1. If beta in the figure equals 150, what is the critical frequency of the input coupling circuit?



A) 3.35Hz
B) 75kHz
C) 26.54Hz
D) 5.8Hz

2.



If beta in the figure equals 200, what is the critical frequency of the output coupling circuit?

A) 14.48Hz
B) 7.24kHz
C) 3.62Hz
D) 7.24Hz

3. In the figure, the transistors are identical with βdc = 200. Use the second approximation of a diode, and assume the bases are driven by low-impedance sources to find Vout.



A) 10.00V
B) –20.00V
C) 9.65V
D) 10.35V

4. In the figure, the transistors are identical with βdc = 200. Use the second approximation of a diode, and assume the bases are driven by low-impedance sources to find Zin.


A) 259.0kΩ
B) 103.6kΩ
C) 200.0kΩ
D) 51.8kΩ

5.

In the figure, the transistors are identical with βdc = 300. Use the second approximation of a diode to determine Zin.


A) 44.3Ω
B) 13.3kΩ
C) 4.7kΩ
D) 26.6kΩ

6.

In the figure, the transistors are identical with βdc = 300. Use the second approximation of a diode to determine VB.


A) 0V
B) 0.7V
C) 1.4V
D) –6V

7. In the figure, the transistors are identical with βdc = 300. Use the second approximation of a diode to determine Vout.


A) 5.2V
B) 0.7V
C) 10.4V
D) 6.4V

8.

In the collector circuit of the figure, C represents the combined capacitance of Cc’ and the stray capacitance. Calculate the critical frequency of the collector-bypass circuit.



A) 589kHz
B) 9.43MHz
C) 1Hz
D) 16.9Hz

9.

In the figure shown above, the transistors are identical with βdc = 200. When the common-mode input is 5 mVp-p, determine Vout.



A) 1.93mVp-p
B) 2.50 mVp-p
C) 0.48 mVp-p
D) 10.35 mVp-p

10.

What is the critical frequency of the output coupling circuit in Figure 1?



A) 589kHz
B) 4.82MHz
C) 1Hz
D) 15.92Hz