



Fig. 4 – Sensitivity analysis of microbial decay or death rate coefficient (d_x) values of $3.6 \times 10^{-4} \text{ h}^{-1}$, $1.8 \times 10^{-3} \text{ h}^{-1}$ and $2.88 \times 10^{-2} \text{ h}^{-1}$ while injecting Microbe 3 within sandstone core during MEOR under varying temperature, salinity and pH conditions: temporal evolutions of (a) microbial concentration at $x = 0.4 \text{ m}$ from the influent point; (b) total volume fraction of microbes attached reversibly and irreversibly onto sandstone porous rock surface at $x = 0.004 \text{ m}$; (c) effective porosity of sandstone core at $x = 0.004 \text{ m}$; (d) absolute or intrinsic permeability of sandstone core at $x = 0.004 \text{ m}$; and (e) *in-Situ* produced biosurfactant concentration at $x = 0.6 \text{ m}$.