

B.Sc. (IT) - I (C.B.C.S. Pattern) Sem - I  
**UBITT104 - Developing Programming Logic and Techniques Paper-IV**

P. Pages : 2

Time : Three Hours



**GUG/S/19/10913**

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) What do you mean by Generation of Languages? Explain it in brief with all generations. 8
- b) Write a brief note on study of programming languages. 8

**OR**

- c) What is Translators? Explain various translators in detail. 8
- d) What is linker and Loader? Explain how it is associated with the compilation process. 8

2. Either
- a) Explain in detail the program Analysis and program Development. 8
- b) What is Algorithm? Explain types of Algorithm in detail. 8

**OR**

- c) Write a brief note on flow chart and give its advantages and disadvantages and also explain types of flow chart. 8
- d) What do you mean by complexity of algorithm? Explain in detail. 8

3. Either
- a) Write a brief note on following. 8  
i) Character set ii) Data type
- b) What is conditional statements? Explain each type with an example. 8

**OR**

- c) What are the operators? Explain in detail and also explain their precedence. 8
- d) Write a brief note on following with their syntax and example. 8  
i) For statements ii) While statements

4. Either
- a) Explain how to represent a matrix as a two dimensional array and explain the number of elements in 2-D array. 8

b) Write an algorithm to insert an element ITEM into the  $K^{\text{th}}$  position in a linear array. **8**

**OR**

c) What is array? Explain Need for array and Types of array and show memory representation of 1-D array. **8**

d) Write an algorithm to transpose a matrix of size  $N * N$  i.e. square Matrix. **8**

**5.** Solve all the questions.

a) Give the characteristics of Good Programming language. **4**

b) Define Pseudo code and give its characteristics. **4**

c) Write a note on constants in detail. **4**

d) What is modular programming? Give its feature in detail. **4**

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