**Frequently Asked Question About the Take Home Problem**

- What is the difference between $H(t)$ and $h(t)$ in (a)?

  – $H(t)$ is defined and periodic on $[0, \infty)$. It's definition involves an infinite series. MATLAB can't do things like plot it or use it as a forcing function. $h(t)$ only has to agree with $H(t)$ on $[0, 10\pi)$. MATLAB can work with it, but $h(t)$ is not periodic and doesn't agree with $H(t)$ after some time $t_0$ (probably $10\pi$).

- When I tried to plot the solution in (b), I got error messages:

```
Error in inline/feval (line 34)
        INLINE_OUT_ = inlineeval(INLINE_INPUTS_, INLINE_OBJ_.inputExpr, INLINE_OBJ_.expr);

Error in ezplotfeval (line 54)
    z = feval(f,x(1),y(1));

Error in ezplot>ezimplicit (line 256)
    u = ezplotfeval(f, X, Y);

Error in ezplot (line 154)
                hp = ezimplicit(cax, f{1}, vars, labels, args{:});

Error in sym/ezplot (line 58)
      h = ezplot(char(f),varargin{:});
```

  How do I fix this?

  – If your code is similar to the code in Example 13.2 of *Differential Equations with MATLAB®* and the output for **y** includes **ilaplace** or **invlaplace**, the problem is that MATLAB couldn't compute the inverse Laplace transform. You should be able to fix this by replacing your **ytrans** command by

    **ytrans = simplify(solve(neweqn, Y));**

    or

    **ytrans = simplify(factor(solve(neweqn, Y));**

    or

    **ytrans = simple(factor(solve(neweqn, Y)));**