

JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF ENGINEERING AND TECHNOLOGY

UNIVERSITY EXAMIMATION FOR THE DEGREE IN SCIENCE IN CONSTRUCTION MANAGEMENT

1ST YEAR 1ST SEMESTER 2022/2023 ACADEMIC YEAR

CENTRE: MAIN CAMPUS

COURSE CODE: TCB 1103

COURSE TITLE: HISTORY OF CONSTRUCTION

EXAM VENUE: STREAM: BSc. CONSTRUCTION MGT

DURATION: 2 HOURS

Instructions

- 1. Answer question 1 (Compulsory) and ANY other two questions
- 2. Candidates are advised not to write on question paper
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room.

QUESTION ONE (30MARKS)

- a. Explain the following terminologies or phrases associated with the historical development of the construction industry (**10marks**).
 - i. Project
 - ii. Pozzolan
 - iii. Early tar road
 - iv. Dovetail joint
 - v. Neolithic era
- b. Highlight three scenarios on how the current concept of out sourcing of construction labour from sub-contractors has negatively affected the welfare of the Kenyan construction worker (4marks).
- c. Management was practiced by man since historic time. Highlight three major historical instances where management was applied prior to Classical and Neo-Classical theories of management evolving in the late 19th Century (6marks).
- d. Briefly describe the eras that have historically shaped the evolution of the bridge construction system (8marks).
- e. Briefly state major social concepts that ancient architecture was associated with (2marks)

QUESTION TWO (20MARKS)

- a. Briefly explain the following terms applied as styles in ancient architecture (4marks).
 - i) Romanesque
 - ii) Gothic
- b. Briefly discuss the features of architectural styles mentioned in question (a) above (12marks).
- c. Historical concept of tall buildings founded in America from 1849 has immensely contributed to the contemporary high-rise buildings that dot global sky lines.

- i) Highlight the concept of these tall buildings as they were historically known and the architect who was behind the innovation. (2marks).
- ii) State the historical innovations that facilitated this concept (2marks).

QUESTION THREE (20MARKS)

- a. Briefly discuss the features of the first Roman road including an explanation of its usefulness (12marks).
- b. Discuss the historical contribution of Tresaquet, a French to the road construction system (6marks).
- c. Discuss how Telford, a Scottish surveyor and engineer improved on Tresaquet's road construction technique (2marks).

QUESTION FOUR (20MARKS)

The discovery of steel as a construction material revolutionized the construction industry.

- a. Discuss the historical development of steel as a construction material (17marks).
- b. State properties of steel that gives it prominence in the construction industry (3marks)

QUESTION FIVE (20MARKS)

- a. Briefly state what materials of construction were used in construction before the advent of manufactured materials (4marks).
- b. How did the historical shelters of the Aborigines compare with the historical African hut? (6marks).
- c. Discuss the technologies of construction that were employed in the City of Manitoba with respect to log and light wood frame construction (10marks).