NED UNIVERSITY OF ENGINEERING & TECHNOLOGY, KARACHI
FIRST YEAR (COMPUTER SCIENCE AND INFORMATION TECHNOLOGY)
ANNUAL EXAMINATION 2008
BATCH 2007-08

Time: 3 Hours **Dated: 05-11-2008**

Max. Marks: 75/80

PROGRAMMING LANGUAGES – (CT-153)

Instruction:
Attempt any Five (5) Problems.

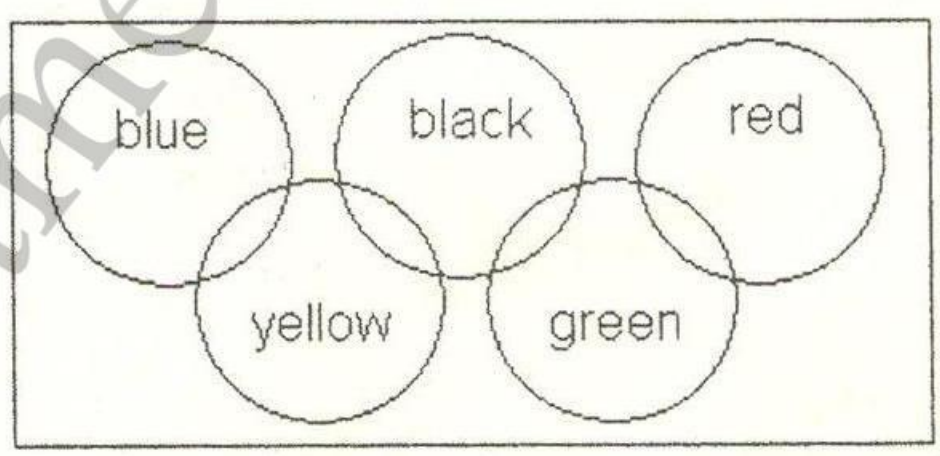
PROBLEM NO. 1:

a) Ask a date from user in the DD/MM/YYYY e.g. 01/01/2008 format as a single string. Split date, month and year and display them individually. (7)

b) Write a short program that will: (8)
(a) Set up a structure to hold a date (structure consist of three integer values for month, day, and year)
(b) Assign values to the members of a structure variable
(c) Print out the values in the format 01-01-08.

PROBLEM NO. 2:

a) Using graphics.h, draw the Olympic circles in the center of screen. The colors are mentioned in the circle. (8)



b) Write a program which performs the following tasks: (7)
- Initialize an integer array of 10 elements in main( )
- Pass the entire array to a function modify( )
- In modify( ) multiply each element of array by 3
- Return the control to main( ) and print the new array elements in main()

PROBLEM NO. 3:

a) Write a small C utility that copy the content of one string to another. While copying, all small letters should convert to capital letter and vice-versa. All other characters will remain unchanged. (7)

b) Write a program that ask an integer, a character and a floating point number from a user and write them on a text file. (8)

PROBLEM NO. 4:

a) Implement bubble sort algorithm on a set of 12 numbers taken from keyboard. Create a BubbleSort() function. (8)

b) Initialize a 3x3 integer array. Find out the smallest numbers in it and also print its location in terms of row and column. (7)

P.T.O.

PROBLEM NO. 5:

a) What are the two ways of passing arguments to functions? Write a code example for both of them. (7)

b) A list consists of 15 integer values given by user. He wants to search any particular value which he entered from keyboard. Write a program to search the value and display the number of times it appears in the list. (8)

PROBLEM NO. 6:

a) Differentiate the following: (8)

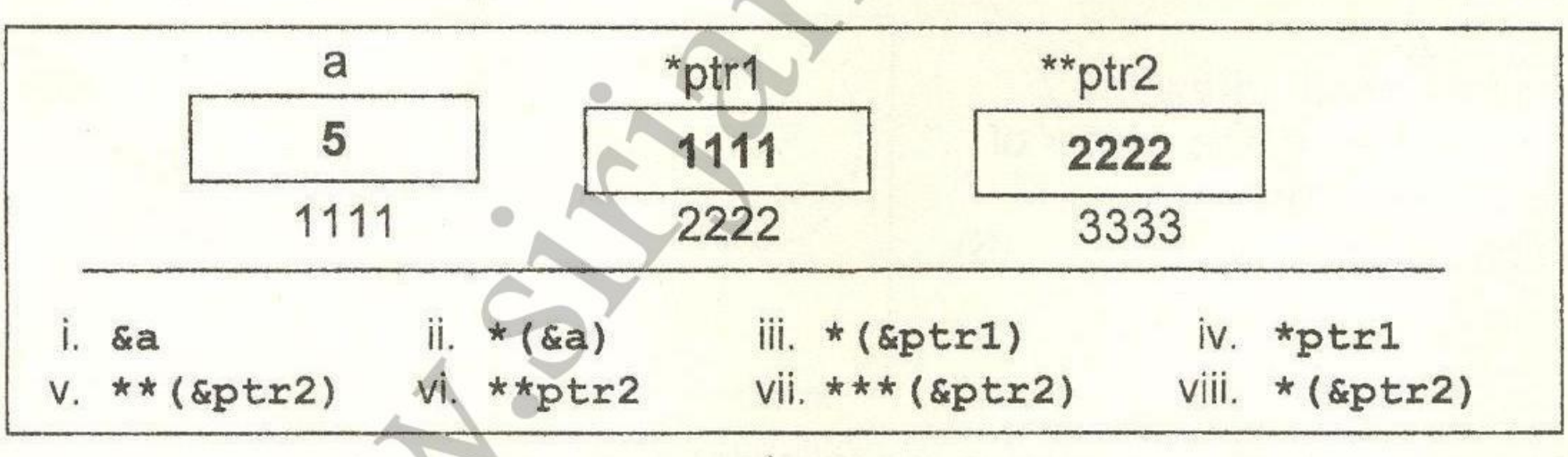
i) Local variable and Global variable	ii) `printf()` and `fprintf()`
iii) `new` and `delete`	iv) `switch` and nested `if-else`

b) Why we use `fread()` and `fwrite()` functions. Write a program in support of your answer? (7)

PROBLEM NO. 7:

a) Ask an integer from user and find out the sum and product of its digits. (7)

b) Carefully analyze the given data and show the values of the following. (8)



PROBLEM NO. 8:

a) What will be the output of the following C code: (7)

i.
```
char i[] = "Programming Languages";
int j = 0;
while ( i[j] != '\0' )
   putch( *i+j++ );
```

ii.
```
int s[] = { 12, 0, 5, 17, 13 };
int p, q, r; p=++s[1]; q=s[p]++; r=s[--q];
printf ( "\n%d %d %d", p, q, r );
```

b) Write a program to generate and sum first seven terms of the following series: $1^1/1! + 3^2/2! + 5^3/3! + 7^4/4! + \ldots$ (8)