain with syntax any four predefined functions on string handling.

c) Differentiate between union and structure with example

Q.5 Attempt any ONE of the following   **[1x3=3]**

a) Given the following declarations

    char str[]="CMCS COLLEGE";

    int *p1=str, *p2=p1+5;

    What is the output of following statements?

    (1) printf("%c %c", *p1, *p2);

    (2) printf("%c %c", *(p1++),*(p2++));

    (3) printf("%c %c",*(++p1),*(++p2));

b) Trace the output of the following program

```
void swap (int *x, int *y)
{ int temp=*x; * y=*x; *x=temp;
}
void main()
{ int a=10, b=20;
  swap(&a, &b);
   printf("%d  %d",a,b);
}
```

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