	heat transfer rate	
	↓	engine 1 / engine 2

① Two engines same Q, 1200 k & 1800 k

they are rejected at 500 k

which engine is better ?

- Carnot efficiency =

$$\eta_{carnot} = 1 - \frac{T_C}{T_H}$$

$1 - \frac{500}{1500} = \%$ $\quad$ $1 - \frac{500}{1800} = \%$

② Computer chip 2 kJ heat transfer

47c & ambient temp 27c

what is entropy ? what is work destructed

S_{gen} =

Enthalpy:

work destruct $I = T_0 * S_{gen}$

T_0 = 27

③ What is the difference between Photovoltaic PV & CSP ?

④ What is the storage system of CSP?

Active storage < Direct system / Indirect system
Passive storage

1- Tested Technologies
2- Commercial Technologies
3- Under Developement
4- Under Research.

⑤ - What is wind power?
- which height has high wind power?

dimension given

Given :- height
air density
wind velocity

equation = $\frac{1}{2} \rho V^3$??

$= \rho A V$??

1- Active Direct storage → two tank
→ single tank
2- Indirect two tank Molten Salt
Saturated Steam storage technology
3- a Passive storage → High T Concrete
b) " → Regenerator Type storage
c) " → Combined sensible & Latent heat TES tank
d) " → Cascade
4- Active storage.

⑥ Is nuclear sustainable in terms of safety, cost, efficiency, resources