

**SYMBIOSIS INTERNATIONAL (DEEMED UNIVERSITY)**  
**Ph D ENTRANCE TEST**

**The Sample questions of Mechanical Engineering**

<b>Question No</b>	<b>Question Text</b>	<b>Option1</b>	<b>Option2</b>	<b>Option3</b>	<b>Option4</b>	<b>Correct Option</b>
<b>Q1.</b>	Which of the following can be regarded as gas so that gas laws could be applicable, within the commonly encountered temperature limits?	O <sub>2</sub> , N <sub>2</sub> , Steam, CO <sub>2</sub>	O <sub>3</sub> , N <sub>2</sub> , Water Vapour	SO <sub>2</sub> , NH <sub>3</sub> , CO <sub>2</sub> , moisture	O <sub>2</sub> , N <sub>2</sub> , H <sub>2</sub> , air	Option 4
<b>Q2.</b>	Which theory of failure is used for ductile materials?	Maximum normal stress theory	Maximum distortion energy theory	Maximum shear stress theory	Mohr theory	Option2
<b>Q3.</b>	At very high pressure, an ideal gas occupies _____ as compared to a real gas	More volume	Less volume	Same volume	Unpredictable behaviour	Option1
<b>Q4.</b>	Ratio of a force required to bend a hollow cylinder and force required to bend a solid cylinder of same outer diameter and length will be	Less than 1	Greater than 1	Equal to 1	Insufficient data	Option 2
<b>Q5.</b>	A compressor can have high Isothermal compression efficiency if the compressor runs at	Average speed	Very slow speed	Very high speed	Zero speed	Option2