

FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA
SCHOOL OF ENVIRONMENTAL TECHNOLOGY
DEPARTMENT OF ARCHITECTURE
FIRST SEMESTER EXAMINATION 2019/2020

Course Title: **Construction Technology** Course Code: **ARC 513** Credit Units: **2**
Lecturer: **Arc. Isah, A. Mann** H.O.D: **Dr. P. Ayuba** Time Allowed: **2 hrs**

Instructions: Question number 1 is compulsory. Answer three (3) in all. Each question carries equal marks.

1. Discuss the principle of folded plates. There are two (2) methods of protecting folds against flattening and buckling. Enumerate them and support your enumeration with an illustrated example. 20 Marks

2. (a) What do you understand by Industrialized Building System (IBS) and Pre-fabricated Construction.
(b) How can the principle applied to solve the problems of quick-approach of construction of shelter for the internally displaced persons (IDPs)? 20 Marks

3. Pneumatic Structures are popular in developed nation particularly for the construction of sporting arenas.
(a) What do you know about the structure? Illustrate your answer with an example of such structure anywhere.
(b) State four (4) advantages and disadvantages of the Pneumatic Structure. 20 Marks

4. Cylindrical shells or barrels are classified into three (3)
(a) List them
(b) Neatly sketch cantilevered and double cantilevered barrels.
(c) Mention examples where either of the barrels are mostly used. 20 Marks

5. Describe Suspended Roof Structure with the aid of a sketch.
(a) Illustrate the roof and the drainage in the sketch.
(b) Mention anywhere around the globe where any suspended structure exist and draw a rough sketch of it. 20 Marks