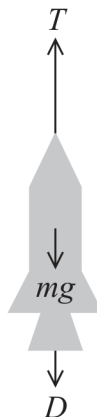**10** The diagram shows a rocket of mass m accelerating upwards with acceleration a.
The diagram represents the forces acting on the rocket.

Diagram not
to scale

T

mg

D

Which of the following equations gives the value of D?

☒ **A** $D = T + m(g - a)$

☒ **B** $D = T + m(a + g)$

☒ **C** $D = T - m(g - a)$

☒ **D** $D = T - m(g + a)$

(Total for Question 10 = 1 mark)