

**Hi-Tech Institute of Engineering & Technology**  
**DEPARTMENT OF COMPUTER APPLICATION**

**Course- MCA.**

**(SEM-1) ODD SEMESTER Model paper- 2**

**Subject Code: KCA-102**

**Subject Name: Problem Solving using C**

**Time: 3: 00 Hours**

**Total Marks: 100**

**Note: 1. Attempt all Sections. If require any missing data, then choose suitably.**

**SECTION-A**

**1. Attempt all question in brief.**

**2x 10 = 20**

Q.No	Question	Marks	CO
a.	Difference between const and static keyword?	2	1
b.	What is the difference between ++a and a++?	2	1
c.	Explain differences between "while" and "do-while" loop with example	2	2
d.	Write a programme in C for "with argument, with return value".	2	2
e.	What will be the output of code? Void main() { int a,b,*p; a=10; b=&a; b=*p +20; printf("%d",b); }	2	3
f.	What is the use of printf() and scanf() functions?	2	3
g.	Define NULL pointer?	2	4
h.	Explain the nested structure with an example as well as output.	2	4
i.	Write the difference between Malloc() and Calloc() with example.	2	5
j.	Write all operations and opening modes in file handling with example.	2	5

**SECTION-B**

**2. Attempt any three of the following:**

**10x3 =30**

Q.No	Question	Marks	CO
a.	What are the various data types used in C language? Explain with example.	10	1
b.	(a) WAP for Armstrong number in C with output. (b) What is the purpose of a Header File? Is the use of header file absolutely necessary? Can we have a C program without any header file?	5 5	2
c.	Write a program that accepts two strings str1 and str2 as arguments and finds which of the two is alphabetically greater (without using the library functions). The function should return 1 if str1 is greater than str2, 0 if str1 is equal to str2 and -1 if str1 is smaller than str2.	10	3
d.	What do you mean by Dynamic Memory Allocation? Explain its all types with an example.	10	4
e.	WAP in c to copy the content of one file to another file. The file name must be passing through command line arguments.	10	5

**SECTION-C**

**3. Attempt any ONE part of the following:**

**10x1 = 10**

Q.No	Question	Marks	CO
a.	What is the use of flow chart? Explain the symbols used in flow chart. Draw a flow chart to find the maximum among three input numbers.	10	1
b.	Describe the structure of a C Program	10	1

4. Attempt any ONE part of the following:

10x1 = 10

Q.No	Question	Marks	CO
a.	Explain the various types of Data type and Storage classes?	10	2
b.	What do you mean by function declaration, function calling and function definition? Give appropriate example.	10	2

5. Attempt any ONE part of the following:

10x1 = 10

Q.No	Question	Marks	CO
a.	Using multidimensional array to write a program in C to sort a list of names in alphabetical order.	10	3
b.	Illustrate the different ways to input a string in C language. WAP to count the number of words and characters in a given string.	10	3

6. Attempt any ONE part of the following:

10x1 = 10

Q.No	Question	Marks	CO
a.	Define Structure? How it is differ from union with example?	10	4
b.	Explain all types of storage classes with an example.	10	4

7. Attempt any ONE part of the following:

10x1 = 10

Q.No	Question	Marks	CO
a.	Explain all terms with an example- (a) getc() (b) putc() (c) fprintf() (d) fscanf() (e) ferror()	10	5
b.	Discuss the various file operation using example?	10	5