



“Investing in Africa’s Future”
COLLEGE OF HEALTH, AGRICULTURE & NATURAL SCIENCES
DEPARTMENT OF HEALTH SCIENCES
MASTERS IN PUBLIC HEALTH (MPH)
SPH 537 OCCUPATIONAL HEALTH EXAMINATION
END OF SEMESTER EXAMINATIONS

MAY 2021

LECTURER: J MANDOWA

DURATION: 7 HOURS

INSTRUCTIONS

Answer (fully) any one question of your choice.

Each full question carries 100 marks.

Font: Times New Roman, Font size 12, Line space: 1.5
Type your responses as clearly as possible

Typed responses should be submitted on Moodle

QUESTION 1

- a) Explain in detail the 4 E's of accident prevention in a workplace environment and how they are useful in the management of occupational health risks at the workplace [20]
- b) Making reference to any two Vision Zero golden rules of your choice, discuss how they can be applied to ensure the prevention of occupational injuries and diseases in industry [10]
- c) An organization X has reported an occupational accident involving Taurai Simango who was trapped by a machine trying to repair machinery whilst it was in motion. As an occupational health practitioner for the workplace, you have been approached by senior management to initiate the accident investigation. Explain in detail the approach you will take to effectively investigate the accident so as to ensure the avoidance of a recurrence [20]
- d) Terry and Jones Holdings, an organization involved in Timber processing has been experiencing an unprecedented increase in the number of musculoskeletal disorders amongst its employees. Management of the organization has decided to implement a risk management programme to avert the occupational health risk. With specific reference to risk factors of Musculoskeletal disorders, discuss in detail how you would apply risk management to effectively deal with the challenge of musculoskeletal disorders experienced by workers at Terry and Jones Holdings [50]

QUESTION 2

- a) Explain the applicability and importance of ILO Convention 155 and C 161 in occupational health management [10]
- b) Explain the Iceberg theory as applied in occupational health management [10]
- c) Company X has purchased agrochemicals to use in controlling pests on its tobacco field. Discuss the principles of chemical safety management that should be applied to ensure safe transportation, storage, use and disposal of the agrochemicals [30]
- d) Tsuro Pvt Ltd is a recently established business enterprise involved in growing and processing of macademia nuts for export. As a condition for the company to export, it is

required to comply with the internationally acclaimed Rain Forest Alliance Standard which among other things demands that the organization have a functional occupational health management system. As an Occupational Health Practitioner, you have been tasked by the organization to design an occupational health management system for the business enterprise. Discuss the various elements of an occupational health management system you will include in the company's occupational health management system to ensure its efficacy in prevention of occupational health risks in the organization [50].

QUESTION 3

a) Situation

Holiday Inn Hotel is located in the central business district of the City of Mutare. A Michelin Star Chef has recently been contracted to take over the kitchen and the dining room and so the hotel is being renovated in the expectation of attracting more guests. In the recent past, waiters have had to carry large, heavy trays and work with thick (break resistant) crockery, transporting it from a sideboard at the southern end of the dining room to the kitchen on the northern end. The sideboard is an old – fashioned style with a flat top at chest height and shelves with doors below knee height. In peak periods employees are required to carry loads of plates on their trays and move frequently and quickly between the sideboards, kitchen and tables. The waiters would be forced to stand for long periods of time and this resulted in many of them complaining of musculoskeletal disorders. The challenges were compounded by the kitchen environment that was extremely hot due to lack of adequate ventilation and the availability of hard uncomfortable chairs that were utilized by the dining room supervisors in their respective offices

The task

Prior to your promotion as Assistant Manager you were the Dining room supervisor and spent considerable time thinking about the ergonomic problems in the old dining room. You would like to see changes being made to improve safety and efficiency. Furthermore you wish to develop a proposal for management arguing for change that outlines the current occupational health problems in the kitchen and dining room and recommends specific changes. Write a proposal to management that identifies and explains the ergonomic risk factors that the employees working in the kitchen and dining room are exposed to, expound on at least two

potential musculoskeletal disorders which the employees may develop and recommend appropriate control measures to mitigate the risks taking into consideration the hierarchy of risk control [75]

b) Gushungo Company has an employee compliment of 1000. Within a particular year, the company recorded 100 near misses, 15 injuries that resulted in employees seeking first aid treatment but returning back to work and 5 injuries that resulted in employees failing to return for duty for at least 1 shift. The total lost days for the year were 200 days. Top management of the company is worried about the accidents that are occurring in the organization and want to make concrete decision to avert the recurrence of the incident. Based on the following narration, calculate the following

- i) Lost time injury frequency rate [5]
- ii) Injury severity rate [5]
- iii) Based on the calculated rates in (i) and (ii) , provide a technical interpretation to the company's top management to enable them to make a decision [5]
- iv) Differentiate leading and lagging indicators in occupational health management [10]

END OF EXAMINATION