Roll No...............

BCA-201(N)

B. C. A. (Semester-II) Examination -2014

(New Course)

Paper: First

C Programming

Time: Three Hours] [Maximum Marks: 75

Note: Section A is compulsory. Attempt any seven questions from Section B and attempt any one question from Section C.

Section-A

1. In following code perform following tasks: **(4.5x4=18)**
   (i) Find Bugs or error in the following code of program (with mentioning line number).
   (ii) Explain how all bugs are corrected to generate compiled version of codes.
   (iii) After correction what is the output of the code.

   (a) Void main () {

```
File *FP;
Char text [30];
Clrser ();
FP = fopen ("text.txt", "w");
Clrscr ();
Puts ("In Enter the text here");
gets (text);
fprintf ("% &", & text);
```

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10. (a) What is Union in C? How is data stored using Union?
    (b) What are the difference between Union and structure?

11. (a) What is the difference between end of file and end of string?
    (b) Explain command line arguments.

12. Distinguish between text mode and binary mode operation of a file. How does append mode differ from a write mode?

13. (a) What are the use of malloc( ) and free( ) functions?
    (b) Explain the concept of dynamic memory allocation.

Section-C

Note: Attempt any one question. **(15x1=15)**

14. (a) Write a program to define a structure with tag state; in which fields are state name, number of districts and total population. Define function for read and display the data twenty states using pointer to structure.
    (b) Write a program to enter some text through keyboard, count the number of words that start from 'w' and display list of words.

15. (a) Write a program to display numbers from 1 to 100. Redirect the output of the program to text file.
    (b) A 4x4 matrix is entered through the keyboard. Write a program to obtain the determinant value of Inputed matrix.

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(b) Void main ()
```
{
struct book
    { int pages;
    float price;
    } *b1;

b1. pages = 500;
b1. price = 25.5;
clrscr ();
printf ("ln pages: %ud", b1. pages);
printf ("ln price: % g", b1. price);
}
```

(c) void main()
```
{
float a [ ]={13.21, 1.5, 3.54, 7.268};
float *j, *k;
j=& a;
k=a+4; j = j*2;
k=k/2;
printf ("ln %d % d % d", *j, *k,k+1);
}
```

(d) void main ()
```
{
char str1[10]= 'Song, Str2 [10] = 'Sunny';
clrscr;
printf ("ln source string -: % &" str1);
printf ("ln destination string -: % &", str2);
strcpy (str1, & str2);
printf ("ln destination string -: % &", str2);
getchr();
}
```

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Section-B

Note: Attempt any seven questions. Each question has 6 marks.
(6x7=42)

2. (a) What are strings? How are they declared?
   (b) What is the NULL character? Why is it important?

3. (a) What is preprocessor directives? List out some directives.
   (b) What are the conditional compilation directives? How they are used in code?

4. List any three library functions for string and files respectively and illustrate them with suitable examples.

5. Define some bit wise operators. Illustrate right and left shift operator with suitable examples.

6. (a) Explain the features of pointers. Also explain the use of (*) indirection operators.
   (b) Illustrate the relation between an array and a pointer.

7. What is macro? How they are defined and undefined. Illustrate by suitable example?

8. (a) Can we store values and addresses in the same array? Explain
   (b) Mention difference between character array and Integer array.

9. (a) Explain nested structure. Draw a diagram to explain a nested structure.
   (b) How are structure elements accessed using Pointer? Which operator is used.