Workshop-November 9

 Set

$$f(x) = \frac{e^x}{x^2 + 1}.$$

- (i) Give the domain of the function. Then, compute the first and second derivatives and give the intervals where the function is increasing, decreasing, concave up, concave down.
- (ii) Find all transition points, and indicate whether they are local max, min or inflection points.
- (iii) Indicate all the horizontal and vertical asymptotes if there are any. Then sketch the graph of the function