



GENERAL POST OFFICE,
RADIO AND ACCOMMODATION DEPARTMENT,
HEADQUARTERS BUILDING, ST. MARTIN'S-LE-GRAND,
LONDON, E.C. 1.

1951

RADIO AMATEURS' EXAMINATION

Saturday, 6th October, 1951 2.30 p.m. to 5.30 p.m.

Answer ALL questions.

1. What do you understand by the following terms: "Sidebands", "Carrier Wave" and "Percentage Modulation" ? Explain, with the aid of diagrams, the "choke" method of modulation applied to a radio frequency carrier wave at audio frequencies.

(20 marks)

2. Explain fully the difference between a "Rejector" and an "Acceptor" circuit, and give full detailed examples of their respective uses in receiving and transmitting.

(15 marks)

3. State the reasons for the employment of a Pentode in preference to the Triode for H.F. amplification.

(10 marks)

4. What are the conditions laid down by H.M. Postmaster-General for the frequency control and measurement of amateur transmissions ?

(15 marks)

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5. State fully what precautions should be taken at an amateur transmitting station to avoid interference with broadcast and television reception.

(10 marks)

6. Explain, with the aid of a diagram, how a crystal can be used to control the frequency of a transmitter. State the advantages of crystal control.

(10 marks)

7. When two resistances of equal value are connected in parallel across a battery of 24 volts, the total current flowing in the circuit is 2 amps. The internal resistance of the battery is 2 ohms. What is the value of each resistance ?

(10 marks)

8. Describe, with the aid of a diagram, the construction of a half-wave dipole aerial. Indicate a method by which the aerial is coupled to the transmitter and show how the voltage and current is distributed along the aerial.

(10 marks)