

- 21** A crane is being used to lift containers off a ship. One container has a mass of 14 000 kg and is being lifted vertically with a speed of 3.2 ms^{-1} .

The electric motor being used to supply the power to lift the container is using a current of 240 A at a potential difference of 2200 V.

What is the efficiency of the system?

- A** 8.1 % **B** 8.5 % **C** 48 % **D** 83 %

- 22** Trains supply coal to a power station. The table below gives quantities describing the operation of the power station.

	symbol	unit
power station output	P	W
number of trains per day	N	
mass of coal on a train	M	kg
energy from 1 kg of coal	J	J
number of seconds in one day	S	

Which expression gives the efficiency of the power station?

- A** $\frac{PS}{NMJ}$ **B** $\frac{PSN}{MJ}$ **C** $\frac{NMJ}{PS}$ **D** $\frac{NM}{PSJ}$

Space for working