M. Sc. (I.T. & I.C.T.) (Programme) Examination
March / April - 2016
The Science of Programming

Time : 3 Hours] [Total Marks : 70

Instructions :
(1) Differentiate between testing and debugging.
(2) Explain various data types supported by QBASIC.
(3) Differentiate between int() and fix() function with example.
(4) What is assembly language? Explain its advantages and disadvantages.
(5) Differentiate between compiler and interpreter.
(6) What is jumping? Differentiate between forward jumping and backward jumping.
(7) What will be output of the following:
   (a) PRINT LEN(LEFT$("SGUNIVERSITY",5)+RIGHT$("PROGRAMME",4),3,6))
   (b) PRINT VAL(MID$("123verbS478",10,2))+3
   (c) PRINT STR$(567)+"apple"

2 Answer following questions in detail: (Any Three) [18]

(1) What is an array? Give its advantages. Explain one dimensional and two dimensional array with example.
(2) What is Branching and Looping? Explain one entry controlled and exit controlled loop with example.
(3) Explain DATE$ and TIME$ functions with example.
(4) Explain Subroutine with example. How is it different than user defined function?
3 Answer following questions in detail: (Any Three) [18]

(1) Explain user defined data type in QBASIC with example.
(2) What is File? Differentiate between sequential and random file. Explain various mode in which file can be opened, with example.
(3) What is flowchart? Explain it with its symbols, advantages and disadvantages.
(4) Write a program to print occurrence of a particular character into a master string.

4 Answer following questions in detail: (Any four) [16]

(1) Write a program to sort an array of 10 integers.
(2) Create an user defined data type for book(bid, bname, bauthor, bprice, bpublisher). Write a program to take an input of 10 different books and display information of books published by publisher “TATA”.
(3) Write an UDF to check whether a given number is prime or not.
(4) Draw a flowchart to display sum of all odd digits in a given number.
(5) Write a program to generate a Fibonacci series upto N.