Circles - Class XI

Related Questions with Solutions

Questions

Quetion: 01

The circle passing through the distinct points $(1,t),(t,1)\&(t,t)$ for all values of ' t ', passes through the point:

A. $(-1,-1)$
B. $(-1,1)$
C. $(1,-1)$
D. $(1,1)$

Solutions

Solution: 01

Equation of circle is $x^2+y^2+2gx+2fy+c=0$

$(1,t) \Rightarrow \quad 1+t^2+2g+2ft+c=0$

$(t,t) \Rightarrow t^2+t^2+2gt+2ft+c=0$

$(t,1) \Rightarrow \quad 1+t^2+2gt+2f+c=0$

subtract $1+2g-t^2-2gt=0$

$\Rightarrow \quad 1-t^2+2g(1-t)=0 \Rightarrow (1-t)(1+t+2g)=0$

$\Rightarrow \quad t=1$

$\therefore$ one point (t,t)

$\therefore$ passes through $(1,1)]$

Correct Options

Answer:01
Correct Options: D