Institute: (0301)SYMBIOSIS INSTITUTE OF COMPUTER STUDIES & RESEARCH, PUNE

Programme: (030122) BACHELOR OF BUSINESS ADMINISTRATION (INFORMATION TECHNOLOGY)

Batch: 2010-13
Semester: I
Course: Logic Development & Program Concepts
Course Code: 0301220103

Date: 01/04/2017

Day: Saturday

Maximum Marks: 30

Time: 01:30 pm - 02:30 pm

Q.1 Answer the following in short. [10 Marks]

1. Describe. Top-tested loop. [3]

2. Differentiate between high-level and low-level languages. [3]

3. Draw the different symbols used in flow charts and state their use. [4]

Q.2 Draw a flowchart for the following (Any ONE): [10 Marks]

1. A prime number is a natural number greater than 1 that has no positive divisors other than 1 and itself. A twin primes is a pair of prime number that differs from another by 2. Following are some of the twin prime pairs: (11, 13), (41, 43).
   Draw a flowchart to print first 10 pairs of twin primes.

2. A palindromic number is a number that reads the same both the ways (left to right and right to left). For example, 25852 is palindromic. Write an algorithm to print first 20 palindromic numbers.

Q.3 Write an algorithm for the following (Any ONE): [10 Marks]

1. A Harshad number is an integer that is divisible by the sum of its digits.
   For example: 45 and 54 are Harshad numbers. They are divisible by sum of their digits (4 + 5 = 9).
   Write an algorithm to print first 100 Harshad numbers starting from 10.

2. Write an algorithm to accept a number from the user and print the sum of odd digits in it.
   For example: if the number is 2574 then, the output should be sum of 5 + 7 ie. 12.

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