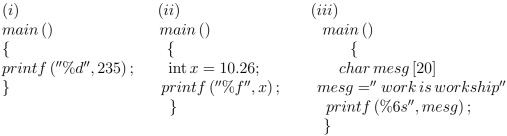I B.Tech(ccc) Regular Examinations, December 2007
PROGRAMMING AND DATA STRUCTURES
(Common to Civil Engineering and Mechanical Engineering)

Time: 3 hours   Max Marks:100

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) What is a microprocessor? Give some examples?   [5]

   (b) Distinguish between the following :   [15]
      i. Line printer and Laser printer
      ii. Floppy disk and Hard disk
      iii. Address bus and Control bus

2. (a) Write the output of the following: [10]

   (i) (ii) (iii)
   $main\,()$ $main\,()$ $main\,()$
   {   {   {
   $printf\,("\%d",235)\,;$ $int\,x=10.26;$ $char\,mesg\,[20]$
   } $printf\,("\%f",x)\,;$ $mesg\,=''\,work\,is\,workship''$
                            } $printf\,(\%6s'',mesg)\,;$
                                                    }

   (b) Write a C program to accept your name, roll number, branch and percentage
   and display it in the required format.   [10]

3. (a) What are storage classes ? Explain with examples.   [10]

   (b) Write a user defined function to append two strings.   [10]

4. (a) Write a C program to read integers from the file using getw( ) function. [10]

   (b) Write a C program to write a string into a file using fputc( ) function. [10]

5. (a) Write a C Program to fill with diagonal lines the rectangle where the rectangle
   in defined with the vertices (75,75) (150,75), (150,150) and (75,150).

   (b) Translate the above object vertically from bottom to top with an increment
   of 10 units at a time.   [10+10]

6. What is Circular doubly linked list? Explain the various operations on Circular
   doubly linked lists with suitable algorithms.   [20]

7. Write a program to convert a given prefix expression to postfix expression using
   stacks   [20]

8. What is sorting? Explain about tree sorting technique with suitable examples. [20]

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