

Civil Engineering.

The word “engineering” means the art of designing, constructing, or using engines. But this word is now applied in a more extended sense. Engineering is divided into many branches. The most important of them are: civil, electrical, nuclear, mining, military, marine, and sanitary engineering. The profession of civil engineer is as old as civilized life.

Up to the middle of the 18th century there were two main branches of engineering – civil and military. The former included all those branches of the constructive art not directly connected with military operations and the construction of fortifications, while military engineering concerned itself with the application of science and the utilization of building materials in the art of war.

But later there came a remarkable series of mechanical inventions, great discoveries in electrical science and atomic energy. It led to the differentiation of mechanical, electrical, nuclear engineering, etc. Architecture, which up to the 18th century had been considered a branch of engineering had become a profession itself. The term “civil engineering” has therefore two distinct meanings. In the widest and oldest sense it includes all non-military branches of engineering as it did two centuries ago. But in its narrower, and at the present day more correct sense, civil engineering, includes mechanical engineering, electrical engineering, metallurgical, and mining engineering. Here are some fields of civil engineering.

1. Housing, industrial, and agricultural construction.
2. Structural engineering which is the construction of all fixed structures with their foundations.
3. The construction of highways and city streets and pavements.
4. The construction of railroads.
5. The construction of harbours and canals.
6. Hydraulic engineering which includes the construction of dams and power plants.

Vocabulary

designing –	проектування (конструювання)
engineering -	техніка
structural engineering –	Проектування та розрахунок будівель та конструкцій
civil engineering -	громадянське будівництво
mechanical engineering-	машинобудівництво
electrical engineering -	електротехніка
nuclear engineering –	ядерна техніка
mining engineering –	гірничя техніка
military engineering –	військово-інженерна справа
marine engineering –	суднобудівна техніка
sanitary engineering -	санітарна техніка
hydraulic engineering -	гідротехніка

branch of engineering –	галузь техніки
construction –	будівництво
foundation –	фундамент
housing construction –	житлове будівництво
industrial construction –	промислове будівництво
agricultural construction –	сільськогосподарське будівництво
the former –	перший з перерахованих

Task 1. Прочитайте текст ще раз, дайте відповіді на запитання.

1. What does the word engineering mean? _____
2. Is this word now applied in a more extended sense? _____
3. Is engineering divided into many branches? _____
4. What are the most important branches of engineering? _____
5. Is the profession of civil engineer old? _____
6. What branches of engineering were there in the 18th century? _____
7. What does civil engineering include now? _____

Task 2. Визначте часову форму речень:

1. The word “engineering” means the art of designing, constructing, or using engines.

2. The former included all those branches of the constructive art not directly connected with military operations and the construction of fortifications, while military engineering concerned itself with the application of science and the utilization of building materials in the art of war. _____
3. The term “civil engineering” has therefore two distinct meanings.

Task 3. Поставте до вказаних речень відповідні типи запитань:

1. Запитання до підмета:

The profession of civil engineer is as old as civilized life.

2. Запитання до додатка:

It includes all non-military branches of engineering.

3. До обставини:

Military engineering concerned itself with the application of science and the utilization of building materials in the art of war. _____
