

## QUIZ#06 MATH 022 SECTION 12

Name:

1. What's the behavior of function  $f = -x^2(x+3)(x-5)$  when  $x \rightarrow \infty$  and  $x \rightarrow -\infty$  respectively
  - a)  $y \rightarrow \infty, y \rightarrow \infty$
  - b)  $y \rightarrow -\infty, y \rightarrow \infty$
  - c)  $y \rightarrow \infty, y \rightarrow -\infty$
  - d)  $y \rightarrow -\infty, y \rightarrow -\infty$
2. The solution for the inequality  $x^3 \leq 14x^2 - 48x$  is
  - a)  $(-\infty, 0] \cup [6, 8]$
  - b)  $(-\infty, 8]$
  - c)  $(0, 6] \cup [8, \infty]$
  - d)  $[6, 8]$
3. The graph of the function  $f(x) = x^2(x-1)(x+2)^4$  crosses the x-axis at
  - a)  $(-2, 0), (0, 0)$
  - b)  $(-2, 0), (0, 0), (1, 0)$
  - c)  $(-2, 0)$
  - d)  $(1, 0)$
4. The graph of the function  $f(x) = x^6 - x^4 + x^2 - 8$  possesses
  - a) y-axis symmetry
  - b) origin symmetry
  - c) symmetry about  $x = 1$
  - d) none of the above types of symmetry
5. Draw a simple graph function  $f(x) = -x^2(x+2)(x-2)$ . If it has some kind of symmetry, show it in your graph.