

# MIKE MOORE & SONS CONSTRUCTION LTD.

## SAFETY QUIZ

Employee Name: \_\_\_\_\_

Date: \_\_\_\_\_

### Topic: Heat Stress & Health Effects

- 1) Mike Moore & Sons Construction has a Heat Stress policy in their Safety manual
  - a. Yes
  - b. No
  - c. I have never seen one
  
- 2) Heat stress is the net heat burden on the body from the combination of the body heat generated while working, environmental sources (temperature, humidity, air movement and radiation from the sun) and clothing requirements.
  - a. False
  - b. True
  
- 3) A healthy human body has variations of less than 1°C occur with the time of day, level of physical activity or emotional state. The normal internal temperature of the human body is:
  - a. 32° C
  - b. 35° C
  - c. 37° C
  - d. 39° C
  
- 4) The body's internal "thermostat" maintains a constant inner body temperature by pumping more blood to the skin and by increasing sweat production. In a very hot environment, the rate of "heat gain" exceeds the rate of "heat loss" and the body temperature begins to rise. This is what causes heat illness.
  - a. True
  - b. False

- 5) The human body exchanges heat with its surroundings mainly through:
- Radiation
  - Convection
  - Evaporation of sweat
  - All of the above
- 6) Exposure to more heat stress can cause physical problems which impair the workers' efficiency and may cause adverse health effects both short and long term. As the temperature increases from a comfort zone of between 20° to 27° C, certain problems and symptoms occur. Some of these problems could be:
- Increased irritability
  - Loss of efficiency in skilled tasks
  - More incidents
  - Heavy load on the heart or circulation
  - All of the above
- 7) Heat Syncope is heat induced giddiness and fainting induced by temporarily insufficient flow of blood to the brain while a person is standing. It is caused by the loss of bodily fluids through sweating and by lowered blood pressure due to the pooling of blood in the legs. Recovery is rapid after rest in a cool area.
- True
  - False
- 8) Heat cramps are painful and often incapacitating cramps in muscles and may occur alone or be combined with one of the other heat stress disorders. Heat cramps are caused by depletion of salt in the body as a result of heavy sweating and the ingestion of large amounts of water without sufficient salt (electrolyte) replacement. A person suffering from heat cramps should rest in a cool area and consume cool salted drinks?
- True
  - False

- 9) Heat Stroke and Hyperpyrexia (elevated body temperatures) are the most serious types of heat illnesses caused by prolonged work in hot environments. Signs of heat stroke include dry, hot skin; body temperatures often exceed 41° C and complete or partial loss of consciousness. The signs of hyperpyrexia are the similar except that the skin remains moist.
- False
  - True
  - Hyperpyrexia is an eye disease
- 10) Heat stroke and hyperpyrexia require immediate first aid and medical attention. Delayed treatment may result in damage to the brain, kidneys and heart. Treatment may involve removal of the victim's clothing and spraying the body with cold water. Fanning increases evaporation and further cools the body. Immersing the victim in cold water more efficiently cools the body but it can result in harmful overcooling which can interfere with vital brain functions and should only be done under close medical supervision.
- True
  - False
- 11) In men, repeatedly raising testicular temperature by 3 to 5° C decreases sperm count.
- True
  - False
- 12) Signs of heat exhaustion are weakness, tiredness, dizziness, visual disturbance, feeling of intense thirst and heat, nausea, vomiting, palpitations, tingling and numbness of the extremities after exposure to a hot environment.
- True
  - False
- 13) Signs of Heat Edema are tiny red spots on the skin which cause a prickling sensation during heat exposure. The spots are the result of inflammation caused when the ducts of sweat glands become plugged.
- True
  - False

- 14) Certain drugs such as tranquilizers and diuretics (a drug which increases urine output) can increase an individual's susceptibility to heat stroke or hyperpyrexia.
- a. False
  - b. True
- 15) Certain kidney, liver, heart, digestive system, central nervous system and skin illnesses are thought to be linked to long term heat exposure however, the evidence supporting these associations is not conclusive.
- a. True
  - b. False