Physicsaholics

DPP – 1

Q 1. If specific heat of a substance is infinite, it means--
(A) Heat is given out
(B) Heat is taken in place whether heat is taken in or given out
(C) No change in temperature takes
(D) All of the above

Q 2. Two spheres made of same substance have diameters in the ratio 1 : 2. Their thermal capacities are in the ratio of -
(A) 1 : 2 (B) 1 : 8
(C) 1 : 4 (D) 2 : 1–

Q 3. Liquids A and B are at 30°C and 20°C. When mixed in equal masses, the temperature of the mixture is found to be 26°C. Their specific heats are in the ratio of -
(a) 3 : 2 (B) 1 : 1
(C) 2 : 3 (D) 4 : 3

Q 4. The temperature of equal masses of three different liquids A,B and C are 12°C, 19°C and 28°C respectively . The temperature when A and B are mixed is 16°C, when B and C are mixed is 23°C; what is the temperature when A and C are mixed ?
(A) 31°C (B) 20.26°C
(C) 19.5°C (D) 28°C

Q 5. Heat required to convert one gram of ice at 0ºC into steam at 100ºC is (given L_{steam} = 536 cal/gm)-
(A) 100 calorie (B) 0.01 kilocalorie
(C) 716 calorie (D) 1 kilocalorie

Q 6. 300 gm of water at 25ºC is added to 100 gm of ice at 0ºC. The final temperature of the mixture is - :-
(A) 0 ºC (B) 2 ºC (C) 1 ºC (D) 3 ºC

Q 7. A 1 g of ice is mixed with 1 g of steam. After thermal equilibrium is achieved, the temperature of the mixture is : -
A) 100°C (B) 55°C
(C) 75°C (D) 0°C

Q 8. If x grams of steam at 100ºC becomes water at 100ºC which converts y grams of ice at 0ºC into water at 100ºC, then the ratio x/y will be –
(A) 1/3 (B)1/ 2
(C) 1/4 (D) none

Q 9. 5 g of steam at 100ºC is passed into 6 g of ice at 0ºC. If the latent heats of steam and ice are 540 cal/g and 80 cal/g, then the final temperature is–
(A) 0ºC (B) 50ºC
(C) 30ºC (D) 100ºC

Q 10. The amount of heat required to raise the temperature of 1 kg of water through 1°C is called

(A) kilocalorie (B) calorie

(C) B.T.U. (D) calorie/°C

Answer Key

Q.1 c	**Q.2 b**	**Q.3 a**	**Q.4 b**	**Q.5 c**
Q.6 a	**Q.7 a**	**Q.8 a**	**Q.9 d**	**Q.10 a**