B.SC. (Information Technology)-I First Semester (Old)

1BIT4 - Developing Programming Logic and Techniques Paper - IV

P. Pages : 2 **GUG/W/18/1423**

Time : Three Hours * 1 1 2 2 * Max. Marks : 80

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

1. EITHER.

a) Computers can understand only machine language (i.e. 0 and 1). Explain. **8**

b) Explain the event based approach of programming language. **8**

OR

c) What are the three basic classification of translator? Explain them. **8**

d) What is the rule of linker and loader during the execution of a program. **8**

2. EITEHR.

a) Write an algorithm and draw the flowchart to find the factorial of a given number. **8**

b) What is process? Explain various types of process available to solve a problem. **8**

OR

c) Write an algorithm and draw a flowchart to convert temperature from degree celcius to Fahrenheit. **8**

d) Write a note on complexity of an algorithm. **8**

3. EITHER.

a) Explain the hierarchy of operators? List the precedence of arithmetic operators. **8**

b) Write a note on following with proper syntax and example. **8**
i) If-Statement ii) Nested if statement.

OR

c) Define loop? Explain various types of loops supported by high level language. **8**

d) What is the use of exit and break statement in programming language. **8**

4. EITHER.

a) Write an algorithm/pseudo code to find longest element of an given array. **8**

b) What are the different methods of sorting on array? Distinguish between internal and external sorting. **8**

OR

c) Write an algorithm/pseudo code to find the reverse of an array. **8**

d) How we can represent a matrix using two dimensional array? Explain with example. **8**

5. Solve all questions.

a) Differentiate between interpreter and compiler. **4**

b) What are the advantages and disadvantages of algorithm. **4**

c) Differentiate between if-else and switch statement. **4**

d) What are the different types of arrays supported by high level languages. **4**

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