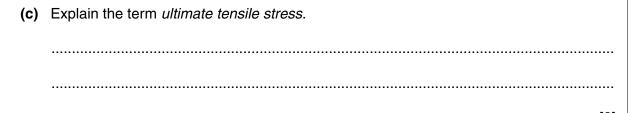
3	(2)	Dρf	ino		
9	(a)	Define			
		(i)	stress,		
			[1]		
		(ii)	strain		

	[1]	l
(b)	Explain the term <i>elastic limit</i> .	

 [1]



(d) (i) A **ductile** material in the form of a wire is stretched up to its breaking point. On Fig. 3.1, sketch the variation with extension *x* of the stretching force *F*.



Fig. 3.1

(ii) On Fig. 3.2, sketch the variation with x of F for a **brittle** material up to its breaking point.



Fig. 3.2

[1]

(e)	(i)	Explain the features of the graphs in (d) that show the characteristics of ductile and brittle materials.
		[2]
	(ii)	The force F is removed from the materials in (d) just before the breaking point is reached. Describe the subsequent change in the extension for
		1. the ductile material,
		[1]
		2. the brittle material.
		[1]