Code: R7100307

R07

B.Tech I Year (R07) Supplementary Examinations, June 2013
COMPUTER PROGRAMMING
(Mechanical Engineering)

Time: 3 hours
Max. Marks: 80

Answer any FIVE questions
All questions carry equal marks

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1   (a)   With an example explain the structure of C program.
    (b)   Write notes on the following:
          (i) Type conversions.
          (ii) Expressions.
          (iii) Precedence and order of evaluation.

2   (a)   Distinguish between while and do-while loops. Explain with examples.
    (b)   Write a C program to check whether a given number is palindrome or not.

3   (a)   Discuss various storage classes in detail.
    (b)   Write a brief note on C preprocessor directives.

4   (a)   Write a C program to find the trace of a matrix.
    (b)   Discuss the syntax of the dynamic memory management functions. Also discuss the
          advantages of dynamic memory allocation over static memory allocation.

5   (a)   Explain the difference between structure and union with examples.
    (b)   Explain the following terms:
          (i) Nested structures.
          (ii) Array of structures.
          (iii) Bit fields.

6   (a)   Discuss i/o operations on files.
    (b)   Illustrate the use of fseek and ftell functions.

7   (a)   Explain the operations on queues.
    (b)   With an example explain how bubble sort works.

8   (a)   What is a binary tree? How is it represented? Explain various traversals on a binary tree.
    (b)   Discuss the basic operations on graphs.

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