

V. CONCLUSIONS

The study leads to the following conclusions:

- The first-order velocity field is significantly affected at each point of the flow region by the visco-elastic parameter α_1 .
- The enhancement of absolute value of visco-elasticity depicts the accelerating trend of first-order fluid velocity in comparison with Newtonian fluid flow phenomenon.
- The enhancement of magnetic parameter decelerates the fluid velocity which shows conformity with physical situation.
- The growth of Soret number diminishes the fluid velocity and this trend is noticed in case of Dufour number and radiation parameter.
- With the growth of different important flow parameters, the shearing stress affects significantly by both Newtonian and non-Newtonian cases.
- The first-order temperature and concentration profiles are not considerably affected by the visco-elastic parameter. This is because of restraining effect played by the elasticity of the fluid.
- There is no significant influence of visco-elastic parameter on Nusselt number and Sherwood number.

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