

Govinda Chetty Chattram
Thimmaiah Road
C and M station
Bangalore

10-6-47

My dear Srikantan,

Possibly you have thought out by this time the skeleton of what is to be written. Do not fail to mention that you had a course in

- 1) a) Algebra and the Calculus
- b) Geometry, pure and analytical + trigonometry
- c) Applied mathematics including Dynamics, Statics and Astronomy
- 2) Differential equations (including some partial diff eqns)
 - Bessel's eqns, Legendre's eqns,
 - Legendre's, Laguerre's & Hermitean polynomials,
 - Fourier Series & Integral (with applications)
- 3) a) Vector Analysis } with applications to the subjects
- b) Tensor Analysis } mentioned below
- 4) Analytical Dynamics of
 - Particles,
 - Systems of particles &
 - Rigid bodies,
 - Hydrodynamics
 (including Hamilton's principle and Canonical transformations)
- 5) Thermodynamics & Statistical mechanics - ensembles etc - Statistical Thermodynamics
- 6) Electromagnetic theory and electron theory

- 1) Relativity { Relativity, Kinematics,
 " Dynamics,
 " Optics,
 " Electromagnetic Theory,

Minkowski's Theory - Four dimensional representation,
 Four dimensional Vectors, Four Vectors & Six Vectors,
 Energy Momentum tensor, S.M. field know,
 Four dimensional representation of field eqns.

- 2) Quantum theory { A) De Broglie's theory etc

B) Schrodinger's theory in detail and
 application (mention theory)
 Study of operators & operands,
 Function space etc

Perturbation theory with applications

- a) Stark effect
- b) H atom molecule
- c) Van der Waals' force
- d) Simple Radiation theory
- e) 2 particle Scattering
- f) Radiation transition
 of 2 particles etc...

C) Heisenberg's method & application (?)
 Study of matrices.
 Connection between matrix method & Schrodinger's

D) Dirac's method { Practically the whole book including the
 Position theory.

3) Quantum Statistics { Bose Einstein -
 Fermi Dirac &
 applications to thermionic emission (?), theory of
 metals etc...

Mention fairly well the ~~work~~ ^{studies} you have carried
 out in respect of the subject of the Structure of
 the Nucleus including studies on the exper. side
 like the Cyclotron, the Van de Graaff, your oscillograph
 work etc etc... this is best left to you now.
 Mention how you have made a study of the problems in

Connection with the structure of the nucleus.

Mention also your studies in Wireless including Ultrashort waves, Radar etc. ...

In ~~reply~~ answer to the question as to why you want to take the course, what have you thought of? If it suits you you may say that you are earnestly desirous of becoming a first class Physicist, ~~the~~ ^{physics} being the basis in a sense of Present Day Science & the same logic strikes you take up studies on the most fundamental aspects of Physics; ~~the~~ ^{also} facilities for such studies are available here & it is illogical to go abroad when the same or similar facilities are obtainable here.

Have you mentioned more points?

Keep a copy of the letter you are sending with the application with you in a file.

Later on it ~~will~~ ^{may} be useful to you. ~~that~~

Keep also copies of testimonials with you with care.

Have you received all that you wanted from Mysore or Nanjangud? What about date of birth? marks?

Anxious to know about your progress

Do not unnecessarily tax your mind. Even if you lose some time be calm. It will pay you. Be calm so that you may attend the examination.

with a fine temperament.

I do not think I need write more now.
Please convey my affectionate regards to your
brother. ~~His~~

With love,

yours aM

Subbaramain