Government College of Engineering, Amravati
(An Autonomous Institute of Government of Maharashtra)

First Semester B. Tech. (All Branches)

Winter – 2016

Course Code: CSU101   Course Name: Computer Science

Time: 2 Hrs. 30 Min.

Max. Marks: 60

Instructions to Candidate
1) All questions are compulsory.
2) Assume suitable data wherever necessary and clearly state the assumptions made.
3) Diagrams/sketches should be given wherever necessary.
4) Use of logarithmic table, drawing instruments and non-programmable calculators is permitted.
5) Figures to the right indicate full marks.

1.   **Solve any two**

   a)   What is operator? Explain different types of operator available in C   **06**

   b)   Explain basic Built-in Data Types in C   **06**

   c)   Write a program to calculate simple interest (SI=p*n*r/100)   **06**

2   **Solve any two**

   a)   Write program using If else to grade the student according to the following rules   **06**

Marks			Grade	
70	to	100	DISTINCTION	
60	to	69	IST	CLASS
50	to	59	IIND	CLASS
40	to	49	PASS	CLASS
0 to 39			FAIL	

b) Differentiate between break and continue statement with example? **06**

c) List and explain with example different parameters passing techniques? **06**

3 **Solve any two**

a) Explain various storage classes in C

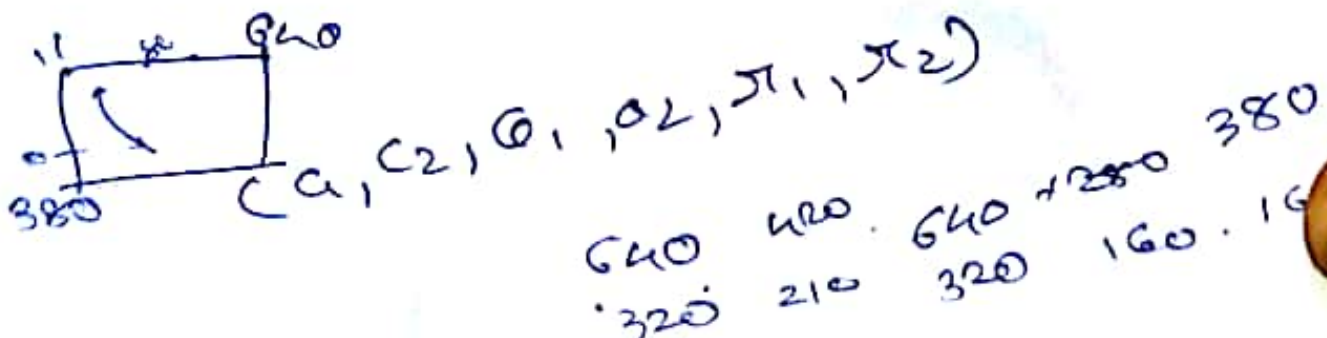**b)** Write a program to find smallest element in array of 10 elements. **06**

c) Write a program to find the transpose of a matrix. **06**

4 **a)** What is array of pointers and pointers to array? **06**

b) Write a user define function to reverse the string **06**

5 **a)** Write a program to accept name, age, address, salary of 100 employees and print the total and average salary. Make use of structure concept. **06**

b) Write a program C graphics program to draws basic shapes such as circle, line, rectangle, ellipse **06**

Government College of Engineering, Amravati
(An Autonomous Institute of Government of Maharashtra)
First Semester B. Tech. (All Branches)
Winter – 2012

Course Code: CSU101

Course Name: Computer Science

Time: 2 hr. 30min.   Max. Marks: 60

Instructions to Candidate:
1) All questions are compulsory.
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3) Diagrams/sketches should be given wherever necessary.
4) Use of logarithmic table, drawing instruments and non-programmable calculators is permitted.
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1.   **Solve**

a.   Describe the meaning of following Built-in data   6
types of 16 bit computers along with their size and
range.
        (i) char (ii) int (iii) float

b.   Explain the meaning of each one of the following   6
instruction in the program. What does these
program print?
        (i) main ()
            {
            int x=10 , y=15,a,b;
            a=x++;
            b= ++y;
            printf("%d%d\n",a,b);

OR

(ii) main ()
{
int x=100,y=20,z=300,w=40;
printf("%d\n%d\n%d\n%d\t%d",x,y,z,w);
printf("t%d\n\t%d\n\t%d",x,y,z,w);

2. Solve

a. What is the purpose of using break and continue 6 statements in C? Explain with example.

b. Write a function that will calculate and display the real roots of the quadratic equation $ax^2+bx+c = 0$. 6

3. Solve

a. Write a program in C to reorder the elements of an one-dimensional integer array in descending 6 order.

OR

b. Write the features of different storage classes in C. explain with examples the difference between:
   (i) automatic and static variables.
   (ii) Static and external variable. 6

c. Write a program in C to copy the contents one string to another and display both strings using pointer. 6

4. Solve

a. Explain the meaning of following declarations. 6
   (i) int *p   (ii) int * p[10]
   (iii) int(*p) [10]   (iv) int *p(void)
   (v) int p(char *a)   (vi) int *p(char *a)

$x^2-7x+12=0$
$x = x^2 4x - 3x$
$(x-3)$,

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b. Describe the rules of pointer arithmetic with suitable examples. 6

OR

c. Define structure called cricket that describes the following information: 6
(i)player name (ii) team name (iii) batting average
Write a program to read and print the information about all 11 players of a team.

5. Solve

a. What are command line arguments? Describe the information represented by each formal arguments in function main with suitable an example. 6

b. Write a C program to read the file called NUMBERS containing series of 20 integer numbers and then write the odd numbers to a file called ODD and all even numbers to a file called EVEN. 6

OR

c. Write a program to draw rectangle with red color and circle with blue color. 6

Government College of Engineering, Amravati
(An Autonomous Institute of Government of Maharashtra)

First Semester B. Tech. (ALL)

Winter – 2015

Course Code: Computer Science

Course Name: CSU101

Time: 2 Hrs. 30 Min.*

Max. Marks: 60*

Instructions to Candidate
1) All questions are compulsory.
2) Assume suitable data wherever necessary and clearly state the assumptions made.
3) Diagrams/sketches should be given wherever necessary.
4) Use of logarithmic table, drawing instruments and non-programmable calculators is permitted.
5) Figures to the right indicate full marks.

1   Solve:

(a) i) List the keywords and variables for the given 2m
   program

  ii) Find associativity of the operators: Conditional, 3m
   Assignment and Bitwise AND

(b) Write down the instructions available in C 4m

(c) How many "Reserved words" are available in C? 3m
  Write down any four built-in data types in C

Contd..

...any two,

(a) What is a function? Explain it with suitable example.

(b) Write a C program for checking whether an entered number is prime number or not, using while loop (Use break if possible)   6

(c) Write a C program to print the given star pattern using nested for loop   6m

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1    2    3    4
1    2    3
1    2
1
```

3   Solve:

(a) Explain storage classes in brief with their storage, default initial value, scope and life   8m

(b) Write a C program with a function to sort an array in ascending order.   4m

OR

(c) Define strings. List all its standard library functions and explain any one of it with an example   4m

4   Solve:

(a) i) Define pointer arithmetic   2m

OR

ii) Fill In The Blanks: A String is terminated by _____ character, which is written as _____ . .   2m

(b) Assume that the two variables r and s are stored at 1000 and 2000 memory address respectively   4m
If int r=30;   int *p= &r;   int *s = &p
Write down the outputs for the given terms - r , s, &r , &s , *p, *s , *(&r) , *(&s)

(c) Write a C Program to find length of a string 6m
without using library function (Use Pointers)

5   Solve any two:
(a) Write a C Program to print name, prices and 6m
pages for 100 books stored in a libraray, using
array of structures

(b) Define graphics mode and initgraph() function. 6m
Write a C program for drawing a line and printing
its slope using graphics in C

(c) Explain "r", "w" and "a" opening modes of file in 6m
detail