

Total No. of Questions—12]

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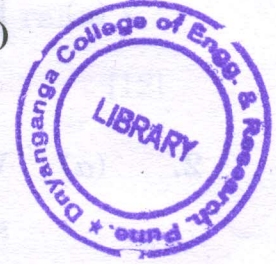
[4162]-202

S.E. (Computer Engineering) (First Semester)

EXAMINATION, 2012

PROGRAMMING AND PROBLEM SOLVING

(2008 PATTERN)



Time : Three Hours

Maximum Marks : 100

- N.B. :-** (i) In Section I, attempt Q. No. 1 or Q. No. 2, Q. No. 3 or Q. No. 4, Q. No. 5 or Q. No. 6.
- (ii) In Section II, attempt Q. No. 7 or Q. No. 8, Q. No. 9 or Q. No. 10, Q. No. 11 or Q. No. 12.
- (iii) Answers to the two sections should be written in separate answer-books.
- (iv) Neat diagrams must be drawn wherever necessary.
- (v) Figures to the right indicate full marks.
- (vi) Assume suitable data if necessary.

SECTION I

1. (a) Define the data types of the following data items. Justify your answers : [6]

- (i) Sum of money

P.T.O.

(ii) Telephone number

(iii) Zip code.

(b) Write a short note on Top down design. [6]

(c) Explain the difference between variables and constants. [4]

Or

2. (a) What do you mean by Algorithmic solutions and heuristic solutions ? Describe the *six* steps in problem solving. [6]

(b) Construct a logical expression for the following policy on using a Departmental Store charge card for a customer to charge an item is that : [6]

(i) Customer must have a valid charge card and

(ii) Balance of less than Rs. 500 or charge of less than Rs. 50.

(c) What is function ? Explain any *two* types of functions. [4]

3. (a) What are different parameters passing methods ? Explain each method with suitable example. [6]

(b) Using Negative logic, write the algorithms and draw the flowcharts for the following set of conditions : [6]

$R = 50$ for $S \leq 1000$

$R = 100$ for $S = 1001 - 4000$

$R = 250$ for $S = 4001 - 8000$

$R = 75$ for $S > 8000$

