

Assignment

Date: 23.03.24

B.Sc (Prog) Physical Science
with Chemistry

Paper: Electricity & Magnetism

M.M. 20

Attempt all questions. Marks are indicated against each question.

Q1: Derive an expression for Gauss's theorem in electrostatics and in dielectrics. (5)

Q2: Find the ^{field &} potential due to a dipole for a point on
(i) Axial line
(ii) Equatorial line. (10)

Q3: Derive an expression to find the electric field due to a uniformly non-conducting charged sphere at a point
(i) outside the charged sphere
(ii) on the surface of sphere
(iii) inside the charged sphere
(iv) At the centre (5)