Department of Computer Systems Engineering
University of Engineering & Technology
Peshawar, PAKISTAN

Subject: Signal and Systems (4th Semester)

Exam: Final Term (Spring 2020)

Max Marks: 20

Time allowed : one (1) hour

Note: Write your registration number on the top of your answer sheet

Question 2:

1) One period of a continues time periodic signal x(t) is given in Figure-2. Find the Fourier series coefficients a_k ($-2 \le k \le 2$), and sketch their magnitude and phase spectrum. (CLO3) **(4 Marks)**

S = Smaller among the digits at units and tens places of your registration number, if it is zero then use S=2

B = Bigger among the digits at units and tens places of your registration number, if it is zero then use B=5

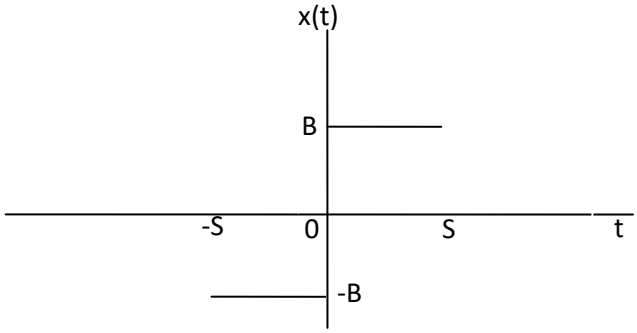

Figure-2

2) What happens to the spectrum of a signal when the following operations are performed on the signal? (CLO3) **(2 Marks)**

(i) Shifting along t-axis
(ii) Reversal along t-axis
(iii) Scaling of independent variable t
(iv) Multiplying the signal with a constant 'c'