

70

**FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA  
SCHOOL OF ENVIRONMENTAL TECHNOLOGY  
DEPARTMENT OF ARCHITECTURE**

**FIRST SEMETER EXAMINATION, 2017/2018 ACADEMIC SESSION**

LEVEL: 400 Levels  
COURSE CODE: ARC 413  
COURSE TITLE: Construction Technology IV  
TIME ALLOWED: Two (2) Hours  
INSTRUCTION: (a) Answer questions five and any other two questions of your choice.  
(b) All sketches and illustrations must be in pencil and neatly drawn.

1. Discuss the concept of pre-stressed concrete and mention two methods of introducing pre stressing to concrete. (20 marks).
2. Generally, partition walls are designed as non-load bearing walls. Discuss three type of its application and illustrate two types of partition walls.
3. Briefly discuss the concept of Industrialized Building System (IBS) and how it can be used to solve problem of shelter in Internally Displaced camps in North East Nigeria (20 marks).
4. Briefly discuss the concept of folded plates in Building Technology and how the stiffness can prevent buckling (20 marks)
5. During the students' unrest at the Federal University of Technology, Minna in February, 2016, the University Clinic at the Bosso Campus was burnt down by the students. A committee was set up to evaluate the building components that were burnt down. It was also observed in the report that the spread of the fire on the entire building took less than an hour.  
The University Management wants the Clinic to be reconstructed soonest and also want a structure that can be resistant to fire for at least an hour. (20 marks).