

B.C.A. - I (NEP Pattern) Semester-I
MDE101 / SEC Paper-III - Problem Solving Techniques

P. Pages : 2

Time : Three Hours



GUG/W/24/16189

Max. Marks : 60

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

Either:

1. a) Differentiate between compiler and interpreter. 6
- b) Write a note on: 6
 - i) Linker
 - ii) Loader

OR

- c) Explain any two types of programming languages. 6
- d) Describe different steps of compilation process. 6

Either:

2. a) What is big-O notation? Explain its importance. 6
- b) Write an algorithm and draw a flowchart to swap two numbers without using 3rd variable. 6

OR

- c) Define algorithm. Explain any two types of algorithm. 6
- d) Explain stages of PDLC (Programming Development Life Cycle). 6

Either:

3. a) Write an algorithm and draw a flowchart to check whether an inputted number is even or odd. 6
- b) What is an unconditional control structure? Explain any two. 6

OR

- c) Write an algorithm and draw a flowchart to print first 10 natural numbers. 6
- d) Explain the difference between if-else and switch statements. 6

Either:

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|-----------|----|---|----------|
| 4. | a) | Define Array's. Explain its types. | 6 |
| | b) | Give the difference between sequential and Binary search. | 6 |

OR

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|-----------|----|---|----------|
| | c) | Define sorting. Explain sequential sort. | 6 |
| | d) | Explain the storage representation of a two dimensional array. How are elements of a two dimensional matrix accessed. | 6 |
| 5. | | Attempt all the questions below. | |
| | a) | Write a note on Assembly languages. | 3 |
| | b) | Explain different types of symbols used in flow chart. | 3 |
| | c) | Define variables and give the rules for naming variables. | 3 |
| | d) | Explain the process of Merging. | 3 |
