SUBJECT CODE : 11MT/AC/CP34

B. Sc. DEGREE EXAMINATION, NOVEMBER 2015
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

Answer ALL Questions: **(20 marks)**
State whether True or False:

1. Integer and floating point constants represent numbers.

2. ?: is a logical operator.

3. A breakpoint is a temporary stopping point within a program.

4. A loop terminates when a continue statement is encountered.

5. Automatic variables are always declared within a function.

Fill up the blanks:

6. _____ have standard predefined meanings in C.

7. A _____ is a single character enclosed in apostrophes.

8. An _____ always begins with a backward slash and is followed by one or more special characters.

9. _____ is an identifier that is used to represent a single data item.

10. The keyword _____ can be used as a type specifier when defining a function that does not return anything.

Match the following:

11. record1   (a) expression statement

12. 0.8E+0.8   (b) string constant

13. 'a'   (c) real constant

14. "red,white"   (d) identifier

15. $a*(b+c)$;   (e) character constant

Choose the correct answer:

16. If a, b, c are integer variables that have been assigned the values a=8, b=3 and c= -5
    the value of $a*(b/c)$ is

    a. 0   b. 1   c. 2

17. The general form of go to statement is

    a. goto label.   b. go to label;   c. goto label;

18. The number of _____ determines the dimension of an array.

    a. parenthesis   b. subscripts   c. elements in the array name

19. _____ are passed to a function as arguments.

    a. identifiers   b. pointers   c. structures

20. The _____ statement can be used to read all types of data from a file.

    a. open   b . scanf   c. fscanf

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TIME   : 1 HOUR   MAX. MARKS : 40

SECTION – B

Answer any FIVE Questions: **5x8=40**

21. Explain the different types of constants available in C.

22. Specify if statements and briefly explain them with example.

23. Explain the concept of recursion and write a recursive function for $n!$.

24. Define a pointer and explain how they are initialized. Write any two applications of
    pointers in developing programs.

25. Explain for loop and while loop with an example.

26. How do you pass an array to a function? Explain with an example.

27. Discuss briefly any four file accessing commands/functions.

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A

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

B. Sc. DEGREE EXAMINATION, NOVEMBER 2015
BRANCH I - MATHEMATICS
THIRD SEMESTER

COURSE   **: ALLIED – CORE**
PAPER   **: C-PROGRAMMING AND APPLICATIONS (PRACTICAL)**
TIME   **: 1½ HOURS   MAX. MARKS : 40**

SECTION – C

Answer any one Question: **15 X 1 = 15**

28. Write a C program to find the transpose of a matrix by taking input from the user.

29. Write a C program to add two complex numbers using functions.

Answer any one Question: **25 X 1 = 25**

30. Design a structure student_record to contain name, date of birth and total marks obtained. Develop a C program to read data for 10 students in a class and list them rank-wise.

31. Write a C program to find simple interest and compound interest using functions by taking input from the user.

✦✦✦✦✦✦✦✦✦

B

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PAPER   : C-PROGRAMMING AND APPLICATIONS (PRACTICAL)
TIME   : 1½ HOURS   MAX. MARKS : 40

SECTION – C

Answer any one Question: **15 X 1 = 15**

28. Write a C program to multiply two 3x3 matrices by taking input from the user.

29. Write a C program to find the roots of a quadratic equation.

Answer any one Question: **25 X 1 = 25**

30. Write a C program to add two complex numbers using functions.

31. Write a C program to create a data file to store account information of 10 bank customers and write a C program to read the same.

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