

## **M502: THERMAL ENVIRONMENT**

### **OVERNIGHT REVISION QUESTIONS – DAY 2**

1. What is thermal comfort?
2. What are the Bedford and ASHRAE Psycho-Physical seven point scales?
3. What is the “Fanger” equation and what does it represent?
4. What are PMV and PPD?
5. What are the most common causes of local thermal discomfort?
6. Which of the various heat stress indices is modelled on the heat balance equation?
7. Which physiological parameters can be used to assess the effects of heat stress on the human body?
8. What are the limits recommended by ISO for core body temperature for slow heat storage?
9. In accordance with ISO 9886 what would be the sustained heart rate limit for a person aged 40 years?
10. In accordance with ISO 7933 what should sweat rates be limited to for non acclimatised and acclimatised subjects?
11. Define Effective Temperature (ET).
12. What are the limitations of ET and CET?
13. What are the advantages and disadvantage of P4SR?

14. Under the ACGIH criteria, what addition should be made to the measured WBGT for a person wearing polypropylene overalls?
15. What effect does a HSI value of 100 suggest for an 8 hour exposure?
16. The TWL is designed for workers who have a number of specific attributes. What are these?
17. How can radiant heat from steel or brick surfaces be reduced?
18. Define the unit of insulation.
19. What is the burn threshold?
20. What protective measures can be taken to minimise burns from hot surfaces?