

# MODEL QUESTION PAPER

## SECOND TERMINAL EXAMINATION

STD: XI

SUBJECT: COMPUTER SCIENCE

MAX MARKS: 55

DURATION: 2 ½ HRS

### Instructions:

1. All questions are compulsory.
2. Figure to the right indicate full marks.
3. Each main question should be answered on a fresh page.
4. Programs should be written in C language.

- Q 1 A ] Choose the correct alternative from those given below. 1  
A C program contains the following declaration.  
int i;  
long x;  
float y;  
The data type of expression i+x+y is \_\_\_\_\_.
- int
  - long
  - float
  - double
- B] State the difference between break and continue statement. 1  
C] State the purpose of 'o' and 'x' conversion character. 2  
D] State the purpose of 0 and '-' flag. 2  
E] List any four unary operators. 2  
F] Write a complete C program to find the largest of three numbers. 3
- Q.2A] Choose the correct alternative from those given below. 1  
Consider the statement k=strcmp("abc","abc");  
The value of k on execution of above statement is \_\_\_\_\_.
- 97
  - 100
  - 0
  - 1
- B] Define an array. 1  
C] Declare and initialize a single dimensional array of type integer with elements 10,20,30,40 and 50. 2  
D] Determine the output of the following code. 2
- ```
main()
{
int c[10]=1,2,3,4,5,6,7,8,9,0);
int a,b=0;
for(a=0;a<10;++a)
if(c[a]%2==1)
b+=c[a];
printf("%d",b);
}
```
- E] State the purpose of gets() and strlen() function. 2

- F] Write a complete C program to accept an integer array and determine the total number of odd and even numbers. 3
- Q 3 A] Choose the correct alternative from those given below. 1  
 The correct way to declare and initialise a 2-D array with 3 columns is \_\_\_\_\_.
- `int a[][]={{10,20,30},{40,50,60}};`
  - `int a[][]={10,20,30,40,50,60};`
  - `int a[][3]={{10,20,30},{40,50,60}};`
  - `int a[2][]={10,20,30,40,50,60};`
- B] Determine the total number of elements from `a[0][1]` to `a[3][0]` in a double dimensional array of size 5 X 4 1
- C] Write a complete C program to accept a double dimensional array of type integer and determine sum of elements of individual rows. 2
- D] Write a complete C program to accept a double dimensional array of type integer and determine the total number of zero and non zero elements. 2
- E] Determine the output of the following program segment code. 2
- ```
main()
{
char a [3][4]={"ABCD","EFGH","IJKL"};
for(i=2,i>=0,i--)
{
for(j=3;j>=0,j--)
printf("%c",a[i][j]);
printf("\n");
}
}
```
- F] Answer **ANY ONE** of the following. 3
1. Write a complete C program to accept a double dimensional integer array and display the lower triangular matrix.
  2. Write a complete C program to accept a double dimensional integer array (rows=columns) and determine if it is a symmetric matrix or not.
- Q 4 A] Choose the correct alternative from those given below. 1  
 The total number of comparisons required to sort the array of 5 elements using Bubble sort technique is \_\_\_\_\_.
- 5
  - 9
  - 8
  - 10
- B] Define sorting. 1
- C] When is linear search algorithm more suitable as compared to binary search algorithm. 2
- D] Perform insertion sort on the following list of numbers. 3  
 8,-1, 0 , -2 ,7 ,3  
 Show the contents of the array after each iteration.
- E] Attempt **ANY ONE** of the following. 4
1. Write a complete C program to merge two single dimensional sorted arrays of type integer. Assume that both input array and resultant array are sorted in ascending order.
  2. Write a complete C program to perform selection sort on a single dimensional array of integers in descending order.

- Q 5 A] Choose the correct alternative from those given below. 1  
By default the return type of a function is \_\_\_\_\_.
- float
  - void
  - integer
  - character
- B] State any two advantages of using functions. 1
- C] Write a short note on function called by reference. 2
- D] Write a user defined function which accept two integer arguments a and b such that a, b>=0 and determine and returns the value of a<sup>b</sup>.(Note: without using power function) 3
- E] Attempt **ANY ONE** of the following. 4
1. Write a complete C program to determine  ${}^n C_r$ . (r<=n)  
Define a function named fact() which returns the factorial of the number.
  2. Write a complete C program to determine the summation of the following series.  
1/1! -1/2! +1/3! -1/4! +.....upto n terms .  
Define a function named fact() which returns the factorial of the number.s