

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

King Fahd University of Petroleum and Minerals
Department of Electrical Engineering

Semester II 2005/2006

EE445 Industrial Electronics

Major Test (1)

ATTEMPT ALL QUESTIONS
TIME ALLOWED ONE HOUR

You are working for a company that provides consulting services in the area of industrial electronics. A client wants a circuit that will operate a motor for five minutes only after closing a switch. However, the motor is not expected to work immediately after closing the switch. Two minutes must elapse before the motor starts operation. The motor is a DC motor and requires 200 mA for operation. You are requested to submit a complete circuit, ready for implementation, including your suggested solution.