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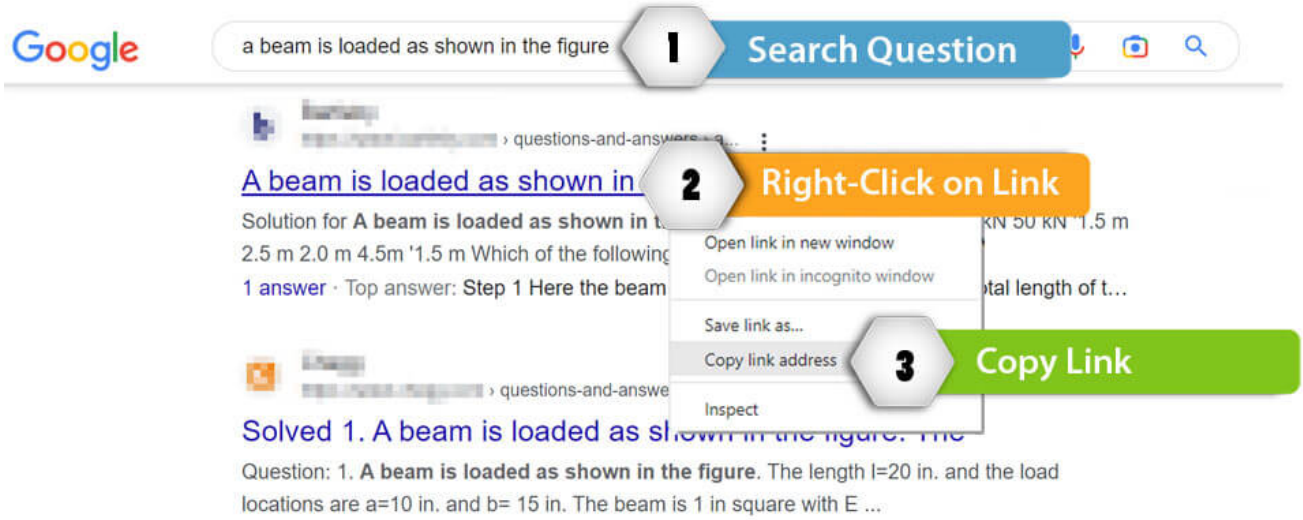
To do: If you are getting wrong answer or irrelevant answer.

Fix #1 >> We suggest you to follow the directions shown in the below image to get right question link.



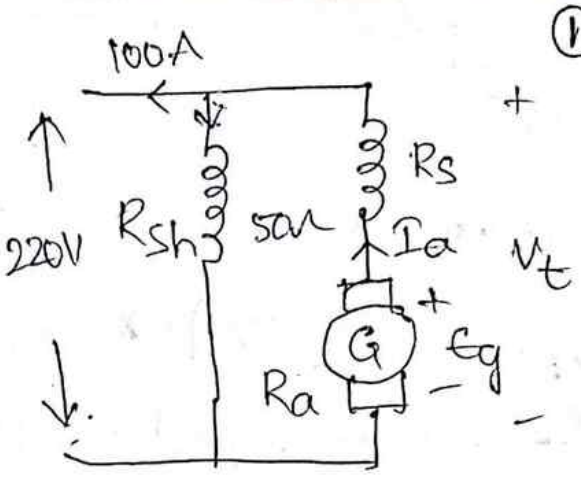
Answer

Please give me an upvote for my efforts . It'll help to answer more questions. If you are having any doubt s please comment me before giving down the vote.thank you

(1)

$R_a = 0.05\,\Omega$

$I = 100A$; $R_s = 0.025\,\Omega$



$$I_{sh} = \frac{220}{50}$$

$$= 4.4\,A$$

$$I_a = 104.4\,A$$

$$E_g = V_t + I_a(R_a + R_{sh}) + \text{brush drop}$$

$$= 220 + (104.4)(0.075) + 2$$

$$E_g = 229.834$$

stray losses = 1 kw (Iron & friction losses)

$$E_g = 229.834$$

$$\text{Copper losses} = I_a^2(R_a + R_{se}) + VI_{sh}$$

$$= 1.785\,kw$$

$$\text{output of prime mover} = V_t I_a + \text{Cu losses}$$

$$= 220 \times 100 + 1.785\,kw$$

$$= 23.785\,kw$$

Generator input = 23.785 kw

$P = 22.785\,kW$

Generator Efficiency $= \frac{22kw}{22kw + 2.785}$

$= 88.763\,\%$

Likes: 1 **Dislikes: 0**