

**FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA**  
**SCHOOL OF ENVIRONMENTAL TECHNOLOGY**  
**DEPARTMENT OF QUANTITY SURVEYING**

**FIRST SEMESTER EXAMINATION, 2016/2017 ACADEMIC SESSION**

**COURSE TITLE: HEAVY ENGINEERING I**

**COURSE CODE: QTS 514**

**TIME ALLOWED: 2<sup>1</sup>/<sub>2</sub> HOURS**

**INSTRUCTION: ANSWER ALL QUESTIONS. READ THE QUESTIONS CAREFULLY AND CREDIT SHALL BE GIVEN TO NEAT PRESENTATION OF WORKS**

**QUESTION ONE (20 marks)**

EPC is one of the global construction contracting models which is also known as the turnkey project service. It is a type of contract typical of heavy engineering, comprising the provision of engineering services, procurement of materials and construction.

- i. Discuss this statement with emphasis on the specific characteristics of heavy engineering works.
- ii. State the advantage and disadvantages of EPC

**QUESTION TWO (30 marks)**

- a. You have been invited to give a speech on patent right and copyright for heavy engineering projects, explain in detail these concepts giving examples where necessary.
- b. The Niger State Government of Nigeria is proposing to embark on the new International Airport to be located in Beji area of the state, identify and explain areas to be considered in preparing a feasibility report for the proposed project.
- c. What are the problems facing feasibility study in Nigeria?

**QUESTION THREE (25 marks)**

- a. There are several parties in a project financing depending on the type and size of the project. Identify the most usual parties to heavy engineering project financing and explain the contractor loan requirement determinants by bank for analysis.
- b. Identify and explain 5 procurement options available for the proposed heavy engineering works given in question two (2b) above