B.C.A.- I (CBCS Pattern) Semester - I

UBCAT104 - Paper-IV : Programming Tools and Techniques

P. Pages : 1 **GUG/S/23/11746**

Time : Three Hours Max. Marks : 80

Notes : 1. All Questions are compulsory and carry equal marks.
2. Draw neat and labelled diagrams wherever necessary.
3. Avoid vague answers and write answers relevant and specific to questions only.

Either:

1. a) Define translator and distinguish between compiler and interpreter. **8**

b) Explain compilation process with different phases. **8**

OR

c) Explain various types of programming languages. **8**

d) Write the characteristics of good programming languages. **8**

Either:

2. a) What is PDLC? Explain the stages of PDLC. **8**

b) Explain the Complexity of Algorithm. **8**

OR

c) Define flowcharts. And explain different symbols using example. **8**

d) Write a note on: **8**
i) Brute force ii) Divide and Conquer.

Either:

3. a) What is a variable? How do we declare a variable in high level language? **8**

b) What is control statement? Explain an if-else statement with example. **8**

OR

c) What are data types? List various data types supported by high level languages. **8**

d) Write an algorithm and draw a flowchart to check whether number is even or odd. **8**

Either:

4. a) What is array? Explain types of arrays. **8**

b) Difference between sequential and binary search. **8**

OR

c) Define sorting & explain with an example why sorting is considered an important operation. **8**

d) Define and explain how computer memory is allocated for two-dimensional array. **8**

5. Attempt all the questions.

a) Write a note on linkers. **4**

b) Explain pseudo codes in detail using example. **4**

c) Explain the importance of Casting. **4**

d) Describe merging using suitable example. **4**

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