

**Signals & Systems Lab, EEE F246**  
**Lab Test**

**Date & Time : 27/ 04/ 2021 , 3.00 – 3.40 pm**

**Max. Marks : 20**

**NOTE:**

- (1) Write Name & ID No. in the answer sheet**
- (2) Paste the observations, matlab code and results in word file (your answer sheet)**
- (3) Save and Upload the file as Name & ID No**

1. (i) Write a matlab code to generate the signal  $y(t) = 1\cos(94.24t) + 2\cos(157t) + 0.5\cos(314.15t)$  and plot it. What is the value of  $f_{max}$ ? Give Matlab code and the figures  
**[6M]**

(ii) Sample the signal  $y(t)$  at the following frequencies

- (a)  $f_{s1} = 0.3 \cdot f_m$
- (b)  $f_{s2} = 1.8 \cdot f_m$ ,
- (c)  $f_{s3} = 10 \cdot f_m$ .

Write a matlab code to perform the above. Plot the signal  $y(t)$  and sampled signals in (a), (b) and (c) using subplots. Give Matlab code and the figures **[14 M]**

Please upload your answer sheet in the google form link given below

<https://forms.gle/DkGFYBuCXrp31NKz9>