

SECTION D — (2 × 10 = 20 marks)

Answer ALL questions, choosing either (a) or (b).

21. (a) Derive an expression for scattering amplitude based on Born's approximation.

Or

(b) Give an account of the Thomas-Fermi statistical model.

22. (a) Discuss fully Heitler-London theory of the hydrogen molecule.

Or

(b) Obtain classical field equations in Hamiltonian form.