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Consider G as a a-regular graph
H as b-regular graph as given in the question.
Now the degree of a n-regular graph is n.
so $\deg(x) = a$ where $x \in V(G)$
and $\deg(y) = b$ where $y \in V(H)$

Here we can consider V(G) and V(H) as the vertices of G and H.
Now let us assume that the set of vertices has some elements in it.
So $V(G) = \{x_1, x_2, x_3, \dots x_p\}$
and $V(H) = \{y_1, y_2, y_3, \dots y_q\}$

∴ When we calculate the vertices of graph G and H together ie $V(G \times H)$ then we can say that
$V(G \times H) = V(G) \times V(H)$
$= \{x_1, x_2, \dots x_p\} \times \{y_1, y_2, \dots y_q\}$
$= \{(x_i, y_j) ; x_i \in V(G) \text{ and } y_j \in V(H)\}$.

$= \{(x_1, y_1), (x_2, y_2) \dots (x_i, y_j), (x_1, y_2), (x_2, y_2) \dots (x_{i-1}, y_j) \dots (x_2, y_1), \dots (x_i, y_j)\}$

Now
$V(G \times H) = \{(x_1, y_1), (x_1, y_2), \dots (x_1, y_j),$
$(x_2, y_1), (x_2, y_2) \dots (x_2, y_j),$
$\vdots$
$(x_i, y_1), (x_i, y_2) \dots (x_i, y_j)\}$

Here each of x_i vertex of G connects with each of y_j vertex of H.
∴ We can say that $G \times H$ is also (a+b)-regular graph.

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Sol: consider G as a a-regular graph
H as b-regular graph as given in the question.
Now the degree of a n-regular graph is n.
So $\deg(x) = a$ where $x \in V(G)$
and $\deg(y) = b$ where $y \in V(H)$
Here we can consider V(G) and V(H) as the vertices of G and H.
Now let us assume that the set of vertices has some elements in it.
$$\text{So } V(G) = \{x_1, x_2, x_3, \ldots x_p\}$$
$$\text{and } V(H) = \{y_1, y_2, y_3, \ldots y_q\}$$
∴ when we calculate the vertices of graph G and H together is $V(G \times H)$ then we can say that
$$V(G \times H) = V(G) \times V(H)$$
$$= \{x_1, x_2, \ldots x_p\} \times \{y_1, y_2, \ldots y_q\}$$
$$= \{(x_i, y_i) ;\ x_i \in V(G) \text{ and } y_j \in V(H)\}$$
$$= \{(x_1, y_1), (x_2, y_2) \ldots (x_i, y_i), (x_1, y_2)(x_2, y_2) \ldots (x_{i-1}, y_j) \ldots (x_2, y_1), \ldots (x_i, y_j)\}$$
$$\text{Now } V(G \times H) = \{(x_1, y_1), (x_1, y_2) \ldots (x_1, y_j), (x_2, y_1)\ (x_2, y_2) \ldots (x_2, y_j), \ldots (x_i, y_1), (x_i, y_2) \ldots (x_i, y_j)\}$$
Here each of x_i vertex of G connects with each of y_j vertex of H
∴ we can say that $G \times H$ is $(a+b)$-regular graph.

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