SEMESTER II
INTERNAL ASSIGNMENT 2022
DEPARTMENT OF MATHEMATICS

MATH-H-GE-T-02

(Calculus & Differential Equations)

Answer the following question.

1. (a) If $y = \left(x + \sqrt{1 + x^2}\right)^m$, then using Leibnitz's Theorem prove that
$$(1 + x^2)y_{n+2} + (2n + 1)xy_{n+1} + (n^2 - m^2)y_n = 0$$
(b) Discuss the continuity of $f(x)$ at $x = 1$ and $x = 2$, where
$$f(x) = |x - 1| + |x - 2|$$
5+5

Submit answer sheet to the following Mail id:
mathematics@nvc.ac.in

MATH-G-CC-T-02

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Answer the following question.

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