

B.SC(IT) SEMESTER - 1 (NEP-2020) Examination**OCT/NOV-2024****Problem Solving Methodologies and Programming in C (Theory) (Major-1)****Time: 2:00 Hours****Marks: 50****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

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| Que-1 | Answer the following questions (ANY 2) | (10) |
| | <ol style="list-style-type: none">1. What is an algorithm? Explain with suitable example.2. Explain different data types in C.3. Explain different types of operators in C.4. Explain keywords, constants and variables in C. | |
| Que-2 | Answer the following questions (ANY 2) | (10) |
| | <ol style="list-style-type: none">1. Explain importance of break and continue statements.2. Write and explain syntax of for loop in C with suitable example.3. Explain switch...case with example.4. Explain nested if with suitable example. | |
| Que-3 | Answer the following questions (ANY 2) | (10) |
| | <ol style="list-style-type: none">1. List out memory allocation library functions in C. Explain in detail.2. List out mathematical library functions in C. Explain any three in detail.3. What is call by value and call by reference? Explain it.4. Explain UDF. | |
| Que-4 | Answer the following questions (ANY 2) | (10) |
| | <ol style="list-style-type: none">1. Explain String Arrays in C.2. Explain structure with example.3. Explain array within structure with example.4. Differentiate: Structure v/s Union | |
| Que-5 | Answer the following questions (ANY 2) | (10) |
| | <ol style="list-style-type: none">1. Explain Command line argument in C.2. Explain concept of file handling in C.3. What is Pointer? Explain with example.4. Explain use of pointer to array with example. | |
