In which of the following reactions, the formation of product is favoured by decrease in temperature? $\Delta H^{\circ} = 181$

(1)
$$N_2(g) + O_2(g) \rightleftharpoons 2NO(g)$$
;

$$\Delta H^{\circ} = 181$$

(2)
$$2CO_2(g) \rightleftharpoons 2CO(g) + O_2(g)$$
;

$$\Delta H^{\circ} = 566$$

(3)
$$H_2(g) + I_2(g) \rightleftharpoons 2HI(g)$$
;

$$\Delta H^{\circ} = -9.4$$

(4)
$$H_2(g) + F_2(g) \rightleftharpoons 2HF(g)$$
;

$$\Delta H^{\circ} = -541$$

(c)
$$1, 2, 3$$



(d) Temperature ↓ ⇒ towards exothermic direction