



**MASINDE MULIRO UNIVERSITY OF  
SCIENCE AND TECHNOLOGY  
(MMUST)**

**MAIN CAMPUS**

**UNIVERSITY EXAMINATIONS  
2021/2022 ACADEMIC YEAR**

**SECOND YEAR, THIRD TRIMESTER EXAMINATION**

**FOR THE DEGREE  
OF  
BACHELOR OF SCIENCE IN PHYSIOTHERAPY (UPGRADING)  
MAIN PAPER**

**COURSE CODE: HPT 212**

**COURSE TITLE: OCCUPATIONAL HEALTH AND SAFETY**

**DATE: MONDAY 10<sup>TH</sup> JANUARY 2022**

**TIME: 8.00-11.00 AM**

**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: 3 Hours

MMUST observes ZERO tolerance to examination cheating

This paper has 5 pages

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

1. What is the purpose of environmental legislation?
  - a) To regulate the production of hazardous substances.
  - b) To specify the methods that must be used for storing hazardous substances.
  - c) To protect humans and the environment against hazardous substances.
2. What is the objective of a task risk analysis?
  - a) To control the risks associated with the work.
  - b) To prepare for the proper execution of the work.
  - c) To eliminate all risks.
3. What is an example of safe behavior at the workplace?
  - a) Speaking to others about unsafe actions.
  - b) Never using hazardous substances.
  - c) Always wearing hearing protection
4. What is one of the employee's obligations?
  - a) Changing protective devices and use them in the correct way.
  - b) Supervise high-risk activities.
  - c) Maintain an accident register
5. What are blanking flanges used for
  - a) For shutting valves or pressure valves in storage tanks.
  - b) For moving pipework when working on storage tanks.
  - c) To shut off supply lines to storage tanks.
6. Hazardous substances are classified by category. What are some of these categories?
  - a) Flammable - corrosive - harmless.
  - b) Harmful - carcinogenic - suffocating.
  - c) Explosive - highly/extremely flammable – harmful
7. What is the best way of limiting exposure to toxic substances?
  - a) By always having the same person work with the toxic substance.
  - b) By using another, non-toxic substance.
  - c) By training employees in working with toxic substances
8. What is the first thing you should do if you discover a fire
  - a) Ensure your own safety.
  - b) Alert the police.
  - c) Alert the fire department.

9. What is an explosion-hazardous environment
- An environment with too much gas and too little air.
  - An environment where many explosions happen.
  - An environment in which an explosive mixture can arise.
10. Which of the following is a risk associated with permanently installed grinders?
- The grinding stone can bite into the material.
  - Due to the low rpm, the grinding stone can come off its shaft.
  - The grinding stone can disintegrate
11. Is the earthing of double insulated electric hand tools permitted?
- This only permitted with the employer's approval.
  - No, this is not permitted.
  - Yes, this is permitted
12. How can you prevent falling hazards at the edge of a work floor?
- By placing warning signs at the edge of the work floor.
  - By putting proper barriers at the edge of the work floor
  - By giving the workers proper instruction at the start of the work.
13. What is the best safety provision for a floor opening?
- The floor opening must be properly lit.
  - Sufficient warning signs must be placed around the floor opening.
  - The floor opening must be covered with materials capable of carrying heavy loads
14. What is important for manually lifting an object standing on the ground?
- That your feet are spread out as far as possible.
  - That you lift with a straight back and bent knees.
  - That after you have lifted the object you can turn it sideways.
15. What must you do with your PBM's (personal protective equipment)?
- Have your name put on it.
  - Have an expert inspect it after every use.
  - Take proper care of it.
16. What rule applies to the use of protective clothing
- Replace your clothing once a year.
  - Immediately repair or replace torn/worn clothing.
  - Immediately replace torn/worn clothing at your own cost

17. in the case of a fatal accident, when should the incident be reported to the nearest OSHA office

- a) With 24 hours
- b) Within 48 hours
- c) Within 8 hours
- d) Within 4 hours

18. under OSHA, employee has right to access medical records

- a) True
- b) False

19. hazard communication in OSHA conducts

- a) Chemical analysis
- b) Hazard exposure
- c) Strength analysis
- d) Hazard evaluations of the products

20. when was OSHA enacted

- a) 1980
- b) 1991
- c) 1960
- d) 1970

**SECTION B: SHORT ANSWER QUESTIONS (SAQ)**

**40 MARKS**

**ANSWER ALL QUESTIONS.**

1. In relation to occupational health and safety, explain, using an example in EACH case, the meaning of the following terms (5 marks)

- (a) hazard (1 mark)
- (b) risk (1 mark)
- (c) welfare (1 mark)
- (d) work-related ill-health (1 mark)
- (e) near miss (1 mark)

2. Outline FIVE possible indications of a poor health and safety culture in an organization. (5 MARKS)

3. Describe other measures of health and safety culture. Outline how information on accidents could be used to promote health and safety in the workplace (5 MARKS)
4. Outline the FIVE key stages of the risk assessment process, identifying the issues that would need to be considered at EACH stage. (5 MARKS)
5. Explain why personal protective equipment (PPE) should be considered as a last resort in the control of occupational health hazards (5 MARKS)
6. Outline the factors to consider when making a risk assessment of first-aid provision in a workplace. (5 MARKS)
7. Outline the strengths AND weaknesses of using a checklist to undertake a health and safety inspection of a workplace. (5 MARKS)
8. Define the term 'ergonomics (1 mark)
- (b) Identify 4 factors that need to be considered during an ergonomic assessment 4 MARKS)

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

**40 MARKS**

**CHOOSE TWO QUESTIONS EACH ONE IS 20 MARKS**

1. An employee has been seriously injured after being struck by a fork-lift truck in a warehouse
  - (a) Give FIVE reasons why the accident should be investigated by the person's employer. (5 MARKS)
  - (b) Outline the information that should be included in the investigation report. (5 MARKS)
  - (c) Outline FIVE possible immediate causes and FIVE possible underlying (root) causes of the accident. (5 MARKS)
  - (d) Giving reasons in EACH case, identify FIVE people who may be considered useful members of the accident investigation team. (5 MARKS)
2. new employees have been complaining of workplace bullying. As the human resource manager, discuss measures you would enforce to prevent workplace bullying (20 marks)
3. physiotherapists have been complaining of burns from the hydrocollator. As the OSHA officer in the department, discuss preventive measures for burns from the hydrocollator (20 marks)
4. Employees who work for a publishing company are required to use display screen equipment (computers) for eight hours a day.
  - a). Outline the factors to consider when assessing a display screen equipment (10 marks)

b) Discuss the control measures that may be taken to minimize the risks to these employees (10 marks)