

QUES 04:-

The magnetic force depends on v which depends on the inertial frame of reference. Does the magnetic force differ from inertial frame to frame? Is it reasonable that the net acceleration has a different value in different frames of reference?

Sol. As $F = q(v \times B)$, velocity depends on the frame of reference. Hence The magnetic force is frame dependent. So, yes the magnetic force differs from inertial frame to frame. The net acceleration which a rising from this is, however, frame independent for inertial frames (non-relativistic physics).