

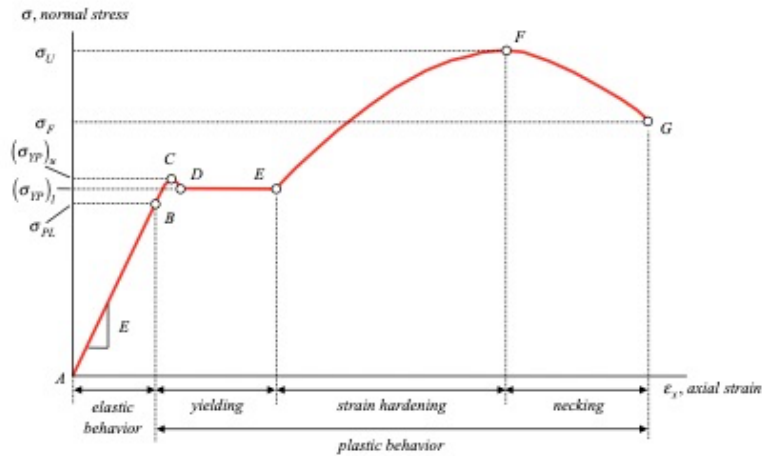
Online Quiz01

ME 323 – Summer 2024

Provide your responses to Quiz01 on Gradescope.

Question Q1

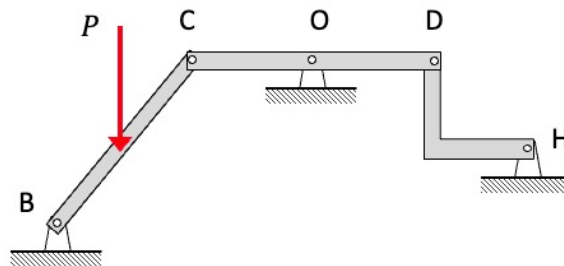
The stress vs. strain curve for a material is shown below.



TRUE or FALSE: The larger the value of the Young's modulus E , the *stronger* the material.

Question Q2

Consider the structure shown below.



Q2.1

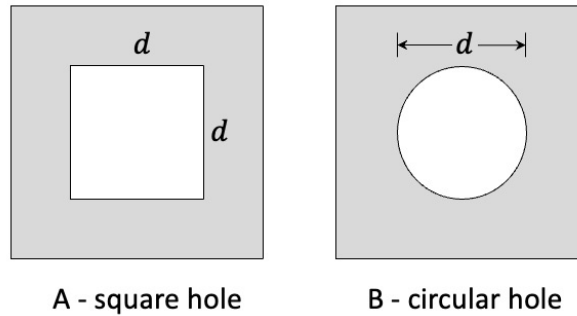
TRUE or FALSE: BC is a two-force member.

Q2.2

TRUE or FALSE: DH is a two-force member.

Question Q3

A square hole of dimensions $d \times d$ is to be punched into a piece of sheet metal of thickness t . A circular hole of diameter d is to be punched into an identical piece of sheet metal of thickness t . Let P_A and P_B be the minimum punching forces required for the square and circular holes, respectively.

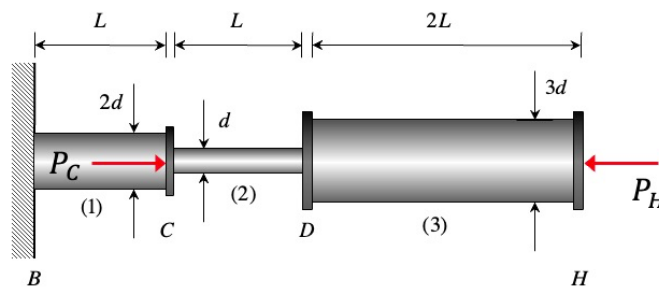


Choose the correct response below.

- a) $P_A > P_B$
- b) $P_A = P_B$
- c) $P_A < P_B$
- d) More information is needed in order to answer.

Question Q4

Consider the rod structure shown with axial loads of P_C and P_H acting on connectors C and H. All members of the rod have a solid circular cross-section. Let $|F_2|$ and $|F_3|$ be the magnitudes of the forces that are carried by members (2) and (3) of the rod, respectively.



Choose the correct response below.

- a) $|F_2| > |F_3|$
- b) $|F_2| = |F_3|$
- c) $|F_2| < |F_3|$
- d) More information is needed in order to answer.