



*(University of Choice)*  
**MASINDE MULIRO UNIVERSITY OF  
SCIENCE AND TECHNOLOGY  
(MMUST)**

**MAIN CAMPUS**

**UNIVERSITY EXAMINATIONS  
2023/2024 ACADEMIC YEAR**

**THIRD AND SECOND YEAR, FIRST TRIMESTER EXAMINATION**

**FOR THE DEGREE  
OF  
BACHELOR OF SCIENCE IN PHYSIOTHERAPY, HEALTH PROFESSION  
EDUCATION (UPGRADING)  
MAIN**

**COURSE CODE: HPT 212/HPE 302**

**COURSE TITLE: OCCUPATIONAL HEALTH AND SAFETY**

**DATE: 4<sup>th</sup> December 2023**

**TIME: 2:00pm – 4:00pm**

**INSTRUCTIONS TO CANDIDATES**

Answer All Questions

Section A: Multiple Choice Questions (MCQ)	20 Marks.
Section B: Short Answer Questions (SAQ)	40 Marks.
Section C: Long Answer Question (LAQ)	40 Marks

TIME: 2 Hours

MMUST observes ZERO tolerance to examination cheating

This paper has 5 pages

**SECTION A: MULTIPLE CHOICE QUESTIONS (MCQ) 20 MARKS**

1. Upper extremity musculoskeletal disorders (UEMSD) are a significant cause of disability and lost productivity globally. Which one of the following workplace programmes/interventions does NOT fit?
  - A. Work-based resistance training programmes can help prevent UEMSD and symptoms.
  - B. Work-based resistance training programmes can help manage UEMSD and symptoms.
  - C. Job stress management training has no impact on the prevalence of UEMSD and symptoms.
  - D. EMG biofeedback training has no impact on the prevalence of UEMSD and symptoms.
  - E. Workstation adjustment alone can reduce the prevalence of UEMSD.
2. Burnout is a major concern for clinicians and their employers. Regarding interventions, which one of the following statements is the best fit?
  - A. Mindfulness-based stress reduction (MBSR) programmes reduce burnout.
  - B. Educational interventions addressing communication skills and self-confidence reduce burnout.
  - C. Workplace interventions addressing workload and shift patterns with meetings to enhance teamwork reduce burnout.
  - D. Regular small-group debriefing sessions with exploration of coping mechanisms reduce burnout.
  - E. Incentivized exercise programmes with teams to improve accountability reduce burnout.
3. Which one of the following is NOT a useful tool in the rehabilitation of a worker injured at work?
  - A. Appropriate financial compensation.
  - B. Reduced numbers of hours in working day.
  - C. Reduced number of days in working week.
  - D. Alternative roles.
  - E. Use of equipment.
4. When considering who best tolerates shift work, which one of the following is the best fit?
  - A. Men.
  - B. Older, experienced workers.
  - C. Introverts.
  - D. Persons who do not exercise regularly.
  - E. Diabetics
5. In coal worker's pneumoconiosis, which one of the following statements is the best fit?
  - A. Severity of the disease does not vary according to composition of the coal.
  - B. Simple coal worker's pneumoconiosis is associated with an increased risk of lung cancer.

15. Regarding heat exhaustion, which one of the following does not fit?
- A. Confusion.
  - B. Loss of appetite.
  - C. Tachycardia.
  - D. Failure to sweat.
  - E. Temperature at 38°C or above.
16. Which one of the following is NOT a factor that can contribute to heat stroke?
- A. Dehydration from not drinking enough water.
  - B. Being overweight.
  - C. Sleep deprivation, which can decrease the rate of sweating.
  - D. Taking an SSRI.
  - E. Being unaccustomed to the heat.
17. All the following are symptoms of hypothermia except for which one?
- A. Shivering.
  - B. Failure to shiver.
  - C. Pinpoint pupils.
  - D. Confusion.
  - E. Loss of consciousness.
18. Regarding heat stroke, which one of the following statements does NOT fit?
- A. Heat stroke is a medical emergency with a high mortality if not diagnosed and treated appropriately.
  - B. The core body temperature of a patient with heat stroke is no greater than 39°C.
  - C. Heat stroke is due to a failure in the thermoregulatory mechanism.
  - D. There may be tissue damage to the liver, kidneys, and brain in the absence of sweating.
  - E. Rapid cooling is required by wetting and measures to increase evaporation along with supportive measures such as an intravenous infusion.
19. Regarding hypothermia, which one of the following statements does NOT fit?
- A. Hypothermia is diagnosed when the core temperature is less than 35°C.
  - B. The absence of shivering is a good prognostic indicator.
  - C. The hypothermic patient may experience delirium, coma, and death.
  - D. First aid management includes the application of thermal blankets.
  - E. Hypothermia may be complicated with an acid base imbalance.
20. Screening for lung cancer is an example of which one of the following.
- A. Primary prevention.
  - B. Secondary prevention.
  - C. Tertiary prevention.
  - D. All the above.
  - E. None of the above.

**SECTION B: SHORT ANSWER QUESTIONS (SAQ)****40 MARKS****ANSWER ALL QUESTIONS.**

1. You provide occupational health advice to a metal fabrication workshop. A 55-year-old worker presents complaining of ringing in both ears and gradually disimproving hearing.
  - a) How would you initially manage this issue (2 marks)
  - b) What types of control measures would you look for in a workplace assessment (3 marks)
2. You work as an occupational health specialist with the health service. A nurse presents to you with bilateral hand dermatitis, predominantly affecting the web spaces between the fingers.
  - a) What are the possible causes of this health problem in nurses (2 marks)
  - b) What types of control measures would you look for (3 marks)
3. Extremes of temperature in the workplace may have an adverse effect on the health of workers. Explain the possible effects on health that may be caused by working in a hot and cold Environment (5 marks)
4. An office building is to be fitted out and equipped by a magazine publishing company explain the issues that should be considered by the company when the lighting requirements are being specified for the building (5 marks)
5. Explain FUVe health and safety rules for drivers on company business (5 marks)
6. Describe the rollover (ROPS) and falling object (FOPS) protection techniques that are used to protect drivers of mobile work equipment (5 marks)
7. A pedestrian has been injured after a collision with a fork-lift truck in a warehouse. Outline the possible immediate causes of the accident associated with the pedestrian, and the way in which the vehicle was driven (5marks)
8. Fire protection is an important feature in the design of a new building. Explain five structural measures that can help to prevent the spread of fire and smoke (5 marks)

**SECTION C: LONG ANSWER QUESTIONS (LAQS)****40 MARKS**

1. Discuss the fire alarm system and the different types of fire extinguishing media extinguishing media ( 20 marks)
2. Discuss measures you would enforce to control noise in your workplace (20 marks)