For Examiner's Use

2 **(a)** Define *impulse*.

.....[1]

**(b)** A resultant force $F$ acts on a mass $m$. The variation with time $t$ of $F$ is shown on Fig. 2.1.

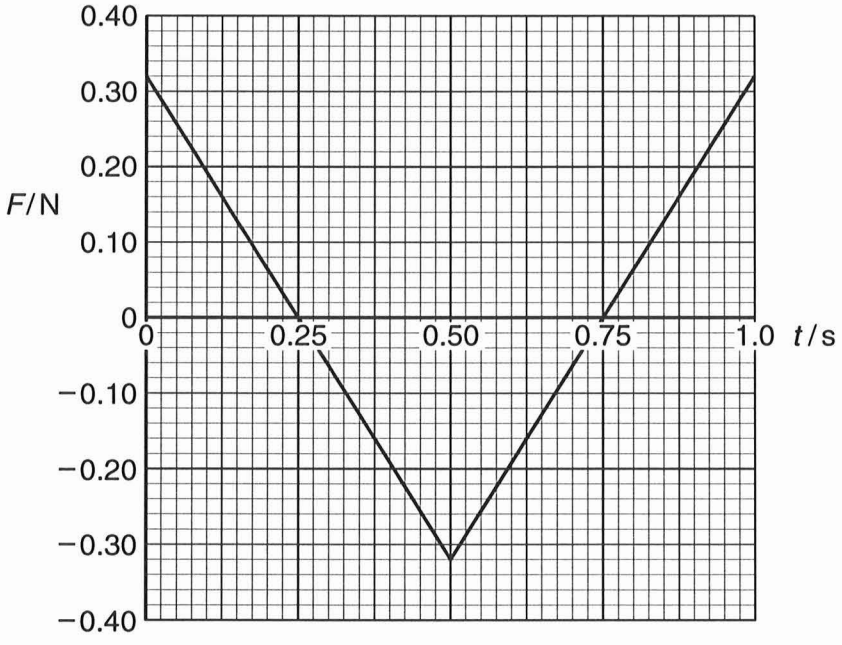


**Fig. 2.1**

Mass $m$ is 150 g. At time $t = 0$ the mass is at rest.

**(i)** Calculate the magnitude of the change in velocity of the mass from $t = 0.25$ s to $t = 0.75$ s.

change = ..... $m\,s^{-1}$ [3]

**(ii)** Use Fig. 2.1 to describe the change in velocity of the mass

**1.** from $t = 0.25$ s to $t = 0.50$ s,

.....

.....[2]

**2.** from $t = 0.50$ s to $t = 0.75$ s.

.....

.....[1]