CHAPTER 13—THERMAL STRESSORS

Due Nov 19 at 1:59pm **Points** 10 **Questions** 5 **Time Limit** None

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	2,132 minutes	10 out of 10

ⓘ Correct answers are hidden.

Score for this quiz: **10** out of 10
Submitted Nov 15 at 8:05pm
This attempt took 2,132 minutes.

Question 1

2 / 2 pts

The water vapor pressure of ambient air is 19 mmHg, and the wind speed is 1.7 m/s. Calculate the maximum evaporative heat loss (Emax in watts). (Assume skin temperature is 35°C; vapor pressure at 35°C is 42 mmHg., and a standard worker)

- ○ 30
- ○ -30
- ○ 232
- ◉ 53
- ○ -232
- ○ -53

Question 2

2 / 2 pts

A worker's metabolic heat (M) is 61 kcal/h. He gains 135 kcal/h by radiation (R) and 47 kcal/h by convection (C). He loses 229 kcal/h by sweating (E). How much is his body heat storage rate (dH)?

- (●) +14
- ( ) -14
- ( ) 350
- ( ) 472
- ( ) -472
- ( ) -350

Question 3

2 / 2 pts

If the mean radiant temperature (tr) in a glass-manufacturing shop is 54°C, what is the radiant heat exchange (R) to a standard worker in kcal/hr (Assume a clothed worker with a skin temperature of 35°C.)

- ( ) 150.5
- ( ) -150.5
- (●) 129.4
- ( ) 24.4
- ( ) -24.4
- ( ) -129.4

Question 4

2 / 2 pts

In a workplace, ambient temperature (ta) is measured at 39°C and wind speed is measured at 2.3 m/s. Calculate heat exchange by convection to a standard worker in kcal/hr. (Assume skin temperature is 35°C and the worker is clothed.)

- 39
- -25
- -39
- 25
- 47
- -47

Question 5

2 / 2 pts

In a shop, a globe thermometer reads 34.0°C, air velocity is 1.3 m/s, and ambient temperature is 30.5°C. Determine the mean radiant temperature (1°C = 5/9[°F – 32]).

- 41.2
- 26.8
- 35.0
- 23.3

Quiz Score: **10** out of 10