



ELIZADE UNIVERSITY, ILARA MOKIN

DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING

COURSE: CVE 531: CIVIL ENGINEERING DESIGN AND ANALYSIS

INSTRUCTION: ANSWER ANY FOUR (4) QUESTIONS TIME ALLOWED: 2HRS


HOD'S SIGNATURE

Q.1 a) Explain what is engineering design?

- b) Mention and explain the characteristics of good engineering design
- c) Enumerate the six categories of engineering design knowledge.

Q.2 a) Describe the tree structure of a engineering design problem

- b) Define the following: System, Element, Subsystem, Surrounding, Structure, Input, Output and Function.

Q.3 a) Explain what you understand by **problem solving methods** in Engineering System

- b) Enumerate and explain the five steps of problem solving methods.

Q.4 a) What is 'Analysis and Synthesis' in system theory?

- b) Explain what is meant by **problem and problem analysis** in civil engineering system.

Q.5 a) Explain **Management** in civil engineering activities.

- b) Mention and explain at least six (6) functions management in civil engineering activities.
- c) List out at least six major problems facing civil engineering project management in Nigeria

Q.6 a) Enumerate the specific characteristics of building / civil engineering industry

- b) Define 'Total Quality Management' (TQM).
- c) Mention the basic principles of total quality management.