

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

King Fahd University of Petroleum and Minerals
Department of Electrical Engineering

Semester I 2005/2006 EE455 Analog Communication Electronics Major (3

ATTEMPT ALL QUESTIONS
TIME ALLOWED 50 Minutes

Consider the circuit shown in figure and answer the following questions:

- Assign trap for the 41.25 MHz sound carrier.
- Assign trap for the 47.25 MHz, adjacent sound carrier.
- Assign center frequencies for the tuned circuits in transistors Q1, Q2 and Q3.
Justify your answer.
- Assign a sound takeoff. Draw a suitable circuit for your solution. **Justify your answer.**
- Calculate the DC bias current in the collector of transistor Q2. Assume $\beta = 100$
- What is the function of the capacitor C_1 ?
- In writing the specifications for the transistors, what should be the cutoff frequency?
- Assign a video take off. Draw a possible circuit for the video detector.
- What is the function of the capacitor C_2 ?
- In your opinion, from where can we obtain the Reverse AGC?

