**EEM301 HOMEWORK – 2**

**1.** Consider S1 with {c=0 and d=1} or S2 with {g=1 and h=0} LTI system and the corresponding {a, b} or {e, f}coefficients given in Pr. 2 above. Find the Fourier series (FS) representation of the output y(t) or y(n) for the following input:

 or 

***Note that for the Problem 3, student’s new index is taken as***

***26 ≤ (14+25) ≤ 50 or 1 ≤ (14 - 25) ≤ 25***

**2.** Consider S1 with {c=0 and d=1} or S2 with {g=1 and h=0} LTI system and the corresponding {a, b} or {e, f}coefficients given in Pr. 2 above.

(a) Determine the frequency response H(jω) of S1 or H(ejω) of S2 utilizing the Fourier (or DTFT) Transform.

(b) Obtain the output response y(t) or y(n) for the following input using FT or DTFT:

 or 

**3.** Consider S1 with {c=0 and d=1} or S2 with {g=1 and h=0} LTI system and the corresponding {a, b} or {e, f}coefficients given in Pr. 2 above.

Obtain the output response y(t) or y(n) for the following input using FT or DTFT:

 or 

***Note that for the Problem 5, student’s new index is taken as***

***26 ≤ (14+25) ≤ 50 or 1 ≤ (14 - 25) ≤ 25***