**Egyptian Engineering (Part I)**

**1. The Urban Revolution**

**Read**: *Science and Technology in World History*, “Pharaohs and Engineers,” pp. 31 - 42.

**Urban Revolution: The Emergence of Six independent Civilizations**

1. Mesopotamia (after 3500 BCE)
2. Egypt (after 3400 BCE)
3. Indus River Valley (2500 BCE)
4. China (after 800 BCE)
5. Mesoamerica (after ~ 500 BCE)
6. South America (after 300 BCE)

“Why did civilization arise independently and repeatedly on a worldwide scale after the fourth millennium BCE in those particular sites?” (32)

**2. Egyptian Dam building**

**Watch**: Engineering an Empire: Egypt (Part I)

<https://www.youtube.com/watch?v=SyctJZ8t-D4>

***~***2900 BC – a ruler of Upper Egypt, Narmer (or Menes), conquered the Nile Delta and lower Egypt and united them into one kingdom (The Old Kingdom). His capital city was located at Memphis, where he built a dam to protect the city.

**Study Guide for Quiz # 2 and Exam # 1**:

What is the Urban Revolution?

What are the characteristics of the civilizations produced by this revolution?

What are the six independent civilizations that arose during the Urban Revolution?

What explanations have been given for the emergence of civilization in the above six sites?

Why was engineering central to the Urban Revolution?

What are the necessary technologies needed to produce bronze?

Why were dams necessary in Egypt?

What else did the Egyptians build in this period?

What happened to the Sadd Al-Kafra dam?

What resources did the pharaoh use to build such projects with?