



DHARMSINH DESAI UNIVERSITY, NADIAD
FACULTY OF TECHNOLOGY
B.TECH. SEMESTER II[IT/CE/MH]

SUBJECT: (CT 213) COMPUTER PROGRAMMING IN C

Examination	: Second Sessional	Seat No.	: _____
Date	: 05/03/2014	Day	: Wednesday
Time	: 03:45 to 5:00	Max. Marks	: 36

INSTRUCTIONS:

1. Figures to the right indicate maximum marks for that question.
2. The symbols used carry their usual meanings.
3. Assume suitable data, if required & mention them clearly.
4. Draw neat sketches wherever necessary.

Q.1 Answer the following questions: [12]

(A) Consider a R1[20][8] 2-D array of type integer is declared, which has base address = 1200. Compute the address of the element- R1[15][5] assuming that the elements are stored in row major order. [2]

(B) Explain Formal parameters and Actual parameters with example. [2]

(C) Difference between auto and static variable. [2]

(D) Write the logic to print the Pascal triangle. [2]

(E) **Find the error if any, correct it and write the output for the following code:** [4]

(i) <pre>int value(int a) { a>20 ? return(10); return(20); } void main() { int a=value(20); printf("%d",a); }</pre>	(ii) <pre>void main() { int arr[3]={1,2,2}; for(i=0;i<3;i++) printf("%d\n", i[arr]); }</pre>
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Q.2 Answer the following questions: [12]

(A) Write a program to swap the biggest and smallest number in the array of 10 elements using function. Create three functions "FindBig()", "FindSmall()" and "swap()". "FindBig()" and "FindSmall()" these functions are used to find big and small elements, and "swap()" will work for swapping those numbers. **Pass array as an argument to all functions.** [6]

(B) **Answer the following questions:** [6]

(i) Write a program to extract last N characters from the string and display it. [4]

(ii) **Find the error if any, correct it and write the output for the following code:** [2]

```
void main()
{ int i;
  char s1[]="Dharmasinh Desai University";
  while(s1[i]!='\0') {
    if(i%2 == 0)
      printf("%c",s1[i]);
    i++; } }
```

OR

(C) **Answer the following questions:** [6]

(i) Write a program to check whether the string is palindrome or not. Display appropriate message. [4]

(ii) **Find the error if any, correct it and write the output for the following code:** [2]

```
void main()
{ int a=25,b=20;
  { int a=10;
    int c=a%b;
    printf("%d",c);
  } b=c;
  printf("%d",b); }
```

Q.3 Answer the following questions: [12]

(A) Write a program to calculate GCD using **recursive function**. [4]

(B) Write a program to read an array of 10 floating point numbers. Display the position of the second largest number. [4]

(C) Explain all inbuilt string handling function with example. [4]

OR

Q.3 Answer the following questions: [12]

(A) Write a program to calculate exp(x,y) using **recursive function**. (You have to find x^y eg. 2^4 that is 16). [4]

(B) Write a program to find XA+YB where A & B are two 3X3 Matrices. Here value of X and Y will be taken from user. [4]

(C) Explain Table of String with example. [4]