

B.Sc.- I (Information Technology) (CBCS Pattern) Sem-I  
**UBITT104 - Paper-IV - Developing Programming Logic and Techniques**

P. Pages : 2

Time : Three Hours



**GUG/W/23/10913 (S)**

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 answer and write specific answer related to question.

**Either :**

1. a) Explain generation of programming language in detail. 8  
b) Write a note on: 8  
i) Compiler  
ii) Assembler

**OR**

- c) Explain linker and loader in detail. 8  
d) Describe the characteristics of good programming language. 8

**Either :**

2. a) Define flowchart. Give the advantages and disadvantages. 8  
b) Write a note on: 8  
i) Process Analysis  
ii) Problem Analysis

**OR**

- c) Write an algorithm and draw a flowchart to calculate area of circle. 8  
d) Explain complexity of an algorithm. 8  
3. a) What is operator? Explain arithmetic and relational operators. 8  
b) Explain simple-if and Nested-if with suitable example. 8

**OR**

- c) Describe various types of datatype in detail. 8  
d) Write an algorithm and draw a flow chart to demonstrate if - - else statement. 8

4. a) What is an array? Explain types of array in detail. **8**
- b) Write an algorithm or pseudo code for addition of all elements of array. **8**

**OR**

- c) Explain one-dimensional array with suitable example. **8**
- d) Describe bubble sort with suitable example. **8**
5. Solve all the questions-
- a) What is interpreter? Explain. **4**
- b) List the symbols used to draw flowchart. **4**
- c) Explain keyword in short. **4**
- d) What is searching? Explain in short. **4**

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