**Subject:** Electrical and Fire Safety at Work

**Maximum Time Allowed:** 3 hours

**Instructions**: Do not write on any part of the exam paper. All rough work should be done in your answer booklet. All questions carry equal marks. You are required to answer only FOUR questions.

Question 1

a. Explore the use of sprinklers as firefighting equipment. What are the advantages and disadvantages of using sprinklers? [15]

b. Examine four (4) “methods” of extinguishing fires. [10]

Question 2

a. How do electrical: - Insulation [7.5]; and – Isolation [7.5] serve as systems to protect people, plant and premises from electrical hazards?

b. Excavation work should be properly managed to control risks relating to “contact with buried electrical power lines”. How can this be done? [10]

Question 3

What is portable electrical appliance testing (PAT)? What are its benefits? Discuss in detail. [25]

Question 4

a. What are the necessary ingredients for most fires? Discuss. [15]

b. Examine four (4) main consequences of fire. [10]

Question 5

a. Electric shock and burns are hazards associated with the use of electricity. Discuss. [10]

b. How does static electrical discharges cause fire in electrical installations? How can they be prevented? [15]

Question 6

In preventing fires and its spread, ignition sources must be controlled. Discuss in detail five (5) ways of controlling ignition sources. [25]