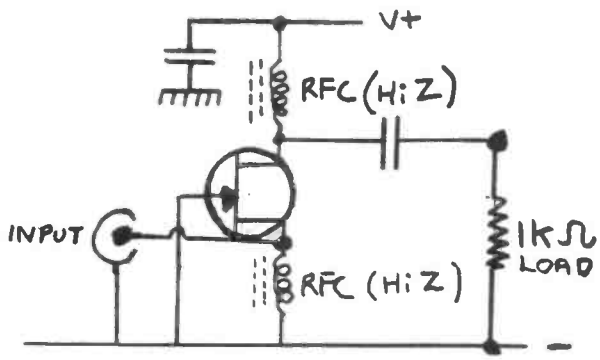
5) If the aerial shown in question 4) was just ¼ wavelength long would the resistance be:
a. 25 ohms, b.35 ohms, c. 50 ohms, d. 75 ohms, e. 100 ohms, f. 120 ohms a b c d e f

6) A VHF co-linear aerial has a gain of 6 dB over a standard dipole. If the dipole aerial produces an EMF of 1 mV across the receiver terminals, what should be the EMF produced by the co-linear across the same receiver:
a. 2 mV, b. 4 mV, c. 8 mV, d. 10 mV a b c d

7) A transmitter connected to the hypothetical dipole of question 6 produces an ERP of 1 watt What will be the ERP produced by the co-linear aerial:
a. 2 watts, b. 4 watts, c. 8 watts, d. 10 watts a b c d

8) A transistor is quoted as having a 10 dB gain. How much power should it deliver to a matched load if one watt is correctly matched to its input circuit:
a. 5 watts, b. 10 watts, c. 20 watts, d. 40 watts a b c d

9) The FET RF pre-amplifier shown in the circuit diagram has a transconductance (mutual conductance) of 10,000 micro-mhos (10 mA/V).



What is the effective input impedance at its source terminal:
a. 10 ohms, b. 20 ohms, c. 50 ohms, d. 100 ohms a b c d

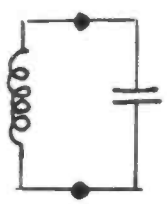
10) The FET pre-amp of question 9 has a 1K ohm load connected in its drain circuit. What will be the voltage gain across this load assuming that the in put circuit is driven from an RF source of negligible impedance and that the measuring instrument places no additional load on the drain circuit:
a. 5, b. 10, c. 20, d. 50 a b c d

11) What do you think would be the most likely figure for the dynamic range for a typical cross section of amateur HF receivers:
a. 145 dB, b. 125 dB, c. 105 dB, d. 95 dB, e. 75 dB a b c d e

12) What would be the most likely typical figure for a professional communications receiver:
a. 145 dB, b. 125 dB, c. 105 dB, d. 95 dB, e. 75 dB a b c d e

13) If you double the turns on a torroidal (O ring) ferrite core, will the inductance be the initial value multiplied by:
a. 2, b. $\sqrt{2}$, c. 4, d. 8. a b c d

14) You want the circuit shown to resonate at twice the initial frequency. To achieve this should you:



a. double the inductance, b. halve the capacitance, c. halve both the capacitance and inductance, d. halve the inductance. a b c d