To draw the profile of involute teeth for a spur gear having 25 teeth and a module pitch equal to 10 mm, assuming a pressure angle of 20°

Calculations :

P.C.D. $= M \times N = 10 \times 25 = 250$ mm.

C.P. $= \pi \times M = 3{\cdot}14 \times 10 = 31{\cdot}4$ mm.

Addendum $= \dfrac{C.P.}{\pi} = M = 10$ mm.

Add. circle dia. $= $ P.C.D. $+ 2 \times$ add.
$= 250 + 2 \times 10 = 270$ m.

Clearance $= \dfrac{C.P.}{20} = \dfrac{31.4}{20} = 1.57$ mm.

Dedendum $= $ Addendum + clearance
$= 10 + 1.57 = 11.57$ mm.

Ded. circle dia. $= $ P.C.D. $- 2 \times$ ded.
$= 250 - 2 \times 11.57$
$= 250 - 23{\cdot}14 = 226{\cdot}86$ mm.

Tooth thickness $= \dfrac{C.P.}{2} = \dfrac{31.4}{2} = 15{\cdot}7$ mm.