

Osculating Plane:— The plane which contains r & t is called osculating plane. (2)
 or, The plane which is \perp to binormal is called osculating plane whose eqn is

$$(r - r) \cdot b = 0$$

Normal plane:— The plane which contains r & b is called normal plane.
 or, The plane which is \perp to tangent is called normal plane. whose eqn is

$$(r - r) \cdot t = 0$$

Rectifying Plane:— The plane which contains b & t is called rectifying plane.
 or, The plane which is \perp to principal normal is called rectifying plane. whose eqn is

$$(r - r) \cdot n = 0$$

- Notes:-
- (i) Eqn of tangent plane is $r = r + dt$
 - (ii) Eqn of normal plane is $r = r + dn$
 - (iii) Eqn of binormal plane is $r = r + db$

Ex 10
P. 40 Curvature and Torsion:—

Curvature:— Differentiation of t w.r.t 's' is called curvature vector whose magnitude is denoted by

K i.e $K = \left| \frac{dt}{ds} \right|$

The reciprocal of curvature is called radius of curvature which is denoted by ρ

i.e $\rho = \frac{1}{K}$

$\Rightarrow \rho K = 1$