

King Saud University

College of Engineering

GE 105: **Introduction to Engineering Design**

Quiz 1 Solution

The following statements, presented in point format in the table below, describe the requirements to improve the design of a gas cylinder for home and restaurant usage.

The symbols A, B, C and D represent the design steps indicators that need to be identified as follow:

A: Problem statement; B: Objective; C: Constraint; D: Criteria

Circle the **most appropriate** design step indicator for each of the statement:

1	The design should enable to transport the gas cylinder by different means.	A	<u>B</u>	C	D
2	The gas cylinder should have a long life	A	B	C	<u>D</u>
3	Today's gas cylinders are heavy, difficult to handle and transport.	<u>A</u>	B	C	D
4	It is required to design an improved a gas cylinder for home and restaurant cooking and heating, cheaper and easier to handle.	A	<u>B</u>	C	D
5	The cylinder needs to be lighter, safer and able to store more gas than the old one.	A	<u>B</u>	C	D
6	The gas cylinder should have a diameter of 40cm and should be offered in three heights (60cm, 80cm, 100cm).	A	B	<u>C</u>	D
7	The new gas cylinder should be able to adapt different types of valves and include a control level monitor.	A	<u>B</u>	C	D
8	It should be easily placed and removed	A	B	C	<u>D</u>
9	The price should not exceed 600 SR.	A	B	<u>C</u>	D
10	The body of the cylinder should be made of a material that is highly resistant to corrosion, impact and fire.	A	B	C	<u>D</u>