Mansoura University
Faculty of Engineering
Building & Construction Engineering Program
Second Semester 2014/2015
Course Title: English 2
Level: (000)

Final Exam (50 Marks)
Time: 2 hours
Date : 16th Jun., 2015

الإمتحان في ثلاث ورقات

Section 1: Reading Comprehension **(20 marks)**

Read the following passage then answer the questions that follow:

Throughout history, the use of concrete as a building material has contributed significantly to the built environment. Enduring examples of various forms of concrete can be found as far back as the early Egyptian civilization. Significant building remnants still exist from the Roman civilization, which used concretes made from naturally occurring volcanic ash pozzolans, mixed with water, sand and stone. Now concrete is being used in the construction of durable bridges, roads, water supply, hospitals, churches, houses and commercial buildings, to give people a social foundation, a thriving economy, and serviceable facilities for many years. In the modern era, the properties of concrete were refined in the late 1800s, with the introduction of a patented manufacturing process for portland cement. While it has ancient roots, concrete, as we know it today, is a modern and highly advanced building material.

In the last 150 years, concrete has become one of the most widely used building materials on earth. However, the production of Portland cement, an essential material in concrete, leads to the release of significant amount of CO2, a greenhouse gas. One ton of Portland cement clinker production is said to create approximately one ton of CO2 and other greenhouse gases.

Environmental issues are playing an important role in the sustainable development of the cement and concrete industry. For example, if we run out of limestone, as **it** is predicted to happen in some places, then we cannot produce Portland cement; and, therefore, we cannot produce concrete and all the employment associated with the concrete industry goes out-of-business. A sustainable concrete structure is one that is constructed so that the total environmental impact during its entire life cycle is minimal.

Concrete is a sustainable material because it has a very low inherent energy requirement and is produced to order as needed with very little waste. It is made from some of the most plentiful resources on earth and has a very high thermal mass. It can be made with recycled materials and is completely recyclable. Sustainable design and construction of structures have a small impact on the environment. Use of "green" materials embodies low energy costs. **Their** use must have high durability and low maintenance leading to sustainable construction materials. High performance cements and concrete can reduce the amount of cementitious materials and total volume of concrete required. Concrete must keep evolving to satisfy the increasing demands of all its users. Reuse of post-consumer wastes and industrial byproducts in concrete is necessary to produce even "greener" concrete. **It** also improves air quality, minimizes solid wastes, and leads to sustainable cement and concrete industry.

Concrete is a very environmentally friendly material. **It** has been used for over 2,000 years. It is best known for its long-lasting and dependable nature. However, additional ways that concrete contributes to social progress, economic growth, and environmental protection are often overlooked. Concrete structures are superior in energy performance. **They** provide flexibility in design as well as affordability, and are environmentally more responsible than steel or aluminum structures.

I. Answer the following questions.

1) Why is concrete a sustainable material?
2) What is the effect of environmental issues on concrete industry?
3) What is the impact of using Portland cement production?
4) According to the text, what is the evidence given to prove that concrete has a historical root.
5) What do you know about "greener" concrete?

II. State whether the following statements are true (T) or false (F). Correct the false one(s).

1) Concrete can be made with recycled materials. ( )
2) The disadvantage of concrete is its short-lasting nature. ( )
3) Concrete was used in construction of durable building. ( )
4) The properties of concrete were refined in the late nineteenth century. ( )
5) Steel and aluminum structures provide flexibility in design as well as affordability. ( )

III. Find words in the passage which have the same meanings as:

1) flourishing	paragraph (1)
2) deliverance	paragraph (2)
3) expected	paragraph (3)
4) generous	paragraph (4)
5) supplementary	paragraph (5)

IV. Find the suitable referent for each of the underlined words.

1) it	paragraph (3)
2) Their	paragraph (4)
3) It	paragraph (4)
4) It	paragraph (5)
5) They	paragraph (5)

Section 2: Language and Structure **(10 marks)**

I. Decide whether the following sentences are simple, compound, complex or compound-complex.

1) I started on time, but I arrived late
2) When I stepped out into the bright sunlight, from the darkness of the movie house, I had only two things on my mind.
3) The dog barked and howled at the cat in the backyard.
4) Because my coffee was too cold, I heated it in the microwave.
5) Although I like books, I do not like romance novels, but my sister loves them.

II. Define the dependent and independent clauses in the following sentences.

1) Although Klingon battle cruisers are not very maneuverable, they can make themselves invisible.
2) What the aerospace industry needs now is more friends in Congress.
3) After Eunice set fire to the cat, he jumped into the pool, but because he couldn't swim, Rodney rescued him.
4) We went to the movie theatre last night and saw the new comedy, which just came out last Friday, and then we went to dinner at the local steakhouse.
5) I am worried about my use of outside sources in this paper because I have never written an argument essay for a college class before.

Section 3: Writing Skills **(20 marks)**

"When people succeed in solving a problem, it is because of hard work. Luck has nothing to do with success." The following diagram shows the steps taken in solving a problem. Based on the steps shown in that diagram, write a fully detailed paragraph describing a problem or a serious situation that you faced and how you succeeded in solving it.