

## Quiz Review

**Subject Lectures**  
Heat And Mass Transfer  
L21 : Unsteady State Heat Conduction  
L22 : Non-Dimensional Factors  
L23 : Lumped Analysis  
L24 : Heisler Charts

**Dated** Wednesday 5 November 2014  
**Time taken** 46 secs  
**Scores** 6 Out of 6  
**Percentage** 100%

## Question 1

Unsteady Heat Conduction refers to

- a. when Heat Conduction is Temperature Dependent
- b. when Heat Conduction is Time Dependent ✓
- c. when Heat Conduction is Material Dependent
- d. None

Correct

## Question 2

Which is assumed Negligible for Newtonian Heating or Cooling.

- a. Surface Temperature Resistance
- b. Internal Temperature Resistance ✓
- c. Coefficient of Heat Transfer at the Surface
- d. Coefficient of Heat Transfer at the Internal

Correct

## Question 3

What does a small Biot number  $B_i$  imply?

- a. The convective resistance is smaller than the conduction resistance
- b. The temperature gradient in the material where heat conduction occurs is practically zero ✓
- c. Heat conductivity varies with temperature
- d. None of the above

Correct

## Question 4

Fourier Number is the Ratio between \_\_\_\_\_.

- a. Heat conduction Rate and Thermal Energy Content ✓
- b. Heat Convective Rate and Thermal Energy Content
- c. Radiation Rate and Thermal Energy Content
- d. None

Correct

## Question 5

The Temperatures in Body differs by 5% at any Time for a Value of Biot Number less than

- a. 0.5
- b. 0.01
- c. 0.1 ✓
- d. 0.05

Correct

## Question 6

Heisler Chart is used to describe