

City and Guilds of London Institute Examination  
in  
Radio Communication                      Grade 1.

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Questions may be set with the object of testing the candidate's knowledge of the elementary electrical principles applied at this stage of radio-communication, and his ability to deal with the problems and calculations based on these principles, in addition to the questions more directly concerned with the following subject-matter:-

1. Construction of transmitting and receiving inductors.
2. Capacitance; construction of fixed and variable condensers for low voltage, fixed condensers for high voltage.
3. Qualitative treatment of eddy current loss including skin effect in conductors, and of dielectric loss in condensers.
4. Construction of two electrode and three electrode thermionic valves; principles of action and characteristic curves with application to non-reactive load.
5. Detecting devices for small alternating potentials; contact rectifiers and valves.
6. Construction and action of telephone receivers and electromagnetic loudspeakers.
7. High and low frequency thermionic amplifiers, essential principles of action. Causes of distortion.
8. Simple circuits of radio receivers including use of retroaction. Qualitative ideas of selectivity.
9. Simple omni-directional aerials for reception purposes.
10. Use of a loop aerial for reception and direction finding.
11. Qualitative treatment of simple valve oscillator.
12. Simple waemeter.
13. General principles of heterodyne reception.