

LIB

28/5/13

FE Sem-II (R) May-June 2013

SPA

Disneha (B) April 2013 119

Cón. 6927-13.

Structured Programming Approach.

GS-5508

(REVISED COURSE)

(3 Hours)

[Total Marks : 80

- N.B.**
- (1) Question No. 1 is **compulsory**.
 - (2) Attempt any **three** questions from remaining.
 - (3) **All** questions carry **equal** marks.
 - (3) Assume suitable **data** wherever **necessary**.

1. (a) Explain the purpose of following standard library functions – 3
(i) Floor () (ii) ceil () (iii) sqrt ()
(b) Explain how problem is defined with a help of suitable example. 4
(c) Explain difference between for, while and do while loop. 3
(d) Explain difference between call by value and call by reference. 4
(e) Explain any three string standard library functions. 3
(f) Explain reference and de-reference operators with example. 3
2. (a) Explain various storage classes used in c with example. 5
(b) Write a program to calculate sum of list by passing array to a function. 5
(c) Write a c-program to create an array of structure to store the details of almost 100 10
employees. And sort it according to employee ID. Employee details are as follows :
(i) Employee Name
(ii) Employee ID
(iii) Employee Salary.
3. (a) Write an algorithm and draw flowchart to calculate roots of quadratic equation. 6
(b) Write a program to display pascal triangle. 6
A
A B
A B C
A B C D
A B C D E
(c) Explain recursion concept. Write a program to display Fibonacci series using recursion. 8
4. (a) Write an algorithm to sort set of numbers in ascending order. For above problem 6
in which cases time complexity is calculated.
(b) Write a program to display armstrong nos between 1 to 1000. 6
(c) Write a program to calculate matrix multiplication and transpose for a matrix. 8

[TURN OVER

Con. 6927-GS-5508-13.

2

5. (a) Write a output for following program :-

```
# include <stdio.h>
Void main ( )
{
    int x = 10, y, z;
    z = y = x;
    y- = -- x;
    z - = x --;
    x - = -- x - x --;
    printf ("x = %d y = %d z = %d," x, y, z);p
}
```

- (b) WAP to calculate sum of series
 $1/2 + 3/4 + 5/6 + \dots + n$ terms.
- (c) Write a program to sort list elements in descending order.
6. (a) Explain difference between switch statement, ladder of if else and nested if else.
- (b) Write a recursive program to calculate factorial of accepted number.
- (c) Write a program to validate whether accepted string is palindromé or not.
- (d) Explain how to read the contents of file and write into the file with Syntax.
-