

Sub: SPA FE Sem (II) Rev (CBGS)
March 2014

(REVISED COURSE) QP Code : NP-17782

(3 Hours)

[Total Marks : 80

- N. B. :** (1) Question No. 1 is compulsory.
(2) Attempt any **three** questions from remaining five questions.
(3) **Figures to right indicate full marks.**
(4) Assume suitable data if necessary, but justify the same

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| 1. | (A) What do you mean by algorithm? Which points you should consider while developing the algorithm. | 4 |
| 1. | (B) Determine the type of triangle, given its sides.(i.e. isosceles, scalene, equilateral). Is the above problem definition is complete? if not, make this problem definition complete. | 4 |
| 1. | (C) State any 2 library function in string.h along with its uses. | 4 |
| 1. | (D) What do you mean by auto and extern storage class. Explain with example. | 4 |
| 1. | (E) Explain switch control statement with the help of example. | 4 |
| 2. | (A) Write a program in C to delete all the occurrences of given number from an ARRAY. For example, suppose ARRAY A= { 2,5,3,9,2,2,3} and given no is 2 then after deletion ARRAY should have A= { 5,3,9,3} | 10 |
| 2. | (B) Write a program to check whether the given number is palindrome or not. i.e if no is 12421 it is palindrome | 10 |
| 3. | (A) What do you mean by Recursion? write a program which will accept two numbers, n and r and calculate value of $nC_r = n! / r! (n-r)!$. Program should make use of recursion. | 10 |
| 3. | (B) Write a program to sort given nos in Ascending order. | 10 |
| 4. | (A) A Hospital needs to maintain details of patients . Details to be maintained are, First name, Middle name , Surname, Date of Birth, Disease. Write a C program which will print the list of all patients with given disease. | 10 |
| 4. | (B) write a program which will accept a 2 dimensional square matrix and find out transpose of it. Program should not make use of another matrix. | 10 |
| 5. | (A) Write a program to generate following patterns. | 10 |
| | (i) | |
| | 1 | |
| | 2 3 | |
| | 4 5 6 | |
| | 7 8 9 10 | |
| | (ii) | |
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5. (B) Write a C program to multiply 2 matrices after checking compatibility. Your program should make use of function to accept element of matrix, display matrix, and multiply matrix 10
6. (A) Write a program to calculate summation of series.
 $1/2 - 3/4 + 5/6 - 7/8 + \dots$ upto n terms. 10
6. (B) What do you mean by FILE ? What are the different functions available to read data from file ? Specify the different modes in which file can be opened along with syntax. 10
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