National University of Sciences & Technology
School of Electrical Engineering and Computer Science
Department of Humanities and Sciences

MATH-232: Complex Variables and Transforms (3+0): BEE2k20-12ABC Spring 2022

Assignment – 3	
CLO-3 (Evaluate Fourier and Z-transforms of a given function)	
Maximum Marks: 10 (5+5)	Instructor: Mr. Saeed Afzal
Announcement Date: 18th May 2022	Due Date: 25th May 2022

Instructions:

- Understanding the question is part of the assignment and copying is not allowed.
- Express your answer in the most simplified form. Direct calculations using calculator are not allowed, you need to show the detail of your work to get the maximum marks.
- This is an individual assignment.
- Assignment must be handwritten and properly arranged with page numbers These two pages must be part of every assignment.
- Assignment is not acceptable after deadline.

Tasks: Attempt all questions.

Students Name	NUST/Qalam ID	Section
Muhammad Umer	345834	BEE 12C

Total Marks	Marks Obtained
10 Marks	

Q – 1 (5 marks): Evaluate Fourier transform and sketch the magnitude and phase spectra of the function given by:

$$\boldsymbol{f(t) = \frac{3\sin\left(30\pi\left(t - \frac{1}{20}\right)\right)}{\pi\left(t - \frac{1}{20}\right)}\cos\left(300\pi t\right)}$$

Note: 5 marks are assigned for class participation.