Date 14/7/2021

M.Sc. Physics

SEM-I/PAPER-II

Vector field and Scalar field

01

THURSDAY

Explain the concept of scalar and vector fields →

If a vector is a continuous function of the coordinates (position) x, y, z of a point in a region of space (field), then the vector is called a field vector. If, for instance, with every point (x, y, z) of a region R of space, some vector $\vec{A}$ (x, y, z) is associated, then $\vec{A}(x, y, z)$ is a field vector and a vector field is said to exist in the region R.

The intensity in electric, magnetic and gravitational fields is a field vector and the field referred to ~~the~~ are all-

APPOINTMENTS

PRIORITY

NOTES

JUL 2021

vector fields.

If a scalar ϕ is a continuous function of position (co-ordinates) x, y, z of a point in a region R of space (field), then $\phi = \phi(x,y,z)$ is called a field scalar and a scalar field is said to exist in the region R.

A typical scalar field is the distribution of temperature, density, electric ~~potenstat~~ potential and such other non-directed physical quantities.

Sunday 04

PRIORITY	APPOINTMENTS	NOTES