Bachelor of Computer Application-I First Semester (Old)
## 1BCA4 - Programming Tools and Techniques Paper-IV

P. Pages : 2

Time : Three Hours

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\* 0 8 0 7 \*

Max. Marks : 80

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Notes : 1. All questions are compulsory and carry equal marks.
2. Draw neat and labelled diagram and use supporting data wherever necessary.
3. Avoid vague answers and write specific answer related to question.

**1.** Either

a) Describe four different types of high level languages in detail. **8**

b) Write a short note on **8**
   i) Linkers
   ii) Loaders.

**OR**

c) Explain the compilation process in detail. **8**

d) Write a short note on **8**
   i) Function oriented language.
   ii) Object oriented language.

**2.** Either

a) What is flowchart? Explain various symbol used to draw a flowchart. **8**

b) Explain the concept of conceptual development of a solution? List and explain the stages involved. **8**

**OR**

c) Explain complexity of algorithm using suitable example. **8**

d) Write algorithm and draw flowchart to print first 7 numbers. **8**

**3.** Either

a) What is Data Type? Explain the role of Data type in detail. **8**

b) What is looping statement? Explain while and do---while with suitable example. **8**

**OR**

c) What is variable? Explain how to declare variable in high level language. **8**

d) Write a algorithm and draw a flowchart to find factorial of a number. **8**

**4.** Either

    a)    What is array? Explain one dimensional array in detail. **8**

    b)    Write a algorithm and draw a flowchart to find addition of two matrix. **8**

<div align="center"><b>OR</b></div>

    c)    Define searching. Explain any one searching technique with suitable example. **8**

    d)    Write an algorithm and draw a flowchart to insert an item at $k^{th}$ position in a linear array. **8**

**5.**        Solve all the questions.

    a)    Explain the characteristics of good programming language. **4**

    b)    Give the advantages and disadvantages of flowchart. **4**

    c)    What is identifier? Explain in detail. **4**

    d)    Describe the features of modular programming in detail. **4**

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