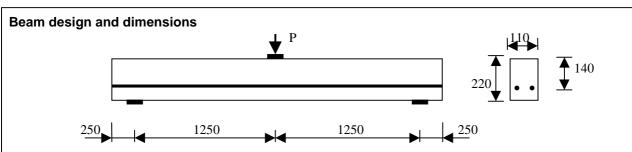
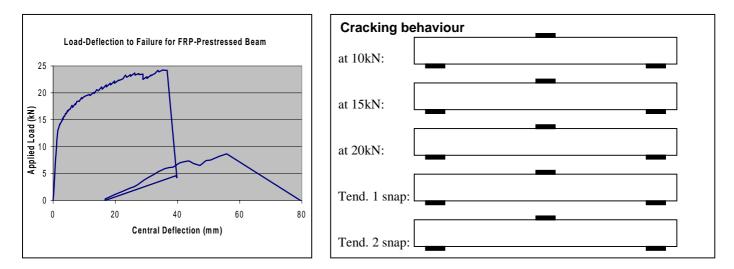
## Tutorial Sheet for FRP-Prestressed Beam

Name:



Concrete cube strength  $f_{cu} = 60.0$  N/mm<sup>2</sup>, tensile strength  $f_t = 6.40$  N/mm<sup>2</sup>. Two FRP tendons of 7.5mm  $\phi$  each snap at  $f_{ult} = 1500$  N/mm<sup>2</sup>. Effective prestress 42% of  $f_{ult}$ . Young's Modulus  $E_s = 60,000$  N/mm<sup>2</sup> for FRP and  $E_c = 30,000$  N/mm<sup>2</sup> for concrete.



Comment briefly on the behaviour of the beam through the elastic range, during progressive cracking, up to peak load, after initial tendon failure and post-peak behaviour. Comment on whether you think this behaviour was to be expected, and why.

	vsis across the result.
nore partial safety factors). Comment on the accuracy of your prediction in this case. Show all calcu gnore self-weight.	