



**A-1712**  
**B. Sc. (I.T) (Sem. I) Examination**  
**March / April – 2015**  
**The Science of Programming**

Time : 3 Hours]

[Total Marks : 70

**Instruction :**

<p>नीचे दृष्टावेक निशानीवाणी विगतो उत्तरवही पर अवश्य लखवी. Fillup strictly the details of signs on your answer book.</p> <p>Name of the Examination : B. SC. (I.T) (SEM. I)</p> <p>Name of the Subject : THE SCIENCE OF PROGRAMMING</p> <p>Subject Code No. : 1 7 1 2 Section No. (1, 2,...): Nil</p>	<p>Seat No. :</p> <table border="1" style="width: 100%; height: 20px; border-collapse: collapse;"><tr><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td></tr></table> <div style="border: 1px solid black; border-radius: 15px; height: 80px; display: flex; align-items: center; justify-content: center; margin-top: 10px;">Student's Signature</div>						

**1 Answer following questions: (Any Three) 18**

- (1) Differentiate between various language translator.
- (2) Differentiate between pre test and post test loop with example.
- (3) What do you mean by branching. Differentiate between NESTED IF and SELECT CASE structure.
- (4) Explain high level, assembly and machine level language with their advantages and disadvantages.

**2 Answer following questions: (Any Three) 18**

- (1) What is flowchart? Explain it with its symbols , advantages and disadvantages.
- (2) What do you mean by jumping? Differentiate between forward jumping and backward jumping. Explain GOTO statement with example.
- (3) Explain INSTR, ASC and STR\$ function with example.
- (4) What do you mean by user defined function? How is it different from Sub routine? Explain with example.

**3** Answer following questions: (Any Three) **18**

- (1) Explain MID\$, HEX\$ and TIME\$ function with example.
- (2) What is File? Why is it important? Explain various mode in which file can be opened with example. Write a program to append contents of file "student.dat" into another file "Info.dat".
- (3) Differentiate between Debugging and Testing. Explain different type of errors with example.
- (4) What is an array? Why is it used? How will you store information of 5 students in two dimensional array.

**4** Answer following questions: (Any Four) **16**

- (1) Write a program to calculate sum of all digits present in a given number.
- (2) Write UDF to check whether a given number is prime or not.
- (3) Write a program to perform matrix addition, subtraction and multiplication with example.
- (4) Write a program to generate Fibonacci series for number upto N.
- (5) The marks obtained by a student in 5 different subject are input through keyboard. The student gets a division as per the following rules:

Percentage above or equal to 60 → First Division  
Percentage between 50 and 59 → Second Division  
Percentage between 40 and 49 → Third Division  
Percentage less than 40 → Fail

Draw a flowchart to take input of calculate the division obtained by the student.