

Clarendon Collection.

Paper C.

Mich. Term, 1937.

Do not attempt more than three or less than four questions.

1. Discuss the Old Bohr theory of the atom as described in Old Bohr's Almanac for 1912.
2. Explain with full experimental details how you would decide whether a beam of light was :-
 - (a) monochromatic.
 - (b) just chromatic.
 - (c) not chromatic at all.
3. What are the most repulsive forces you know? Hence or otherwise describe an ellipse.
4. How do recent experiments on thin films throw light on the problem of the production of cosmic rays by stars? Discuss the possibility of the existence of permanent waves in the ether.
5. An experimenter accidentally connects a milliammeter across the terminals of a high tension battery and finds that the pointer swings rapidly to the maximum and will not return even when the battery is disconnected. How would you account for this to a demonstrator? Find an expression which he might use.