

**LPUNEST – Ph.D. Mechanical Engineering  
(Sample Questions)**

**QUESTION 1**

Biot number signifies the ratio of

- |          |  |
|----------|--|
| Option A | Convective resistance in the fluid to conductive resistance in the solid |
| Option B | Conductive resistance in the solid to convective resistance in the fluid |
| Option C | Inertia force to viscous force in the fluid                              |
| Option D | Buoyancy force to viscous force in the fluid                             |

**QUESTION 2**

The maximum theoretical work obtainable, when a system interacts to equilibrium with a reference environment, is called

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|----------|-----------|
| Option A | Entropy   |
| Option B | Enthalpy  |
| Option C | Exergy    |
| Option D | Renthalpy |

**QUESTION 3**

Which one of the following is CFC refrigerant?

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|----------|------|
| Option A | R744 |
| Option B | R290 |
| Option C | R502 |
| Option D | R718 |

**QUESTION 4**

The majority difficulty during welding of aluminum is due to its

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|----------|----------------------------|
| Option A | High tendency of oxidation |
| Option B | High thermal conductivity  |
| Option C | Low Melting Point          |
| Option D | Low density                |

**QUESTION 5**

The process of reheating the martensite steel to reduce its brittleness without any significant loss in its hardness is

- |          |             |
|----------|-------------|
| Option A | Normalising |
| Option B | Annealing   |
| Option C | Quenching   |
| Option D | Tempering   |