SUBJECT NO-PH60308, SUBJECT NAME- GENERAL THEORY OF RELATIVITY

LTP- 3-0-0,CRD- 3

SYLLABUS :-

Mathematical background\manifolds , tensor fields , connection and curvature ; priniciple of equivalence and general covariance, geodesics and geodesic deviation, action principle , Einstein s equation , solutions- black holes (Schwarzschild, Reissner Nordstrom , Kerr) , Penrose diagrams , gravitational waves and cosmology (FRW models and some observational cosmology) , initial value problem , causal structure and singularities , black hole thermodynamics , brief introduction to problems of quantising gravity.