## QUIZ 10 - MATH 151 YOUR NAME:

Read each problem **very carefully** before starting to solve it. Each problem is worth 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. Determine the intervals of concavity and find the inflection points of the graph of  $f(x) = x + \sin^2 x$  in  $[0, \pi]$ .

2. Create the combined signed table for the first and second derivatives of  $f(x) = 2x^4 - 3x^2 + 2$ . In the last line of the table indicate clearly the monotonicity and concavity intervals as well as the local extrema and the inflection points (if any).