Answer on the question 84064 Chemistry - General Chemistry
At first, let‘s write reaction formula:
$C_7H_{16} + 11O_2 = 7CO_2 + 8H_2O$
$m(C_7H_{16}) = 10kg = 10\ 000g$
$M(C_7H_{16}) = 12*7+1*16 = 100$ g/mole
$M(CO_2) = 12+2*16= 44$ g/mole
$n(C_7H_{16}) = m(C_7H_{16})/ M(C_7H_{16}) = 10\ 000/100 = 100$ mole
$n(C_7H_{16})/n(CO_2) = 1/7$, so $n(CO_2) = 7\ n(C_7H_{16}) = 700$ mole
$m(CO_2) = n(CO_2)*M(CO_2) = 700*44 = 30\ 800g = 30.8kg.$
Answer: $m(CO_2) = 30.8kg.$