

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

FIRST SEMESTER EXAMINATION 2017/2018 SESSION

COURSE TITLE: CONSTRUCTION TECHNOLOGY II  
COURSE CODE: ARC 313

INSTRUCTIONS: Time allowed: 1Hr 30min  
Answer question one and any other two.  
All sketches must be in pencil

- Q1.** (a) Explain the term "roofing system" 3marks  
(b) With illustrations explain the following in a roof:  
(i) the pitch of a roof 4marks  
(ii) the span of a roof 4marks  
(c) Using good sketches, show the following roofing systems:  
(i) Hip roof 3marks  
(ii) Gable roof 3marks  
(iii) Mono-pitch roof 3marks  
(d) Using sketches explain the following terms associated with roofs  
(i) ridge 5marks  
(ii) Valley 5marks  
**30 marks**
- Q2.** Explain using sketches, the construction of the following types of foundations  
(i) strip foundation 5marks  
(ii) Solid slab raft 5marks  
(iii) cellular raft 5marks  
**15marks**
- Q3.** (a). What is a staircase? 3marks  
(b). Explain and show with sketches the following  
(i) step 4marks  
(ii) half space landing 4marks  
(iii) rise of a flight. 4marks  
**15marks**
- Q4.** (a.) What is a floor? 5marks  
(b) Explain using sketches the following types of upper floors  
(i) Slab and beam 5marks  
(ii) waffle grid. 5marks  
**15marks**