STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI - 600 086
(For candidates admitted during the academic year 2011–12)

SUBJECT CODE : 11MT/AC/CP34

B. Sc. DEGREE EXAMINATION, NOVEMBER 2012
BRANCH I - MATHEMATICS
THIRD SEMESTER

REG. NO. _____

COURSE : ALLIED – CORE
PAPER : C-PROGRAMMING AND APPLICATIONS (THEORY)
TIME : 30 MINUTES MAX. MARKS : 20

ANSWER ON THE QUESTION PAPER ITSELF

SECTION – A

I Answer ALL Questions: (20 marks)

State whether the following statements are True or False:

1. Blank spaces cannot be inserted within a variable name.
2. For(;;) implements infinite loop.
3. An array is used to store dissimilar elements and structure to store similar elements.
4. Array index in C starts at zero.
5. A function should return atleast one value.

Fill up the blanks:

6. The expression a=7/22*(3.14 * 2) * 3/5 evaluates to _____.
7. _____ is an array of characters terminated by '\0'.
8. Elements of a structure variable can accessed through _____ operator.
9. int arr[30]; the word arr represents the _____ of the array.
10. Pointer variable can hold _____ of another variable.

Choose the correct answer:

11. A character variable can at a time store _____ character
    a. 1 b. 8 c. 255 d. None of these

12. Which of the following is allowed in an arithmetic expression of C?
    a. [ ] b. { } c. () d. /* */

13. Which of the following function should be used to input an integer through keyboard?
    a. scanf() b. gets() c. getche() d. getint()

..2

14. What is the difference between the 5's in the following two expression?

```
int  num[5];
num[5]=11;
```

a. First is a particular element, second is type
b. First is array size, second is particular element
c. Both specify array size
d. Both specify particular element

15. Body of the loop will be executed atleast once in the _____ statement.

a. for b. While c. Do ... while d. All of these

Match the following:

16. ==	a. conditional expression
17. >>	b. relational operator
18. ?:	c. mod operator
19. ->	d. division
20. %	e. assignment
	f. structure operator
	g. shift right

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SECTION – B

II Answer any FIVE Questions: 5x8=40

1. Discuss about the different looping structures available in C
2. Explain about any four data types available in C
3. What is an array? Explain how do declare and use an array with suitable example.
4. Why do you need function? How do declare, define and call function in C?
5. Discuss about any four operations that can be done on a data file.
6. What are pointers? How do you pass values using pointers to function? Discuss about the merits and demerits of using pointers.
7. Define structure. How is the member of a structure accessed and processed? Compare structures and Union.

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TIME : 1½ HOURS MAX. MARKS : 40

SECTION – C

III Answer any one Question: 15 X 1 = 15

1. Write a C program to find the transpose of a square matrix.

2. Write a C program to find the range of rain fall during the year 2011 by taking the 12 months rain fall from the user.

IV Answer any one Question: 25 X 1 = 25

3. Write a C program to count number of digits, upper case letters, lower case letters and vowels in the given sentence using pointers.

4. Write a C program to store book information of 10 books and to print the same.

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SECTION – C

III Answer any one Question 15 X 1 = 15

1. Write a C program to prove A*I = A where A is a square matrix and I is a unit matrix of order 'n'.

2. Write a C program to find the topper in your class considering 5 subject.

IV Answer any one Question 25 X 1 = 25

3. Write a C program to convert the sentence to lower case.

4. Write a C program to store name, city and mobile number of 10 of your friends and print only the details of your friends who resides in Chennai.