

DEPARTMENT OF ARCHITECTURE

SCHOOL OF ENVIRONMENTAL TECHNOLOGY FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA

SECOND SEMESTER EXAMINATION- OCTOBER, 2017

COURSE TITLE : CONSTRUCTION TECHNOLOGY VI
COURSE CODE : ARC 524
TIME ALLOWED: THREE (3) HOURS
INSTRUCTIONS: ANSWER ANY FIVE (5) QUESTIONS

ALL questions carry EQUAL marks.

1. What are the key underlying principles that guide the planning and design of floors built with **small elements** for example:
(i) prefabricated non-load-carrying filling concrete or reinforced concrete blocks
(ii) in-situ hollow reinforced hollow pots
(iii) reinforced concrete cellular clay infill components.
Neat, appropriate and meaningful drawings will attract marks.
[20 marks]
2. What are prefabricated reinforced concrete **medium-sized** Hollow Core Units, Panel floor-elements or Beam floor-elements? Answer with the aid of appropriate sketches.
[20 marks]
3. Examine the application of prefabricated **large-sized** reinforced concrete floor elements in a modern multi-storey building. Produce constructional technology details.
[20 marks]
4. Discuss the **fundamental principles** of good Plumbing and Sanitary Engineering in residential buildings? Relevant illustrations or drawings are necessary.
[20 marks]
5. Articulate on the main advantages and disadvantages of **composite** reinforced concrete-steel floor construction. Use good illustrations.
[20 marks]
6. In the practical application of architecture generally, evaluate the constructional advantage of **pre-stressed** reinforced concrete structures. Neat and expressive drawings will earn you good marks.
[20 marks]