

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

**King Fahd University of Petroleum and Minerals
Department of Electrical Engineering**

Semester I 2005/2006 EE455 Analog Communication Electronics Major (1)

**ATTEMPT ALL QUESTIONS
TIME ALLOWED 50 Minutes**

Q1. For each of the following cases, suggest the appropriate class of the output stage (power amplifier):

- a. A stage to deliver a power = 1 W.
- b. A stage to deliver an output frequency equal to three times the input frequency.
- c. A stage to deliver an output power of 100 W.

BRIEFLY JUSTIFY YOUR ANSWER. AN ANSWER WITHOUT JUSTIFICATION WILL NOT CARRY ANY CREDITS.

Q2. A class-C output stage uses a VMOS transistor having maximum drain current = 1.5 A, and its maximum power dissipation = 4 W and is supplied from a DC source = 48 V. What is the maximum output power obtainable from this output stage.