

Multiple Choice Questions' Bank:

1. Find the wrong statement: Specific heat of a material \_\_\_\_\_.

- (a) Constant for a material  
(b) Heat capacity per unit mass  
(c) Extrinsic property  
(d) Has units as J/kg-K.

2. Heat capacity has units as

- (a) J/kg.K                      (b) J/mol.K                      (c) J.ohm/sec.K<sup>2</sup>                      (d) W/m.K

3. Units for thermal conductivity

- (a) J/kg.K                      (b) J/mol.K                      (c) J.ohm/sec.K<sup>2</sup>                      (d) W/m.K

4. Lorentz constant has units as

- (a) J/kg.K                      (b) J/mol.K                      (c) J.ohm/sec.K<sup>2</sup>                      (d) W/m.K

5. Thermal expansion of a material has units as

- (a) J/kg-K                      (b) J/mol-K                      (c) J.ohm/sec.K<sup>2</sup>                      (d) 1/°C

6. Polymers have thermal conductivities in the range of

- (a) < 1                      (b) 1-10                      (c) 10-100                      (d) >100

7. Polymers have thermal expansion coefficients in the range of \_\_\_\_\_x10<sup>-6</sup>.

- (a) 0.5-15                      (b) 5-25                      (c) 25-50                      (d) 50-400

8. Coefficient of thermal expansion for ceramics is the range of \_\_\_\_\_x10<sup>-6</sup>.

- (a) 0.5-15                      (b) 5-25                      (c) 25-50                      (d) 50-400

9. Metals have thermal conductivities in the range of

- (a) < 1                      (b) 1-5                      (c) 5-25                      (d) 20-400

10. Heat capacity of most materials is approximately equal to \_\_\_\_\_.

- (a) R                      (b) 2R                      (c) 3R                      (d) R/2

11. With increase in temperature, thermal conductivity of a metal \_\_\_\_\_.

- (a) Increases            (b) Decreases            (c) Either            (d) All, depending on metal.

12. Thermal conductivity in polymers increases with \_\_\_\_\_.

- (a) Increase in crystallinity    (b) Decrease in crystallinity    (c) Either    (d) None

Answers:

1. c
2. b
3. d
4. c
5. d
6. a
7. d
8. a
9. d
10. c
11. d
12. a