

## ENGR 3323: Signals and Systems

### HW 2\_Ch1\_Answer keys

**1a)** Not linear

**1b)** Linear

1c) Not linear

**2a)** Time invariant

**2b)** Time variant

**2c)** Time variant

**2d)** Time variant

**3a)** Causal

**3b)** Not causal

**3c)** Not causal

**3d)** Not causal

**4a)**  $(D + 3)y_1(t) = x(t)$

**4b)**  $(D + 3)y_2(t) = Dx(t)$

**5)**  $(MD^2 + BD + K)y(t) = (BD + K)x(t)$