

M502: THERMAL ENVIRONMENT

OVERNIGHT REVISION QUESTIONS – DAY 3

1. What are the key objectives of exposure standards for cold environments?
2. What is the wind chill index?
3. What is the equivalent chilling temperature?
4. What is the key limitation of the WCI?
5. ISO 11079 refers to the IREQ indices. What are the two IREQ indices and what do they represent?
6. There are a number of personal factors which may place workers at an increased risk of adverse health effects in cold environments. What are these personal factors?
7. What engineering controls can be used to minimise the risk of thermal stress in cold environments?
8. What monitoring strategies have been suggested for cold environments?
9. What managerial controls could be used to minimise the effects of exposure to cold?
10. In the absence of shelter, clothing is the most important means of protection against cold stress. Given this, what is the principle of thermal insulation provided by clothing?
11. What is “intrinsic clothing insulation”?
12. Why should the head be covered with effective clothing in cold environments?

13. There are three steps to the AIOH risk assessment approach. What are these steps?
14. Using the AIOH tiered approach, what would an assessment point total of 35 indicate?
15. What are the key elements of the South African Mines Department Code of Practice for thermal stress?
16. Under the RSA Code of Practice, what are the six occupational hygiene steps that are required?
17. What is the goal of the ACGIH Thermal Stress TLVs®?
18. When considering the quantitative versus the qualitative approaches to assessing thermal stress, what are the benefits and limitations of each approach?
19. When conducting physiological assessments of workers who are expected to work in hot environments, what factors should be taken into account when assessing their suitability?
20. Individual employee risk profiles have been developed for persons working in hot environments in South African gold and platinum mines. What are the key elements of these profiles?