Benha University Faculty of Engineering at Shoubra Electrical Engineering Department 2nd Year Communications



Mid Term Exam Date: Monday 18/4/2016 Subject: Signals Duration: 60 Mins

- Answer all the following questions
- Illustrate your answers with sketches when necessary
 - **1.** Decompose f(t) using Fourier series (find and draw magnitude as well as phase)



- 2. Assume one period only from the above signal multiplied by unit step function find and draw the magnitude and phase of the Fourier transform of this signal.
- **3.** Prove the time shifting property or the Fourier transform of the signal described in problem (2) if it was delayed by 5.
- 4. Drive the Fourier transform of the waveform in the figure below:

