

Higher technological institute
10th of Ramadan city
6th of October branch
Civil Engineering department

Subject: water and waste water system

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Sheet (1)

Population and water consumption

1 – what are the factors affecting the rate of increase of the population , and draw the curve of population growth

2 – What are the methods of calculation the population at future depending on, and explain with drawing the graphical extension method and graphical comparison method

3 – What are the factors affecting the design period of water supply project

4 – Why we need to know the water consumption, and define the water rate and when it is determined

5 – Classified the water consumption, and what are the factors affecting the water consumption

6 – Draw the hydrograph of water consumption and what is the characteristics of it

7 – Define the fire demand

8 – It is required to estimate population at year 2050 using the different methods, and if the average water consumption 250 l/c/d find:

Maximum monthly flow , Maximum daily flow , Maximum hourly flow ,
Minimum flow , Fire demand , The maximum water demand during a fire at
year 2050 using the following data:

Year	1950	1960	1970	1975	1980	2000
City 1	45100	56000	75400	90000	115600	129500
City 2	107500	127400	150000	168300	185000	195600