



NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF THE BUILT ENVIRONMENT

DEPARTMENT OF ARCHITECTURE

HISTORY OF ARCHITECTURE I

AAR 1103

Examination Paper

December 2014

This examination paper consists of 4 pages

Time Allowed: 3 hours

Total Marks: 100

Special Requirements: N/A

Examiner's Name: Professor John Knight

INSTRUCTIONS

1. Answer any four (4) questions
2. Each question carries 25 marks
3. Use of calculators is permissible

MARK ALLOCATION

QUESTION	MARKS
1.	25
2.	25
3.	25
4.	25
5.	25
TOTAL	100

QUESTION 1 (25 Marks)

- a. Name two settlements of Pre-Colonial Zimbabwean architecture that developed after Great Zimbabwe was abandoned. (2)
- b. Describe four of the decorative stone wall patterns found in these settlements. (4)
- c. Name two mythical structures believed to have existed in Mesopotamia influenced by or derived from the Ziggurat. (2)
- d. Explain the development and evolution of the Egyptian burial tomb from the first tombs onwards (8)
- e. Describe with sketches three of the following elements used in the Egyptian temples:-
 - i. Progressive Axis
 - ii. Pylons
 - iii. First Court
 - iv. Hypostyle Hall
 - v. Sanctuary (6)
- f. Illustrate and name one of the temples carved from *living rock* and later displaced by the Aswan Dam (3)

QUESTION 2 (25 Marks)

- a. Draw a section of a Doric Column and Entablature, illustrating and annotating six of the following.
 - i. Entablature
 - ii. Capital
 - iii. Shaft
 - iv. Stylobate
 - v. Fluting
 - vi. Abacus
 - vii. Triglyphs
 - viii. Architrave (9)

- b. Give the typical proportion of the radius of the Doric Column relative to its:-
i. Height
ii. Entablature (4)
- c. The Greek temple is considered one of the most perfect architectural forms.
i. Name the material from which the Classical Greek temples are believed to be derived. (1)
ii. Name the type of decoration used by the Greeks where the original building material was expressed in the stone detailing giving examples. (3)
- d. After the Persian Invasions the Greek city states united for a brief `Golden Age`.
i. Name and describe the building considered the highpoint of this Greek Classical Period. (3)
ii. Describe why the building perfects the development of temple form and embodies the spirit of Greek Unification. (5)

QUESTION 3 (25 Marks)

- a. Who first wrote that the three qualities of Architecture were Firmness, Commodity and Delight. Describe these qualities. (4)
- b. Initially Roman stone walls were laid in a way similar to that of the Greeks.
i. Describe this method of solid stone wall. (2)
ii. Describe two ways the Romans later employed stone and concrete to build walls more economically. (4)
- c. Explain three of the following forms and how they were derived from the arch.
i. Vault
ii. Dome
iii. Cross Vault
iv. Hemicycle (6)
- d. Describe the difference between the corbelled arch and the radiating arch. (2)

- e. Describe one of the following buildings including details of their size, shape, architectural articulation and structural ingenuity.
 - i. Arch of Constantine
 - ii. Pantheon (7)

QUESTION 4 (25 Marks)

- a. Two distinct forms of church arose from the Early Christian churches. Name these and describe with diagrams how each of these forms suited different concepts of church design. (8)
- b. While the two church forms remained in conflict throughout the history of church design, in 532 AD the Emperor Justinian commissioned the services of Anthemius and Isidorus architects to design a church that combined these two forms and the ideas that lay behind them.
 - i. Name this church and with diagrams describe how the building resolved this conflict. (5)
 - ii. Describe with diagrams how pendentives resolved the problem of placing the dome on a square plan. (5)
- c. Name and draw the predominant plan form of the Byzantine church. (3)
- d. Around which Roman city was the Byzantine movement centered and what is the name of this city today? (2)
- e. Describe two features that characterize Saracenic architecture (2)

QUESTION 5 (25 Marks)

- a. Name the three distinctive characteristics of Gothic Architecture. (3)
- b. Describe with diagrams the structural advantages of these features. (6)
- c. Comparing with Romanesque equivalents, how did these features, formally and spatially, assist in achieving the overall aspirations of Gothic architecture? (12)
- d. Kings College Chapel is considered an example of which English Gothic style? Draw and name three features of this style that differ from French High Gothic. (4)